

**[Report 1941] / Medical Officer of Health, Penrith U.D.C.**

**Contributors**

Penrith (England). Urban District Council.

**Publication/Creation**

1941

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THE URBAN DISTRICT OF PENRITH



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# ANNUAL REPORTS

OF THE

MEDICAL OFFICER OF HEALTH

AND OF THE

SANITARY INSPECTOR

For the year 1941

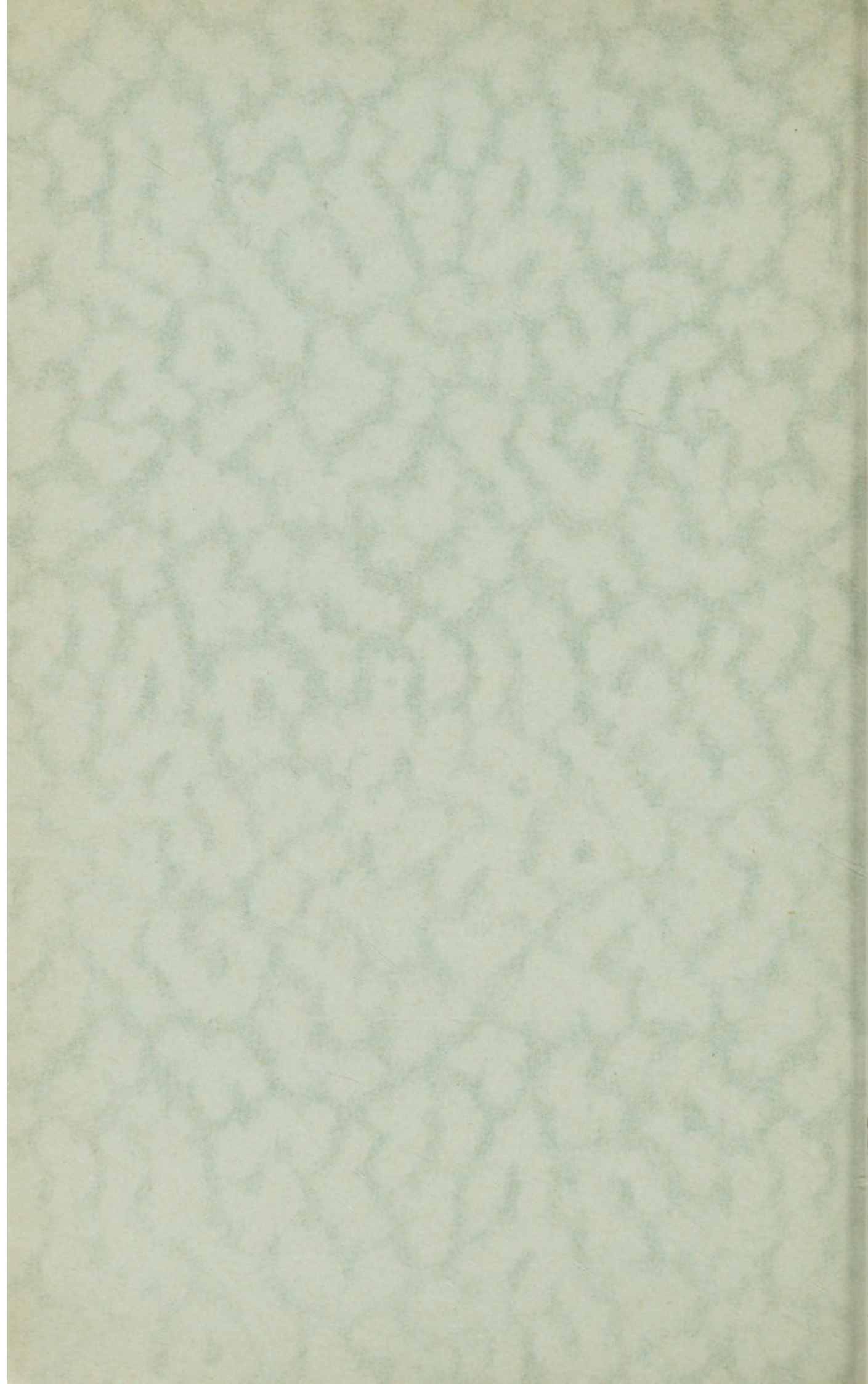
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Penrith :

REED'S LTD., Printers, &c., 46 King Street

—  
1942.





TOWN HALL,  
PENRITH,

3rd September, 1942.

*To the Chairman and Councillors of the  
Urban District Council of Penrith.*

Mr. Chairman, Mrs. Johnson and Gentlemen,

I have pleasure in presenting my Annual Report upon the health of the town for the year 1941.

This report has been prepared in accordance with instructions contained in Circular 2604 of the Ministry of Health dated 24th March, 1942, and on the lines indicated in Circulars 2314 and 2607 dated 26th March, 1941, and 19th July, 1940, respectively.

The outbreak of Trichiniasis was the outstanding epidemiological event of the year, and in this connection I beg to call your attention to the report by Mr. J. W. Butler, the Sanitary Inspector, on the special treatment given to the town's old refuse disposal dump near the Carlisle Road.

Scarlet Fever was epidemic during November and December, and it is to be noted that this disease was of a less mild character than in recent years, with a fairly high proportion of cases showing complications in convalescence.

The high incidence of Scabies occasioned some anxiety and much extra work was incurred in dealing with the disease, and in this connection I am indebted to Dr. Semple, the Medical Officer of Health, Carlisle, for his ready help in admitting evacuees suffering from this disease, and for the efficient manner in which they were treated at the hostel in Carlisle.

In conclusion, I wish to express my thanks for the courtesy and help extended to me by the Chairman of the Council, the Chairmen of the Sanitary and Housing Committees, and to Mr. C. H. Huntley, Clerk of the Council, and Mr. J. W. Butler, the Sanitary Inspector.

I have the honour to be,

Mr. Chairman, Mrs. Johnson and Gentlemen,

Your obedient Servant,

F. W. GAVIN,

*Medical Officer of Health.*



## EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

	Males.	Females.	Total.
Live Births—Legitimate .....	80	72	152
Illegitimate .....	5	1	6
Birth Rate per 1,000 of population .....			14.35
Still Births—Legitimate .....	4	1	5
Illegitimate .....	—	1	1
Rate per 1,000 (total live and still births) .....			33.89
Still Births, rate per 1,000 of population for Penrith Urban area .....			0.54
Still Births, rate per 1,000 of population for England and Wales .....			0.51

	Males.	Females.	Total.
Deaths .....	72	73	145
Death Rate per 1,000 of the population .....			13.16
Deaths from Puerperal Causes—Puerperal Sepsis .....			Nil
Deaths from Other Maternal Causes .....			Nil
Death Rate of Infants under one year—			
All Infants, per 1,000 live births .....			25.31
Legitimate Infants, per 1,000 live births .....			25.31
Illegitimate Infants, per 1,000 illegitimate live births.....			Nil
Deaths from Cancer (all ages) .....			18
Deaths from Measles (all ages) .....			Nil
Deaths from Whooping Cough (all ages) .....			Nil
Deaths from Diarrhoea (under two years of age) .....			1
Infantile Mortality, 1941—			
Congenital Debility .....	1 month.		
	1 month (private evacuee from Leicester C.B.).		
Broncho-pneumonia .....	2 months.		
Acute Gastro-enteritis .....	3 months.		

## COUNTY OF CUMBERLAND.

VITAL STATISTICS—Year ended 31st December, 1941.

	Birth Rate.	Crude Death Rate.	Infantile Mortality Rate.
Administrative County of Cumberland	16	12.6	56
Urban Districts of Cumberland (including Boroughs of Workington and Whitehaven)	16.3	12.6	54
Rural Districts of Cumberland	15.8	12.5	57
Penrith Urban District Council	14.35	13.16	25.31

## CUMBERLAND PATHOLOGICAL LABORATORY.

CUMBERLAND INFIRMARY,  
CARLISLE,  
4th December, 1941.

## EXAMINATION OF WATER.

Time and place of sample taken—Town Hall, Penrith, 1/12/41.

## BACTERIOLOGY.

Agar plate count	0.1 ml. colonies	1 ml. colonies	10 ml. colonies
At 22° C.	2	14	177
At 37° C.	nil	3	51
Probable number of coli-aerogenes present in 100 ml.—5 and are faecal in origin, <i>i.e.</i> Methyl Red—positive ; Voges Proskauer— negative.			

## CHEMISTRY.

Appearance in a 2 ft. tube—Clear and colourless.  
pH. 7.0.

	Parts per 100,000
Free and saline ammonia .. .. .	0.0010
Albuminoid ammonia .. .. .	0.0094
Oxygen absorbed in permanganate in 15 mins. at 27° C...	0.014
Oxygen absorbed in permanganate in 4 hours at 27° C...	0.036
Total Solids .. .. .	3.8
Suspended matter .. .. .	0.0
Hardness—total .. .. .	2.0
permanent .. .. .	2.0
temporary .. .. .	0.0
Chlorine present as chlorides .. .. .	0.44
Heavy metals .. .. .	0.00

Opinion :—A good domestic supply.

(Signed) LESLIE H. EASSON,  
Chemist.



## INSPECTION AND SUPERVISION OF FOOD.

### Milk Supply :—

ANALYSIS OF MILK SAMPLES TAKEN DURING 1941.

Grade of Milk.	Entirely Satisfactory.	Entirely Unsatisfactory.	Methylene Blue Test Satisfactory.	B. Coli Test Satisfactory.
T.T. ....	4	2	4	1
Accredited ....	7	11	2	0
Ungraded ....	3	4	0	1
	—	—	—	—
	14	17	6	2
	—	—	—	—

### Milk in Schools :—

Tuberculin Tested (Certified) Milk is supplied to all the Elementary Schools in the town and also to the Queen Elizabeth Grammar School under the "Milk in Schools Scheme" of the Milk Marketing Board.

The supply was satisfactory.

### Meat and Other Foods :—

#### CARCASSES INSPECTED AND CONDEMNED.

	Beasts.	Cows.	Calves.	Sheep and Lambs.	Pigs.
Number killed .. ..	1,678	474	959	23,857	754
Number inspected .. ..	1,678	474	959	23,777	754
<i>All diseases except Tuberculosis—</i>					
Whole Carcasses condemned ..	14	9	8	83	2
Carcasses of which some part or organ was condemned..	515	105	6	655	25
Percentage of the number in- spected affected with disease other than T.B. .. ..	31.52%	24.05%	1.45%	3.10%	3.58%
<i>Tuberculosis only—</i>					
Whole Carcasses condemned..	15	15	2	—	2
Carcasses of which some part or organ was condemned..	44	42	9	—	44
Percentage of the number in- spected affected with tuber- culosis .. ..	3.51%	12.02%	1.14%	Nil	6.10%

## CARCASSES EXAMINED BY THE VETERINARY SURGEON.

## PENRITH MUNICIPAL SLAUGHTERHOUSE.

		Beasts.	Cows.	Sheep & Lambs.	Pigs.	Calves.
January	.. ..	161	23	1,004	99	18
February	.. ..	151	15	1,203	113	9
March	.. ..	156	26	1,502	116	68
April	.. ..	152	27	1,156	75	73
May	.. ..	169	59	1,547	107	83
June	.. ..	202	35	1,802	71	108
July	.. ..	103	69	2,703	18	82
August	.. ..	121	51	2,384	30	102
September	.. ..	147	38	2,666	27	73
October	.. ..	95	59	2,706	32	136
November	.. ..	108	33	2,742	27	117
December	.. ..	113	39	2,362	39	90
Yearly Total	..	1,678	474	23,777	754	959

## TRICHINIASIS or TRICHINOSIS.

The outbreak of this disease in the early part of 1941 is the first recorded instance of its presence in this area, but outbreaks were also recorded at Wolverhampton, Harpenden and Birmingham at about the same time, and it is quite probable that the disease is more widespread and of more frequent occurrence than has hitherto been thought.

In this connection I would like to mention that there was a suspected small outbreak localised in Carlisle in 1937, and 2 patients ill at that time were tested by Dr. Beeson in May, 1941, and found to be positive reactors to intra-dermal skin tests; and the likelihood is that many other unrecorded outbreaks have taken place in this country.

## ETIOLOGY.

**Parasite.**

The casual parasite, a nematode (*trichinella spiralis*), occurs in the flesh of many different animals. The rat is considered to be the chief carrier, but many other warm blooded animals may be affected including pigs, dogs, cats, bears, pigeons, etc., as well as human beings.

During the process of digestion, larvae are set free and develop into mature worms which infest the intestinal canal and the embryos, which are discharged into the blood stream, find their way to the muscles and organs of the host.



In the brain, heart and lungs, a somewhat acute inflammatory reaction is excited which destroys the parasite. The parasite may remain in the muscles of the host in its larval state throughout life, and it is computed that these muscles may be infective for a period of twenty-five years.

Infection of swine can be attributed to :—

- (a) inclusion of trichinosed meat in non-sterilised pig food (*i.e.* garbage containing portions of pork, bacon or ham) ;
- (b) consumption of pig food contaminated by excreta of infected rats or infected cats (either before or after sterilisation owing to carelessness in allowing access to food by rats and cats) ;
- (c) consumption of infected rats (disputed by certain authorities in the United States of America).

It will therefore be realised that the provisions of the Foot and Mouth (Boiling of Foodstuffs) Order, 1932, which requires the boiling of pig swill for at least one hour, must be strictly enforced.

### Human Infection.

The consumption of inadequately cooked trichinosed pork or pork products will give rise to the disease, although the eating of such meat does not necessarily cause any definite symptoms. The factors concerned appear to be :—

- (a) amount of infected meat consumed ;
- (b) degree of infection of meat consumed ;
- (c) slight human infection only with no apparent symptoms ;
- (d) probability of immunity being developed by small sub-infective dosage (children appear less likely to be infected) ;
- (e) one attack appears to confer immunity or partial immunity.

### Clinical Symptoms.

The clinical symptoms noted in the Penrith outbreak were sudden swelling of the eyelids and face without albuminuria, together with malaise and a swinging temperature, followed later by generalised and frequent muscle pains, chiefly in the limbs, back of neck and trunk, accompanied by local swelling and stiffness of the legs and arms. Some patients complained of extreme weakness and some were anæmic, but gastro-intestinal symptoms were infrequent, although several cases complained of constipation. At least two cases had a clinical resemblance to pneumonia. Convalescence was extremely slow in our severe cases, and two fatal cases were noted. It is interesting to record that only one patient apparently had sub-ungual hæmorrhages.



### Confusion with Influenza.

At least three cases of trichinosis were wrongly diagnosed as "gastric influenza." One of these cases (female, aged 48 years) was admitted to the Cumberland Infirmary, Carlisle, as a case of pneumonia with empyema, following influenza.

On admission this patient showed on blood film examination 9% eosinophilia with total white cell count of 16,000, and on 28th February when still an in-patient at the Infirmary, her eosinophilia had risen to 12% and the white blood count was still 16,000.

Dr. Faulds reports "Portion of left deltoid shows numerous encysted motile trichina spiralis" on 10th March, 1941. This patient made a complete recovery, although symptoms of oedema round the lower legs and feet remained for five or six months after discharge, together with a certain amount of muscle weakness.

### Eosinophilia.

In 36 cases blood counts were carried out by the Pathologist, Cumberland Infirmary, Carlisle, and the results were as follows:—

Eosinophilia of from 40% to 72% .....	14 cases
„ of from 10% to 40% .....	19 cases
„ of from 4% to 10% .....	2 cases
„ of 3% .....	1 case (fatal)
„ less than 3% .....	Nil

### Notes on Fatal Cases.

(1). Mrs. H. (aged 48) died in the Cumberland Infirmary, Carlisle, on 19th March, 1941, after an illness of 7½ weeks. This case showed an eosinophilia count of only 3%, and a total white blood count of 18,000. At postmortem, Dr. Faulds reported trichina positive in all muscles examined except the myocardium. The certified cause of death was "pulmonary embolism and trichinosis."

2. Mrs. T. (aged 48) died at her home on 9th February, 1941, after an illness of three weeks. The certified cause of death was "cerebral thrombosis after influenza." From details of the onset and course of the illness given by the relatives (two of whom had had the disease) there can be little doubt that death was due to trichinosis.

The case mortality was 3.3%, and in this connection it would seem probable that there were a number of missed cases owing either to the mildness of the symptoms or the failure of patients to call in medical aid.



### **History of the Penrith Outbreak.**

On 11th February, 1941, suspected cases of this disease were brought to my notice by two local medical practitioners. Contact was immediately made with the veterinary surgeon responsible for meat inspection at the Penrith Municipal Abattoir and also with the Medical Officer of Health for the City of Carlisle (who communicated with the Superintendent of the City Abattoir), when it was established that there had been no suspected carcasses dealt with at either Penrith or Carlisle. The outbreak was immediately reported to the County Medical Officer of Health and to the Ministry of Health.

On 24th February, Colonel T. Maddock of the Ministry of Health, arrived in Penrith, accompanied by Professor Leiper of the London School of Hygiene and Dr. Paul B. Beeson (Harvard), to investigate the outbreak.

The Ministry of Health investigation continued during the period 25th February to 4th March, 1941, inclusive. A supplementary enquiry was later undertaken by Colonel Maddock and Dr. Beeson during the period 4th to 7th May, 1941, inclusive, when skin tests were made upon known cases, contacts and others. Dr. Beeson's observations upon these skin tests are included, with his permission, at a later stage in this report.

The total number of cases notified by local doctors numbered 30 in the Penrith Urban area, 8 in the Penrith Rural area, and 2 in the area of the North Westmorland Rural District Council, making a total of 40 notified cases. Additional cases were found during the investigations, and a graph is appended showing the daily number of cases occurring during the outbreak. The first known case occurred on 20th January and from that date to the 8th February, 50 definite cases and 10 suspected cases came to my notice, no less than 30 of them in the nine days commencing 24th January, 1941.

[illegible]



During the course of the investigation carried out by Colonel Maddock, it was found that 36 patients stated that sausages had been purchased by them from a Penrith Pork Butcher (A) retailing sausages in the town and the surrounding district, and, further, that eight patients obtain sausages from a Westmorland Pork Butcher (B). Pork Butcher B sells sausages in Penrith on market days. These sausages were consumed at a material time to fit in with the date of onset.

40 patients gave a history of onset of illness between January 20th and February 1st. In the weeks ending January 11th, 18th and 25th, the number of purchases of sausages for the families in which cases occurred was 24, 49 and 34 respectively.

Seven patients nibbled raw sausages, which was their habit, and one patient ate them lightly cooked. Three patients in one family ate raw sausages on January 18th, two of them became ill on January 20th and the third on January 22nd.

Pork Butcher A has two shops in the town, one for the pork trade and another for that of a general butcher. He therefore receives porkers, sows and plucks. He had received no foreign meat for three or more months, and he manufactures his own sausages, which are made up of 30—35% of sow meat, up to 40% of meat with beef, and to this a baked flour and seasoning is added. The mixture is filled into hog's casings. He makes sausages daily, except on Sunday and Monday, and one half of the quantity of manufacturing pork received in a week is carried over to the Wednesday of the week following. Thus manufacturing pork received on a Monday may not be disposed of completely as sausages until Wednesday of the week following. Colonel Maddock obtained a list of all pig carcasses received by Pork Butcher A during the weeks ending January 11th, 18th and 25th. All came from the local municipal abattoir through the Wholesale Meat Supply Association, and the list was found to be correct.

Pork Butcher B, residing in Westmorland, has a stand in the Penrith Market for the sale of sausages and black puddings, both of which he sells on Tuesdays and Saturdays. During this period Pork Butcher B received from the same source as Pork Butcher A a precisely similar supply, *e.g.*, if Pork Butcher A got one half of sow X, Pork Butcher B got the other half. Thus the raw material for their sausages was strictly comparable.

The method adopted in the preparation of sausages by Pork Butcher B is substantially the same as that of Pork Butcher A, but there appears to have been some little difference in the matter of sausage casings. There are apparently four types of hog casings:



wide, medium, medium-narrow and narrow. During January and up to the 15th February, Pork Butcher B was unable to obtain his customary medium sized casings, but was compelled to fall back on the narrow.

Both Butchers therefore must have disposed of approximately the same quantity of sausages. Neither sold sausage meat ; there was a keen demand for sausages at the time, and there is no doubt that the weight of sausages disposed of locally by both retailers was the same, but their sausages were of a different size. Pork Butcher A used medium casings throughout, while Pork Butcher B for the first six weeks of the year used " narrows." It was observed that amongst Pork Butcher A's customers there were 36 known cases of trichinosis as compared with 8 of Pork Butcher B's. It may be that the greater number of sausages would have meant more consumers, and the greater number of persons at risk. Against this is to be weighed the smaller dose in the " narrow " sausage, and, what is probably of greater importance, the better cooking of the smaller sausages. Colonel Maddock states that he could see no other way of accounting for the great disparity in the number of cases as between the two vendors, and that no sausage makers other than A and B were concerned.

The next point to be considered is the raw material received from the abattoir. After investigation of the information received, it would appear from sales of sausages during the material time that sows from five piggeries could be suspected. Further enquiries reduced these piggeries to two, one in the Urban area and one in the Rural area of Penrith.

The vendor of the pig in the Rural area had never fed his pig on swill, and of the carcasses of 16 pigs, 1 cat and 8 rats subsequently obtained on this farm, none were found to be infected. Suspicion therefore centres on sow Z which commenced to be made into sausages on January 9th, on which day also the sausages were first sold, the last probable date of sale being January 18th, but it is considered as being improbable that this date was ever reached, having regard to the local demand.

Pig Z was a sow bred by a local pig keeper, and his premises were inspected on March 2nd. He has two piggeries, one situated behind his house in a populous part of the town and the other perhaps a mile away. The former consists of stys in an unpaved, undrained yard at the back of the dwelling house. Here were twenty pigs of varying ages kept under unfavourable conditions. The latter piggery was situated on high ground in open country, and consisted of a small field where fifteen pigs were kept in a number of lean-to sheds. None of the thirty-five pigs appeared to be unwell ; there was no history of recent losses among them.



Three ill-conditioned cats were seen on these premises, and it is to be noted that these cats were strays and not regularly fed by the occupier. Unfortunately, it was not possible to secure rats from either premises, but the three cats were destroyed and on examination one was found to show marked evidence of trichinosis. In this connection the second piggery is situated fairly close to the refuse dump of the Urban District Council, and out of a total of 166 rats obtained from this dump 14 were found to be trichinosed.

From the evidence obtainable, Colonel Maddock was of the opinion that the source of the Penrith outbreak was the sow Z killed on January 8th, 1941, from this piggery.

The following report was received from Mr. J. A. Sedgwick, Additional Sanitary Inspector, Penrith Rural District Council, upon examination of rats and cats obtained from various premises in the Penrith Urban, Rural, and North Westmorland Rural Areas.

23rd March, 1941.

Dear Dr. Gavin,

#### TRICHINOSIS.

I have carried out microscopical examination of rats obtained from various premises as follows:—

<i>Premises.</i>	<i>Rats obtained.</i>
Penrith Urban Area—	
Town Refuse Dump, Ballast Pit .....	166
Round Thorn, Penrith (Farm) .....	29
Fletcher's Knackery, Penrith .....	22
Penrith Abattoir .....	1
Penrith Rural Area—	
Lancaster, Edenhall, Penrith (Farm) .....	18
North Westmorland Rural Area—	
Penrith Sewerage Works .....	4
Wood, Bolton, Penrith (Farm) .....	7

With the exception of rats obtained from the Town Refuse Dump, all rats examined microscopically showed no trace of the disease.

Fourteen of the 166 rats obtained from the Refuse Dump were found to be infected with trichina, giving a percentage infection of 8.43.

From the period March 3rd to 10th, 83 rats were obtained from the above source, but only three were found to be positive, but from 12th March to 23rd March a further 83 rats were obtained, of which eleven were positive. The town refuse dump was systematically searched for rats during this period, and it was observed that certain portions of the tip were very heavily infected whilst other portions yielded negative results.

In addition, three cats were obtained from a local piggery, one of which had a wide-spread infection, and a cat obtained from a rural piggery yielded negative results.

(Signed) J. A. SEDGWICK.

I am indebted to Dr. Paul B. Beeson of the American Red Cross—Harvard Field Hospital Unit, who has very kindly supplied me with the following data for this report :—

“ With regard to the skin tests that Colonel Maddock and I made in Penrith on 5th, 6th and 7th May, 1941, the results were as follows :—

Of twenty-two patients on whom a clinical diagnosis of trichinosis was made, the skin tests were positive in every case.

Twenty-six persons were tested because they were either relatives of known cases or were connected with the two pork butchers concerned. In this group 5 positive reactions were obtained.

Twenty-seven other persons were tested, and from this group three positive reactions were obtained.

Of the eight positive reactions contained in the latter two groups a suggestive history of illness at the time trichinosis was prevalent was obtained in every case but one, and I believe that the other seven represented mild cases of trichinosis. I think it is fair to presume that in addition to the fifty odd recognised cases of trichinosis which occurred in Penrith, there must have been many more—perhaps several hundred—mild illnesses also due to trichinosis.”

(Signed) PAUL B. BEESON, M.D.



### Observations and Conclusions.

The definite cause of the Penrith outbreak was certainly due to the consumption of sausages prepared from sow Z.

The question then arises—how was sow Z infected? The answer to this question must remain conjectural, but infection can be attributed to one or other of the following :—

- (a) This sow may have caught a rat infected with trichinosis and eaten it.
- (b) By eating pig swill infected from a trichinosed rat's excreta.
- (c) By consuming pig swill infected from a trichinosed cat's excreta, and in this connection one cat out of three examined from this piggery was found to be extensively trichinosed.
- (d) By eating pig swill containing infected pig flesh.

It must be again emphasized that pig swill may be insufficiently sterilized or may be infected after sterilization by allowing rats or other animals to have access to it.

It is interesting to note that out of 50 recognised cases no less than 39 were females. The only children concerned were a girl of 11 years of age and another girl aged 13 years. As females prepare the food in the household they are more liable to have an opportunity of nibbling raw sausages in the course of cooking. It is also to be noted that no other pig product apart from sausages appeared to be implicated. In the invaded houses, about 144 persons ate of the particular sausages that were suspected and one out of 3.8 consumers were known to have developed clinical trichinosis.

No subsequent cases of trichinosis were notified.

The clinical picture may be confused with enteric fever, influenza, rheumatism or pneumonia. It is probable that an article on trichiniasis which appeared in the *British Medical Journal* of Saturday, 8th February, 1941, was responsible for the detection of the Penrith outbreak, and thus a retrospective diagnosis was made by the doctors concerned.

The disease is apparently notifiable as a type of food poisoning under Section 17 of the Food and Drugs Act, 1938.

It may be asked why the disease had not been detected during the routine inspection of meat at the municipal slaughterhouse, Penrith, and in this connection it must be stated that this disease can only rarely be detected by the ordinary methods of meat inspection. Microscopical or trichinoscopic examination is necessary as even a hand lens would not necessarily afford a satisfactory examination. Since the outbreak, pigs received at the abattoir for slaughter from piggeries in the suspected area have been examined microscopically.

The main factor in prevention is, of course, the adequate cooking of sausages and other pork foods.

Other important factors are the extermination of rats and the destruction of their carcasses by incineration, the sterilisation of pig swill as required by the Foot and Mouth Order, 1938, and the prevention of fouling of pig swill by excreta of rats or cats subsequent to sterilisation.

### **RATS AND MICE DESTRUCTION.**

Practical experience in this area has demonstrated that it is unwise to concentrate solely on rat week in November, and, although Autumn is undoubtedly the best time to carry out such work, endeavours are made to conduct a continuous offensive against rats and mice throughout the year.

During inspection of farms and other premises in various parts of the district, evidence of rat infestation have been frequently found and the occupiers have been warned accordingly.

Arrangements have been made with the Cumberland County Council to maintain a regular supply of rat poison in the Council Offices all the year round for distribution free of charge to occupiers of rat infested premises. This service is now well known throughout the area, and we have numerous applications for rat poison every week.



## PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

### Scarlet Fever.

There were six evacuees notified suffering from Scarlet Fever during 1941, when 39 cases in all occurred.

Thirty-five cases occurred between 18th October and 29th December, thirty-two were school-children and three were of pre-school age.

While all the Schools in the town were affected, Penrith Girls' Council had the largest number of cases, and it is possible that some spread of infection may have occurred at that School. At the Penrith Boys' National School a boy was found to be peeling on hands and feet and may have been the source of infection for some cases. The disease was moderately severe ; there was a high incidence of otitis media and cervical adenitis.

### Diphtheria.

One case, a boy aged 9 years, was notified on 9th October. This case was a severe one with multiple paralysis, and it is to be noted that the parents had refused immunisation.

### Diphtheria Immunisation.

The campaign which had been commenced in the Penrith areas in 1936 was continued during 1941, helped by the Government's excellent scheme with widespread publicity through the medium of Press, Radio, the Cinema, etc. ; and it is gratifying to note the high percentage of Penrith School Children who have been immunised and for which thanks are due to the Head Teachers.

The percentage of pre-school age children is rising steadily, and in this connection special sessions have been arranged in collaboration with Dr. Kenneth Fraser, the County Medical Officer, for the use of the County Child Welfare Clinic, together with the continued services of the County Health Visitor. A total of 230 school children and 212 pre-school children completed a course of two injections with A.P.T. during the year.

The diphtheria notifications during the past eight years are as follows :—

Year.	Diphtheria Cases.		Deaths.
1934	23	.....	Nil
1935	32	.....	2
1936	23	.....	1
1937	19	.....	Nil
1938	19	.....	Nil
1939	10	.....	Nil
1940	4	.....	Nil
1941	1	.....	Nil

## INFECTIOUS DISEASES.

Diseases.	AGES.											TOTAL.	Admitted to Isolat'n Hosp.	Deaths.
	-1	1-	2-	3-	4-	5-	10-	15-	20-	35-	45-	65-		
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever .. ..	..	..	..	1	2	24	11	1	..	..	..	..	39	37
Diphtheria .. ..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
Enteric Fever (inc. Paratyphoid) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Pyrexia .. ..	..	..	..	..	..	..	..	..	2	..	..	..	2	..
Primary or Influenzal Pneumonia ..	1	..	..	..	1	2	1	2	..	2	4	4	17	2
Erysipelas .. ..	..	..	..	..	..	..	..	..	1	..	3	2	6	1
Ophthalmia Neonatorum .. ..	2	..	..	..	..	..	..	..	..	..	..	..	2	..
Cerebro-spinal Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Anterior Poliomyelitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles .. ..	..	1	..	..	..	1	..	..	..	..	..	..	2	..
Whooping Cough .. ..	5	7	3	9	4	4	1	..	..	..	..	..	33	..
											Totals	102	39	2



### CANCER.

Eighteen deaths were caused by malignant disease, giving a death rate of 1.63 per 1,000 of the population ; in 1940 there were 22 deaths and a rate of 2.06 per 1,000.

The details are as follows :—

System.	Males.	Females.
Alimentary—		
Stomach .....	1	1
Pancreas .....	1	—
Colon .....	2	1
Rectum .....	1	—
Oesophagus .....	—	1
Bucco-pharyngeal .....	2	—
Reproductive—		
Uterus .....	—	1
Breast .....	—	3
Bladder .....	1	—
Respiratory—		
Lung .....	2	1
	—	—
	10	8
	—	—

2 of the deaths occurred among persons aged between 40 and 45

1	“	“	“	“	“	“	45 and 50
1	“	“	“	“	“	“	50 and 55
3	“	“	“	“	“	“	55 and 61
4	“	“	“	“	“	“	65 and 70
3	“	“	“	“	“	“	70 and 75
4	“	“	“	“	“	“	75 and over

Total—18.

66% of the deaths were over 60 years of age.

### TUBERCULOSIS.

No action has been necessary in respect of Tuberculosis among persons employed in the Milk Trade or under Section 172 of the Public Health Act, 1936, relating to the compulsory removal to Hospital of persons suffering from Tuberculosis.

The total number of cases on the register at 31st December, 1941, is 47, a similar number to that at the end of 1940.

There were 7 deaths from tuberculosis, 4 of these cases were pulmonary and had been notified as suffering from tuberculosis in the years 1933 (two cases), 1938 and 1940 ; two non-pulmonary deaths were notified in 1939 and early in 1941 respectively, the remaining pulmonary case was a transferable death which occurred at Garlands Mental Hospital (female, aged 43 years), and I am unable to state the date of the notification of this case to the Border Rural District Council.

#### 1941—TUBERCULOSIS CASES.

AGES.	New Cases.				Deaths.			
	Respiratory		Non-Respir-		Respiratory		Non-Respir-	
	M	F	M	F	M	F	M	F
To One year ...	—	—	—	—	—	—	—	—
1 to 5 years ...	—	—	—	—	—	—	—	—
5 to 15 „ ...	1	—	—	—	—	—	—	—
15 to 25 „ ...	1	3	1	1	1	—	—	—
25 to 35 „ ...	—	—	—	—	—	2	1	—
35 to 45 „ ...	—	—	—	1	1	1	—	—
45 to 55 „ ...	—	—	—	—	—	—	—	—
55 to 65 „ ...	—	—	—	—	—	—	—	—
65 and upwards ...	—	—	1	—	—	—	1	—
TOTALS ...	2	3	2	2	2	3	2	—



# CAUSES OF DEATHS AS GIVEN BY THE REGISTRAR-GENERAL.

Disease.	Males.	Females.	Total.
Pulmonary Tuberculosis .....	1	2	3
Other Forms of Tuberculosis .....	2	—	2
Influenza .....	—	3	3
Cancer of Buccal Cavity and Oesophagus (Male).....	2	—	2
Cancer of Uterus (Female) .....	—	1	1
Cancer of Stomach and Duodenum .....	1	1	2
Cancer of Breast .....	—	3	3
Cancer—All Other Sites .....	6	4	10
Diabetes .....	—	2	2
Intracranial Vascular Lesions .....	6	7	13
Heart Disease .....	26	27	53
Other Diseases of Circulatory System .....	6	6	12
Bronchitis .....	3	4	7
Pneumonia .....	4	1	5
Other Respiratory Diseases .....	2	—	2
Ulcer of Stomach or Duodenum .....	1	—	1
Diarrhoea (under 2 years of age) .....	1	—	1
Other Digestive Diseases.....	—	2	2
Nephritis .....	—	1	1
Congenital Malformation, Birth Injuries, Infantile Diseases .....	1	2	3
Suicide .....	1	—	1
Road Traffic Accidents .....	3	—	3
Other Violent Causes .....	2	1	3
All Other Causes .....	4	6	10
Totals .....	72	73	145

## PENRITH URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT,  
TOWN HALL,  
PENRITH,

21st October, 1942.

*To the Chairman and Members of the  
Highways and Sanitary Committee.*

Mrs. Johnson and Gentlemen,

I desire to submit my first Annual Report for the year ending 31st December, 1941 :—

### **Inspection of the District.**

During the year 256 inspections and re-inspections were made. It was necessary in numerous instances, however, to interview and write to the persons concerned, drawing their attention to repairs which had not received prompt attention.

Twelve letters referring to nuisances and general dilapidations were sent out, nine have received attention, the remaining three have been delayed through labour difficulties.

### **Bakehouses.**

Number on Register .....	16
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The premises are all in a satisfactory condition and are well conducted.

### **Food Premises.**

All premises for the preparation and sale of food including meat, fish, fruit, ice cream, etc., have been inspected and found satisfactory.

### **Abattoir.**

The premises have been kept under supervision and, with the exception of the fence, found satisfactory. A new fence will be erected as soon as timber is available.



### Disinfection.

After all cases of infectious disease, an inspection of the premises affected has been made and the premises, bedding, etc., have been disinfected.

Houses disinfected during 1941	.....	.....	.....	61
Schools disinfected during 1941	.....	.....	.....	3

### Camping Sites.

Number of Camping Sites in the District	.....	.....	1
Maximum number of Campers	.....	.....	5

### Foodstuffs Condemned.

The following foodstuffs were condemned as unfit and, having been surrendered, were destroyed or so disposed of as not to be used for human food :—

Bacon	.....	.....	.....	.....	16 lbs.
Fish	.....	.....	.....	.....	98 lbs.
Tinned Meat	.....	.....	.....	.....	205 lbs.
Tinned Milk	.....	.....	.....	.....	67 tins
Eggs	.....	.....	.....	.....	4,066

### Water Supply.

The water supply to Penrith is obtained from Lake Hayeswater and conveyed 19 miles through an 8 inch main which supplies four storage reservoirs situated at Carleton, Beacon Road, Fairhill and Maidenhill, the total capacity being 1,375,000 gallons. The water is excellent in quality, tests are frequently made, the last being on 4th December, 1941, which the Analyst gave as a very good domestic supply.

Special attention is given to the inspection of reservoirs and testing of mains. At the beginning of the year, owing to the increase in population, it was found difficult to maintain the necessary supply ; this has been overcome by the L.M.S. Railway Company installing a pump on the bank of the River Eamont, taking their supply which is approximately 90,000 gallons per day. Owing to this, we now have a surplus.

### Smoke Abatement.

No statutory action has been taken in connection with smoke nuisance during the year 1941.

### **Eradication of Bed Bugs.**

One case has been dealt with during the year, the premises being fumigated and all bedding, furniture and walls sprayed with "Pyagra" solution.

### **Schools.**

All Schools have been visited and inspected. Sanitary conditions were found to be satisfactory with the exception of St. Catherine's School, which has a trough system ; this should be replaced by pedestal water closets as soon as possible.

Owing to the outbreak of Scarlet Fever, all lavatories have been disinfected.

### **Housing.**

Number of Houses erected during 1941 :—

By Local Authority .....	Nil
By Other Persons.....	4

### **Milk Supply.**

Number of Cowkeepers, Dairymen and Wholesale Purveyors of Milk on Register .....	26
Number of Farms used as Dairies .....	26
Number of Other Premises used as Dairies .....	7
Number of Retail Purveyors of Milk .....	16

Samples taken and submitted to the Pathological Laboratory at Carlisle during the year 1941 :—

Certified Standard T.T. ....	11
Accredited .....	14
Ungraded .....	14

A number of unsatisfactory samples were taken. Seventeen cases were entirely unsatisfactory, while 6 contained Coliform Bacilli and there were 2 cases of unclean milk. Appropriate action was taken in each case.

### **Refuse Collection and Disposal.**

The use of sanitary dustbins is universal throughout the area. House collection of refuse is carried out weekly by the Council's staff.

The old refuse tip near the Carlisle Road having served its purpose, has now been closed, and the system of Controlled Tipping commenced at Red Hills on the 19th December, 1941.



On Saturday, 14th June, Professor Hewer, of the Ministry of Food, paid a visit to the old refuse tip at Carlisle Road and the proposed site at Red Hills. The Professor congratulated the Council on their choice, saying that it was the best he had seen and added that the Carlisle Road site was the worst.

Owing to the outbreak of Trichinosis, rats from various premises were microscopically examined. Out of 166 rats caught at the Carlisle Road Tip, 14 were found to be infected with the disease.

Strong measures were at once taken to clear the Tip of these pests, the method used was flooding, spraying with creosote and poison. I can safely say that the Refuse Tip is now clear of rats.

### **Sewage.**

The whole of the district is drained by a system of sewers, the main outfall discharging into the Sewage Disposal Works at Whinfell,  $2\frac{1}{2}$  miles out of town. On entering the works the effluent passes through detritus tanks, which are in duplicate and each 10 ft. 0 ins. by 6 ft. 0 ins. by 6 ft. 0 ins. deep, then through a dividing chamber into four settling tanks of the circular flat bottomed buck lined type, of a total capacity of 208,000 gallons.

The effluent after treatment in the settling tanks is passed to four revolving distributors by cast iron pipes, the distributors discharge over media of granite, each filter having a diameter of 80 feet and an average depth of 6 feet. After passing through the filtering media the effluent enters humus tanks constructed in duplicate ; these are rectangular sloping floor tanks with scum boards at each end. The resultant effluent then discharges direct into the River Eamont.

I am, Mrs. Johnson and Gentlemen,

Your obedient servant,

J. W. BUTLER,

Surveyor, Sanitary Inspector  
and Water Engineer.

