

## **Report on the Royal Lunatic Asylum of Montrose for 1867 : instituted 1782.**

### **Contributors**

Royal Lunatic Asylum of Montrose.  
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REPORT  
ON THE  
ROYAL LUNATIC ASYLUM  
OF MONTROSE

FOR  
1867.


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INSTITUTED 1782.

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MONTROSE :  
PRINTED AT THE STANDARD OFFICE, HIGH STREET.

—  
1867.



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# LIST OF DIRECTORS.

JUNE 1867.

- The PROVOST and ELDEST BAILIE of MONTROSE.  
 The FIRST and SECOND MINISTERS of the Parish of Montrose.
- 5 PATRICK ARKLEY, Esq. of Dunninald.  
 W. MACDONALD MACDONALD, Esq. of Rossie.  
 The Right Hon. the EARL of SOUTHESK.  
 Sir JAMES CAMPBELL of Stracathro.  
 ALEXANDER PORTEOUS, Esq. of Lauriston.
- 10 THOMAS RENNY TAILYOUR, Esq. of Borrowfield.  
 JOHN DUNCAN, Esq. of Sunnyside and Parkhill.  
 DAVID LYALL, Esq. of Gallery.  
 THOMAS MACPHERSON GRANT, Esq. of Craigo.  
 HERCULES SCOTT, Esq. of Brotherton.
- 15 JAMES FITZMAURICE SCOTT, Esq. of Commieston.  
 The Rev. ROBERT MITCHELL, Minister, Craig.
- |    |   |                   |     |                           |
|----|---|-------------------|-----|---------------------------|
|    | " | THOMAS MACINTOSH, | do. | St Cyrus.                 |
|    | " | JAMES HAY,        | do. | Lunan.                    |
|    | " | ARCH. BUCHANAN,   | do. | Logie-Pert.               |
| 20 | " | WILLIAM NIXON,    | do. | Free St John's, Montrose. |
|    | " | PATRICK CUSHNIE,  | do. | St Mary's Chapel, do.     |
|    | " | JOHN LISTER,      | do. | Free St George's, do.     |
|    | " | WILLIAM ANDERSON, | do. | Melville Church, do.      |
|    | " | JOHN WOODWARD,    | do. | St Mary's Chapel, do.     |
| 25 | " | JOSHUA R. JAGOE,  | do. | St Peter's, do.           |
- Messrs WILLIAM JAMESON, Montrose.
- |    |  |                   |     |  |
|----|--|-------------------|-----|--|
|    |  | ARCHIBALD FOOTE,  | do. |  |
|    |  | DAVID WALKER,     | do. |  |
|    |  | THOMAS BARCLAY,   | do. |  |
| 30 |  | ROBERT WALKER,    | do. |  |
|    |  | JAMES M. PATON,   | do. |  |
|    |  | FRANCIS B. PATON, | do. |  |
|    |  | ROBERT SMART,     | do. |  |
|    |  | THOMAS NAPIER,    | do. |  |
| 35 |  | C. H. MILLAR,     | do. |  |
|    |  | DAVID MITCHELL,   | do. |  |
|    |  | CHARLES BIRNIE,   | do. |  |
|    |  | FRANCIS ABERDEIN, | do. |  |
|    |  | ROBERT COOKE,     | do. |  |
| 40 |  | JOHN GUTHRIE,     | do. |  |
|    |  | JAMES SAVEGE,     | do. |  |
|    |  | GEORGE C. MYERS,  | do. |  |
|    |  | THOMAS B. PATON,  | do. |  |
|    |  | ROBERT HECTOR,    | do. |  |
| 45 |  | EDWARD MILLAR,    | do. |  |
|    |  | ROBERT BARCLAY,   | do. |  |
|    |  | CHARLES BURNES,   | do. |  |
| 48 |  | ALEXANDER MACKIE, | do. |  |

ANNUAL GENERAL MEETING,.....2nd TUESDAY OF JUNE.

MONTHLY MEETING, .....1st TUESDAY OF EACH MONTH.

AT TWELVE O'CLOCK NOON.

House Committee of Asylum.

MESSRS DAVID WALKER.  
" JOHN GUTHRIE.  
" FRANCIS B. PATON.  
" ROBERT HECTOR.  
" ARCHIBALD FOOTE.  
MR WALKER, *Convener.*

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List of Asylum Officers.

JAMES C. HOWDEN, M.D.,.....*Medical Superintendent.*  
ADAM ADDISON, L.R.C.P. & S.,.....*Resident Medical Officer.*  
DAVID JOHNSTON, M.D., .....*Consulting Physician.*  
REV. WILLIAM MORTIMER, M.A.,... *Chaplain.*  
JAMES NIDDRIE, ..... *Steward.*  
MRS WRIGHT, .....*Housekeeper.*  
MISS BURNES, .....*Head Female Attendant.*  
DAVID PICKEMAN, .....*Head Male Attendant.*

GEORGE C. CHALMERS, BANKER,

*Treasurer.*

ADAM BURNES, SOLICITOR.

*Secretary.*

## BALANCE ACCOUNT

OF THE

# MONTROSE ROYAL LUNATIC ASYLUM.

*Drs.*

Seats in Parish Church	...	...	...	...	£29 10 0
Outstanding Boards	...	...	...	...	222 5 3
Old Asylum	...	...	...	...	2,390 15 7
New Asylum, Sunnyside	...	...	...	...	27,861 15 0
Do Furniture Account	...	...	...	...	2,567 15 0
Carriages and Horses	...	...	...	...	60 0 0
Superintendent's House	...	...	...	...	1,218 19 0
The Brechin Gas Company	...	...	...	...	160 0 0
Household Expenses for Stock on hand	...	...	...	...	503 5 4
Clothing	Do.	...	...	...	401 14 1
Farm Account for Stock	...	...	...	...	359 8 5
Balance of Cash	...	...	...	...	10 2 6
					£35,785 10 2

*Crs.*

Sundry Bond Holders	...	...	...	...	£13,000 0 0
The National Bank of Scotland	...	..	...	...	6,329 0 0
Patients' Work and Recreation Fund	...	...	...	...	220 0 0
Stock	...	...	...	...	15,604 7 4
Sinking Fund	...	...	...	...	632 2 10
					£35,785 10 2

## ASYLUM.

REVENUE	...	...	...	...	...£9,203 12 3
EXPENDITURE	...	...	...	...	9,045 9 3
					... £158 3 0

## REPORT OF THE HOUSE COMMITTEE OF THE ASYLUM.

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THE number of patients now in the Asylum is 360 ; while the number at the corresponding period of last year was 396—thus making a decrease on the year of 36. Of the patients of last year, 359 were lodged in the New Asylum, and 37 in the Old. The decrease is accounted for by the withdrawal of the Fife and Kinross patients to the newly-erected District Asylum in the former county. On this withdrawal taking place the whole of the remaining patients were accommodated at Sunnyside, and the Old Asylum was finally closed in the early part of July last. Since then no material alteration has taken place in the number of patients under treatment, and it will probably remain pretty stationary for the future. The Asylum may be considered full, and on this account a number of acute cases offered from the West of Scotland some months ago had to be refused.

In December last the Committee was authorised by the Board to give notice to the District Lunacy Boards, with whom agreements have been entered into, that an extra rate of board would be charged for the patients of parishes keeping a portion of their lunatics in other Asylums, or in the Lunacy Wards of Poorhouses. The object of this notice was to guard against the influx into the Asylum of a disproportionate number of violent, and therefore an expensive class of patients at the present agreed on rate of charge, which was fixed as an average one for tractable and violent patients overhead, and would therefore be wholly inadequate for the latter class alone. The principle now proposed to be established is already acted on by the Gartnavel, or Glasgow Public Asylum, and also (your Committee understand) by some of the new District Asylums—at the former, the extra charge made is 2s 3d per week, or £5 17s per annum ; and the latter make, or propose to make, an extra charge of £5 per annum. When the notice referred to was given, the rate of extra charge to be made was not fixed on ; and the Committee are now prepared to recommend that it should be at the rate of £4 per annum. This rate would by no means cover the cost of keeping violent patients on their first admission, but having regard to the probable average stay of such patients in the Asylum, and to the gradual calming influence exercised over them by its discipline, the Committee hope it will eventually prove sufficient.

The whole expenditure on capital account for the year has been £9. The property has been kept up, and is in good order. Improvements have continued to be made by the patients in the grounds and

on the farm as in previous years. The establishment had been supplied with milk, to the extent of 10,475 gallons, from its own cows.

The Montrose Harbour Commissioners having obtained a Parliamentary right to acquire the Old Asylum within two years from the beginning of last June, nothing has yet been done towards the realizing of that property. In the meantime, the House has been rented out for dwelling-houses to a number of tenants at a gross yearly rental of £116.

The Committee have during the year continued their weekly visits to the Asylum, and they are happy to be again able to express their approval of the management of the establishment, and of the conduct of the staff and officers generally. The Asylum has been twice officially inspected during the year by members of the General Lunacy Board, and the following short extracts from their reports will no doubt be satisfactory to the Managers:—Sir James Coxe reports on the 13th December last—“The condition and management of the Asylum continue to merit the commendations bestowed on them in former reports.” “Every disposition is shewn to give effect to the suggestions made for improving the establishment. The efforts of the Directors in this direction, are, however, controlled by the condition of the finances, and when it is borne in mind that a considerable deduction must be made from the payment of pauper patients, which for those of the district is £22 per annum, to meet the charge for interest, it will be seen how well and economically the affairs of the Asylum are managed. Indeed, it is a question whether the present rate is sufficient to keep the establishment in a thoroughly effective condition. In the Perth and Inverness districts, where the Asylums have been built and furnished by assessment, and no deduction for interest falls to be made from the payment of patients, the rates have been fixed at £25.” “It is hardly necessary to add that the condition of the Asylum is extremely creditable to all concerned in its management.” Dr Browne, reports on the 9th April last—“This establishment was found in excellent order.” “The accommodation for the more affluent classes is most satisfactory.”

With reference to the remark of Sir James Coxe as to the rate of board charged for parochial patients, the Committee beg to add that, in addition to the charge for interest, “Public” Asylums require to provide a yearly surplus for a sufficient Sinking Fund, to meet deterioration on property. “District” Asylums require no such provision, as when their buildings become dilapidated, recourse will again be had to assessment. The surplus shewn on the accounts of the Asylum for the last two years averages 1 per cent. per annum.

The Committee beg to return their grateful acknowledgments to those parties who have kindly given lectures and concerts in the Asylum during the year, and to the benevolent ladies and others who contributed to the Amusement Fund, or shewn other acts of kindness to the patients.

DAVID WALKER, CONVENER.



# MEDICAL SUPERINTENDENT'S REPORT

FOR THE YEAR 1866-67.

## *Closing of Old Asylum.*

THE Old Asylum was finally closed in July last, and the entire establishment concentrated at Sunnyside. It was the first public hospital erected in Scotland for the treatment of the insane, and has served that purpose during 85 years.

## *Number of Inmates.*

The number of inmates on 31st May was 359, and the House may be considered quite full, according to present arrangements.

*Table I.—Showing the Admissions, Re-admissions, Discharges, and Deaths during the year 1866-67.*

				Males.	Females.	Total.
In Asylum at 31st May, 1866	...	...	...	185	207	392
On trial	...	...	...	2	2	4
Admitted for the first time during the year	...	...	...	41	32	73
Re-admitted during the year	..	...	..	5	11	16
<b>Total treated during the year</b>	...	...	...	<b>233</b>	<b>252</b>	<b>485</b>
<b>Discharged and Dead,—</b>						
			Males. Females. Total.			
Recovered	...	...	22 16 38			
Improved	...	...	10 5 15			
Uncured	...	...	20 21 41			
Died	...	...	14 18 32			
			— — —	66	60	126
<b>Total remaining on 31st May, 1867,</b>	...	...	...	<b>167</b>	<b>192</b>	<b>359</b>

The daily average during the year was 359.8; the highest monthly average was in August, 373.9; the lowest in December, 356.

*Table II.—Showing Daily Average Number Resident for each Month and for the Year.*

			Males.		Females.		Total.
June,	1866	...	187.866	...	172.066	...	359.932
July,	"	...	187.354	...	177.290	...	364.644
August,	"	...	179.806	...	193.096	...	373.902
September	"	...	168.336	...	189.566	...	357.932
October,	"	...	171.219	...	188.548	...	359.767
November,	"	...	176.633	...	187.233	...	363.866
December,	"	...	172.322	...	183.774	...	356.096
January,	1867	...	173.322	...	183.709	...	357.031
February,	"	...	171.785	...	186.321	...	358.106
March,	"	...	167.838	...	189.677	...	357.515
April,	"	...	167.533	...	188.666	...	356.199
May,	"	...	164.129	...	189.548	...	353.677
For the whole Year,			174.014	...	185.791	...	359.805

*Table III.—Shewing Admissions, Re-admissions, Discharges, and Deaths, from 31st May, 1857, to 1st June, 1867.*

			Males.	Females.	Total.
Persons resident at 31st May, 1857	...	...	107	144	251
Persons since admitted for the first time	...	...	582	740	1322
Persons since re-admitted	...	...	56	93	149
Total cases treated during the ten years			745	977	1722
Discharged or Remained—					
			Males.	Females.	Total.
Recovered	...	...	211	301	512
Relieved	...	...	54	83	137
Not Improved	...	...	124	167	291
Died	...	...	184	234	418
Escaped	...	...	5	0	5
			578	785	1363
			167	192	359

Of those admitted, 51 were unmarried, 29 married, and 9 widowed.





*Admissions.*

The admissions were 89, being seven more than last year. Of these, 46 were men, and 43 women. Fourteen patients were refused admission for want of accommodation; and a proposal to receive all the acute cases belonging to the Parish of Greenock was also declined for the same reason.

*Table VI.—Shewing the Condition as to Marriage.*

					Males.		Females.		Total.
I. Single	...	...	...	...	27	...	24	...	51
II. Married	...	...	...	...	16	...	13	...	29
III. Widowed	...	...	...	...	3	...	6	...	9
					—		—		—
					46		43		89

Forty-seven were considered at the time of admission to be curable, and sixty-two incurable.

*Table VII.—Shewing the Numbers Curable and Incurable of Patients Admitted.*

					Male		Female		Total
Curable	...	...	...	...	24	...	23	...	47
Incurable	...	...	...	...	22	...	20	...	62
					—		—		—
					46		43		89

Four were under 23 years of age, 38 between 20 and 40, and 14 between 60 and 80.

One of the young patients was a boy of 14, from Caithness. During the night he was wakened from his sleep by a thunder storm, and so terrified, that he became suddenly maniacal. He was a healthy lad, and quite recovered after three months residence in the Asylum.

*Bodily Health of those Admitted.*

The state of bodily health in those admitted was good in 36, indifferent in 33, and bad in 20. Two laboured under paralysis, 1 under epilepsy, 2 had pneumonia, 11 consumption, 1 bronchitis, 5 heart disease, 2 Bright's disease of the kidney, and 2 were blind and deaf.

*Table VIII.—Shewing the Bodily Condition and Diseases of those Admitted.*

	Males.	Females.	Total.
Good ... ..	19	17	36
Indifferent, ... ..	20	13	33
Bad, ... ..	7	13	20
	—	—	—
	46	43	89
DISEASES.			
Paralytic, ... ..	2	0	2
Paralysis Agitans, ... ..	0	2	2
Epilepsy, ... ..	1	0	1
Pneumonia, ... ..	1	1	2
Phthisis, ... ..	2	4	6
Bronchitis, ... ..	0	1	1
Cardiac Disease, ... ..	1	4	5
Ascites, ... ..	0	1	1
Albuminuria, ... ..	2	0	2
Deaf and Blind, ... ..	1	1	2
	—	—	—
	10	14	24

The small number of paralytics and epileptics admitted is remarkable, as also is the frequency of consumption. The loss of sight, hearing, and reason, is fortunately a rare combination of afflictions. In the two instances referred to, the intellect has been mercifully so far blunted as to render the sufferers almost unconscious of their miserable condition.

*Counties whence Patients were Admitted.*

Forty-seven of the patients are from the County of Forfar, 12 from Kincardine, 12 from Caithness, and 18 from other counties.

Table IX.—*Shewing the Counties whence Patients have come.*

				Males.		Females.		Total.
Aberdeen	...	...	...	0	...	3	...	3
Caithness	...	...	...	5	...	7	...	12
Clackmannan	...	...	...	0	...	1	...	1
Edinburgh	...	...	...	5	...	0	...	5
Fife	...	...	...	1	...	0	...	1
Forfar	...	...	...	24	...	23	...	47
Haddington	...	...	...	0	...	1	...	1
Kincardine	...	...	...	6	...	6	...	12
Lanark	...	...	...	2	...	0	...	2
Shetland	...	...	...	1	...	1	...	2
Stirling	...	...	...	2	...	1	...	3
				—		—		—
				46		43		89

*Proportion of those Admitted already Discharged.*

Of the 89 admitted in the year, 21 (or nearly one-half of the curable cases) have already been discharged recovered, 1 as relieved, 2 as not improved, 4 have died, and 61 remain under treatment.

*Recoveries.*

The total number of recoveries during the year was 38, being in the proportion of 42.5 to every hundred admitted. Of these, 4 were less than a month in the Asylum, 17 from two to six months, 9 from six to twelve months, 7 from one to four years, and one recovered after a residence of six years.

Table X.—*Shewing the Period of Residence of those Recovered and Dead.*

	RECOVERED.			DEAD.		
	M.	F.	Total.	M.	F.	Total.
Under 4 weeks ...	2	2	4	1	0	1
" 2 months	6	0	6	0	2	2
" 4 "	5	3	8	0	0	0
" 5 "	1	0	1	0	0	0
" 6 "	1	1	2	0	0	0
" 7 "	2	1	3	0	0	0
" 8 "	1	1	2	0	0	0
" 9 "	0	1	1	1	0	1
" 12 "	1	2	3	0	1	1
" 2 years	2	2	4	1	4	5
" 3 "	0	2	2	3	4	7
" 4 "	1	0	1	3	0	3
" 5 "	0	0	0	3	1	4
" 6 "	0	1	1	1	1	2
" 7 "	0	0	0	0	1	1
" 8 "	0	0	0	1	0	1
" 9 "	0	0	0	0	0	0
" 10 "	0	0	0	0	3	3
" 14 "	0	0	0	0	1	1
	—	—	—	—	—	—
	22	16	38	14	18	32

*Cases Improved.*

Besides those completely restored to reason, 15 were discharged so far improved as to afford hope that they would either ultimately recover or continue in such a state as to render residence in the Asylum unnecessary.

*Transfers.*

Of the 41 who are discharged as not improved, 40 were patients transferred to the new Asylums of the districts to which they belonged.

*Deaths.*

The deaths were 32 in number, being in the proportion of 8.8 per cent. of the average daily number of inmates and of 6.9 per cent. of the total number treated. Ten of those who died were between twenty and forty years of age; 13 between 40 and 60; and 9 between 60 and 80.

*Table XI.—Shewing the Ages of those Admitted and Dead.*

	ADMITTED.			DEAD.				
	Males.	Females.	Total.	Males.	Females.	Total.		
Under 20 years	...	2	2	4	...	0	0	0
From 20 to 30 years	...	8	4	12	...	0	2	2
„ 30 to 40 „	...	16	10	26	...	4	4	8
„ 40 to 50 „	...	7	11	18	...	1	4	5
„ 50 to 60 „	...	8	7	15	...	4	4	8
„ 60 to 70 „	...	2	7	9	...	5	3	8
„ 70 to 80 „	...	3	2	5	...	0	1	1
		—	—	—		—	—	—
		46	43	89		14	18	32

Three died within two months of their admission, 7 had been from 9 months to 2 years in the house, and 22 between 2 and 14 years. It may be remarked that the proportion of deaths among the chronic cases has been unusually large this year, and that among recent cases unusually small.

*Causes of Death.*

The causes of death are shewn in Table XIII., and may



be summarised as follow:—Diseases of the brain, 9; diseases of the lungs, 13; diseases of the abdominal viscera, 7; influenza, 1; general decay, 1; poisoning by Laburnam seeds, 1.

*Table XII.—Shewing the Causes of Death during the Year.*

	Males.	Females.	Total.
Cerebral and Spinal Disease,—			
Apoplexy, ... ..	2	1	3
Apoplexy (due to Concussion), ...	0	1	1
Paralysis, ... ..	0	1	1
General Paralysis, ... ..	3	0	3
Epileptoid attack in Cerebral Disease,	0	1	1
Thoracic Disease,—			
Phthisis, ... ..	1	7	8
Pneumonia, ... ..	3	0	3
Pleurisy, ... ..	2	0	2
Abdominal Disease,—			
Ulceration of the Gall Bladder, ...	0	1	1
Hepatic Disease, ... ..	0	1	1
Bright's Disease and Abscess of Kidney,	0	1	1
Disease of Abdominal Viscera, compli- cated by Diarrhoea, ... ..	0	1	1
Cancer of Prostate Gland, Liver, & Lung,	1	0	1
Dropsy, ... ..	1	1	2
Other Diseases,—			
General Decay, ... ..	0	1	1
Poisoning by Laburnam Seeds, ...	1	0	1
Influenza, ... ..	0	1	1
	14	18	32

Post Mortem examinations made in 30 cases.

*Poisoning by Laburnam Seeds.*

The only case of death requiring special notice is that from Laburnam seeds. The man, a chronic maniac, while walking in the grounds, had gathered and ate a quantity of the ripe seeds of the Laburnam tree, under the notion that it would remove some trivial uneasiness in his stomach. Three hours afterwards he was seized with violent retching and purging. These symptoms were succeeded by drowsiness and great depression of the heart's action. The poison was evidently absorbed into the circulation, and efforts were made to counteract its narcotic effects. These efforts appeared likely to be successful; but next day he became suddenly worse, and died perfectly conscious, from paralysis of the heart, twenty-four hours after eating the seeds. Several cases of Laburnam poisoning are on record; but there is some uncertainty as to the exact conditions in which the seeds are poisonous. I have been told by several persons that they have repeatedly ate the seeds with perfect impunity, and a patient, now recovered, whose word I have no reason to doubt, assured me that

during his illness he often ate quantities in the green state, while walking in the grounds, without feeling any inconvenience. It is not unlikely that the poison only becomes developed when the seed is fully ripened.

When the garden and pleasure grounds were laid out, care was taken to exclude poisonous plants, but the Laburnam tree was overlooked. Since the occasion of the accident, however, it was deemed advisable to remove all the plants.

### *Mortality in Asylums.*

The mortality in this Asylum has been considerably lower during the last three years than it was during the previous three, owing no doubt to the admission being fewer. For the three last years it was on the average population 7.9, 9, and 8.8 per cent., while in the three former years it was 10, 13, and 12 per cent.

### *Analysis of Deaths during the last two years.*

I have made an analysis of the death register for the last two years, with the view of ascertaining the class of patients who are most prone to die. During the period referred to, 26 men and 43 women have died. When these persons were admitted, 9 of them were entered as being in good bodily condition, 2 as indifferent, 17 as bad, 18 as paralytic or epileptic, 2 as labouring under phthisis, 6 as otherwise seriously diseased, and in 15 the state of physical health on admission was not known.

*Table XIII.—Shewing State of Bodily Condition and State of Health on Admission of those who died from 1st June, 1865, to 31st May, 1867, inclusive.*

	Men.	Women.	Both Sexes.
Good, ... ..	5	4	9
Indifferent, ... ..	0	2	2
Bad, ... ..	5	12	17
Paralytic or Epileptic, ... ..	10	8	18
Phthisical, ... ..	1	1	2
Otherwise diseased, ... ..	2	4	6
Uncertain, ... ..	3	12	15
Total, ... ..	26	43	69

Of these persons 25 died from paralysis, apoplexy, or epilepsy, 13 from phthisis, 10 from pneumonia or pleurisy, 4 from dysentery or diarrhoea, and 17 from other diseases.

Table XIV.—*Shewing Causes of Deaths during two years.*

	Men.	Women.	Both Sexes.
Paralysis, Apoplexy, Epilepsy, &c., ...	11	14	25
Phthisis, ...	3	10	13
Pneumonia and Pleurisy, ...	7	3	10
Dysentery and Diarrhoea, ...	0	4	4
Other Diseases, ...	5	12	17
Total, ...	26	43	69

*Phthisis as a Cause of Death.*

It will be seen that while only two of those who died were ascertained to be affected with phthisis when admitted, 13 of them died from it. Making allowance for incipient symptoms being occasionally undetected, there can be no doubt that the disease has in most of the remaining 11 begun during their residence in the Asylum. The intimate relation of consumption and insanity is well known. Dr Clouston in a paper on "Tuberculosis and Insanity,"\* states that during four years, 1859-63, 26.7 per cent. of the deaths in Scotch Asylums resulted from phthisis and other lung diseases, and again that of 463 bodies of insane persons examined after death in the Royal Edinburgh Asylum, tubercular deposit was found in 282, or 61 per cent. The mortality from this disease is very much the same, and in some instances much greater, in English, American, French, and other Continental Asylums,† and it will always hold a prominent place in the death list. Still there can be no doubt that many of the deaths from phthisis, as well as from dysentery and diarrhoea, are producible, in so much as they are generated by cold, mal-nutrition, or some other unfavourable hygienic condition. Looking over the inmates of an Asylum, the experienced eye can easily detect those who are likely to die from phthisis. The motionless, helpless demented who have not sense or instinct left to guard themselves against cold, to satisfy the cravings of hunger, or to answer the common calls of nature, are those who generally succumb to this disease. The most careful nursing will fail to protect these persons always from the exciting causes of consumption, and their treatment is rendered more unsatisfactory because the disease often runs its rapid course without presenting any of the symptoms we find among the sane.

*Small Proportion of Working Patients Die.*

On looking over the history of the patients who have died within the last two years, I have been particularly struck with the remarkable

\* Journal of Mental Science, April, 1863

† In seven American Asylums, 27 per cent. of the deaths are stated to result from Phthisis; and in the Salpêtrière, 50 per cent.—*Op. cit.*, p. 38.

disproportion between the workers and non-workers. Classifying the patients thus—1st, regular workers; 2d, occasional workers; 3d, non-workers, or those who from physical or other causes were incapable of employment during the whole period of residence in the Asylum, I find that out of the whole inmates, 254 belong to first and second classes, and 105 to the third; whereas among those who died during the last two years only 7 were regular workers, 11 occasional workers, and 51 non-workers. In other words—while 72 per cent. of the inmates are more or less industrious, and 27 per cent. non-industrious—74 per cent. of those who died belonged to the latter class, and only 26 per cent. to the former.

*Table XV.—Shewing the Industrial Habits of those who died between 31st May, 1865, and 1st June, 1867.*

	Men.	Women.	Total.
Regular Workers, ... ..	4	3	7
Occasional Workers, ... ..	6	5	11
Those who never worked, ... ..	16	35	51
	—	—	—
Total, ... ..	26	43	69
Per centage of idlers among those who died.			
Men, ... ..	61 per cent.		
Women, ... ..	81 per cent.		
Both Sexes, ... ..	71 per cent.		

Again, on looking to the cause of death among the industrial patients, we find that, with few exceptions, they belong to the non-preventable class of diseases. Thus, of the regular workers, 1 died from general paralysis, 1 from apoplexy, 1 from cancer, 1 from ulceration of the gall bladder, 1 from poison, and 2 from phthisis; and among the irregular workers, 2 died from general paralysis, 1 from ordinary paralysis, 2 from apoplexy, 1 from organic disease of the liver, 1 from ulceration of the stomach, 1 from Bright's disease of the kidney, 2 from phthisis, and 1 from pleurisy.

These facts, I think, tend to shew that manual labour is beneficial, in a hygienic point of view, to the insane, and that it is not in the industrious class that we are to look for the causes of the high mortality.

*Weight of Patients on Admission and after Residence in Asylum.*

During the last two years, with few exceptions, the patients have been weighed on admission and again on their discharge, and those who remained on 31st May were again weighed. I have drawn out a table shewing the form of insanity, physical condition and weight in lbs. of those admitted, the duration of residence in Asylum, and the gain or loss of weight on discharge, or on 31st May, 1867.

Table XVI.—*Shewing the Weight of Patients on Admission and on Discharge, or on 31st May, 1867.*

M A L E S .						
Form of Insanity.	Physical Disease on Admission,	Weight in lbs. or on Admissn.	Weight on Discharge or on 31st May, 1867.	Period of Residence in Asylum.	Gain in Weight.	Loss in Weight.
Mania	None	124 lbs	126 lbs.	21 months.	2 lbs.	—
Melancholia	Ch. Bronchitis	119 ...	137 ...	20 ...	18 ...	—
Mon. of Suspcn.	None	119 ...	133 ...	17 ...	14 ...	—
Mania	Uncertain	117 ...	138 ...	8 ...	21 ...	—
Dementia	None	131 ...	129 ...	17 ...	—	2 lbs.
Dementia	None	119 ...	123 ...	17 ...	4 ...	—
Suicidal Mania	Cut Throat	117 ...	140 ...	13 ...	23 ...	—
Dementia	Phthisis ?	154 ...	167 ...	13 ...	13 ...	—
Mania	Heart Disease & Ch. Bronch.	147 ...	167 ...	13 ...	20 ...	—
Mon. of Suspcn.	Heart Disease	122 ...	117 ...	13 ...	—	5 ...
Mania	None	115 ...	136 ...	12 ...	21 ...	—
Mon. of Suspcn.	Phthisis	161 ...	133 ...	12 ...	—	28*
Mania	None	146 ...	157 ...	5 ...	11 ...	—
Melancholia	None	158 ...	154 ...	11 ...	—	4 ...
Melancholia	Ch. Bronchitis	103 ...	125 ...	11 ...	22 ...	—
Mon. of Fear	None	114 ...	119 ...	7 ...	5 ...	—
Mania	Uncertain	133 ...	154 ...	8 ...	21 ...	—
Delirium Trmns.	Albiminuria	123 ...	125 ...	2 ...	2 ...	—
Mania	None	81 ...	93 ...	5 ...	12 ...	—
Dementia	None	135 ...	161 ...	9 ...	26 ...	—
Dementia	None	111 ...	109 ...	9 ...	—	2 ...
Dementia	None	160 ...	172 ...	9 ...	12 ...	—
Mania	None	123 ...	158 ...	9 ...	35 ...	—
Melancholia	None	125 ...	139 ...	9 ...	14 ...	—
Senile Dementia	Heart Disease	124 ...	144 ...	8 ...	20 ...	—
Mon. of Pride	None	175 ...	166 ...	7 ...	—	9 ...
Delir. Tremens	None	146 ...	159 ...	1 ...	13 ...	—
Mania	None	104 ...	115 ...	7 ...	11 ...	—
Mon. of Suspcn.	None	123 ...	131 ...	7 ...	8 ...	—
Mania	None	123 ...	126 ...	6 ...	3 ...	—
Dementia	None	153 ...	160 ...	5 ...	7 ...	—
Mania	None	130 ...	153 ...	5 ...	23 ...	—
Mania	None	164 ...	163 ...	5 ...	—	1 ...
Cong. Imbecile	None	178 ...	176 ...	5 ...	—	2 ...
Hypochondriasis	None	132 ...	136 ...	5 ...	4 ...	—
Dementia	Paralysis	155 ...	172 ...	5 ...	17 ...	—
Del. Tremens	None	156 ...	164 ...	2 weeks.	8 ...	—
Dementia	Paralysis and Heart Disease	117 ...	160 ...	4 months.	43 ...	—
Mon. of Suspcn	None	109 ...	108 ...	3 ...	—	1 ...
Melancholia	Heart Disease & Albiminuria	127 ...	145 ...	3 ...	18 ...	—
Chronic Mania	Phthisis	148 ...	158 ...	2 ...	10 ...	—
Dementia	None	149 ...	151 ...	2 ...	2 ...	—
Mania	Phthisis	112 ...	130 ...	2 ...	18 ...	—
Dementia	Epilepsy	128 ...	131 ...	1 ...	3 ...	—
Cong. Imbecile	None	116 ...	125 ...	1 ...	9 ...	—
Dementia	None	135 ...	136 ...	1 ...	1 ...	—
Melancholia	Heart Disease	146 ...	140 ...	3 weeks.	—	6 ...
Cong. Imbecility	None	95 ...	92 ...	3 ...	—	3 ...
Dementia	Paralysis	151 ...	151 ...	2 ...	—	—
Total ...	...	6453 lbs.	6904 lbs.		514 lbs.	63 lbs.

Average Weight on admission, 131.6 lbs.; average Weight on Discharge, or on 31st May, 140.8 lbs.

\* Refusing food.

F E M A L E S .						
Form of Isanity.	Physical Disease on Admission.	Weight on Admissn.	Weight on Discharge, or on 31st May.	Residence in Asylum.	Gain.	Loss.
Ep. Mania	Albuminuria?	106 lbs.	112 lbs.	24 months.	6 lbs.	—
Dementia	Epilepsy Phthisis?	96 ...	117 ...	24 ...	21 ...	—
Cong. Imbecility	None	134 ...	135 ...	21 ...	1 ...	—
Melancholia	None	120 ...	114 ...	19 ...	—	6 lbs.
Mania	None	96 ...	111 ...	17 ...	15 ...	—
Melancholia	None	99 ...	110 ...	17 ...	11 ...	—
Mania	None	101 ...	122 ...	17 ...	21 ...	—
Mania	Phthisical	87 ...	98 ...	17 ...	11 ...	—
Intt. Mania	None	156 ...	156 ...	15 ...	—	—
Ch. Mania	None	105 ...	115 ...	14 ...	10 ...	—
Mania	None	136 ...	131 ...	14 ...	—	5 lbs.
Idiocy	None	90 ...	87 ...	14 ...	—	3 ...
Mania	None	100 ...	128 ...	11 ...	28 ...	—
Monomania	Heart Affected	154 ...	142 ...	11 ...	—	12 ...
Mania	None	155 ...	153 ...	10 ...	—	2 ...
Con. Imbecile	Asthma	80 ...	88 ...	9 ...	8 ...	—
Mon. Suspicion.	None	82 ...	87 ...	9 ...	5 ...	—
Mon. Suspicion.	None	112 ...	119 ...	9 ...	7 ...	—
Ch. Mania	None	84 ...	100 ...	9 ...	16 ...	—
Mania	None	98 ...	115 ...	9 ...	17 ...	—
Dementia	None	77 ...	91 ...	9 ...	14 ...	—
Mania	None	120 ...	131 ...	9 ...	11 ...	—
Mania	None	105 ...	135 ...	9 ...	30 ...	—
Mon. of Suspicion.	None	104 ...	115 ...	7 ...	11 ...	—
Mania	None	110 ...	122 ...	6 ...	12 ...	—
Melancholia	Refuses food	105 ...	91 ...	6 ...	—	14 ...
Dementia	Phthisis and Albuminuria	108 ...	122 ...	6 ...	14 ...	—
Mon. Suspicion.	None	105 ...	115 ...	3 ...	10 ...	—
Mon. Suspicion.	Ch. Bronchitis	128 ...	129 ...	3 ...	1 ...	—
Mania	Heart Disease	124 ...	136 ...	2 ...	12 ...	—
Mania	None	124 ...	109 ...	2 ...	—	15* ...
Mania	None	90 ...	91 ...	2 ...	1 ...	—
Mania	None	124 ...	119 ...	2 ...	—	5 ...
Melancholia	None	114 ...	122 ...	2 ...	8 ...	—
Melancholia	Heart Disease	103 ...	114 ...	1 ...	11 ...	—
Dementia	Refuses food	112 ...	120 ...	1 ...	8 ...	—
Melancholia	Phthisis?	98 ...	97 ...	3 weeks.	—	1 ...
Mania	None	109 ...	118 ...	2 ...	4 ...	—
TOTAL ... ..		4156 lbs.	4012 lbs.		324 lbs.	63 lbs.

Average Weight on Admission, 109 lbs.; average Weight on Discharge, or on 31st May, 116 lbs.

From this it will be observed that of the 88 weighed, 21 had lost weight, 2 remained stationary, and 65 had gained; the total loss of weight was 126 lbs. avord. among 21 persons, or an average of 6.3 lbs. per individual; the total gain was 738 lbs. among 65 persons, or an average of 11.3 lbs. per individual. In some cases the gain is

\* After an attack of acute Dysentery.

remarkable—a woman has gained 30 lbs. in eleven months, a man 35 lbs. in nine months, another 43 lbs. in fourth months; a man gained 8 lbs. in a fortnight, another 13 lbs. in a month. In the cases where the patients have lost weight to an appreciable extent, refusal of food, or the existence or late existence of serious disease, explains the circumstance. Thus, of those refusing food—one man loses 9, another 28, and a woman 14 lbs.; a woman with heart disease loses 12 lbs. in eleven months, and a woman 15 lbs. after a severe attack of dysentery. From these facts it may be concluded that the patients admitted are generally below the standard as to weight, and that on the diet of the Asylum and general treatment they rapidly increase in weight. It is worthy of note that the gain is much greater among the patients on the lowest scale of diet, or rather on the scale where oatmeal and milk form the most important items, and that the chief losses are among the private patients who consume a much larger proportion of animal food.

#### *Occurrence of Sickness.*

The occurrence of deaths is not always a true index of the unhealthiness of the weather. The deaths in one month may be the result of the unhealthiness of the previous one; and it is only by noting the seizure of illness that we can get a proper idea of the healthiness or unhealthiness of any particular period.

#### *Medico-Meteorological Register.*

From a register kept during the two past years I have drawn out Table XVII., showing the seizures of illness and the meteorological conditions of each month, from 1st June, 1865, till 31st May, 1867, inclusive. During that period the three most unhealthy months were March, 1866, and March and May, 1867, and the prevailing distemper was diarrhoea and dysentery. When these diseases have become epidemic with us it has been when the temperature has fallen, instead of risen, with the advance of the season. Thus the mean temperature of December, 1865, was 41.5, of January, 1866, 39, in February it fell to 31. In the beginning of March diarrhoea appeared, and in that month the mean temperature was 37 and the minimum 20 deg., two lower than in January, and nine lower than in December. In the following winter January was the coldest month; the mean temperature was 32 deg., the maximum 48 deg., and the minimum 15 deg., and on 11 days the wind was from the north; but the only cases of illness registered are one carbuncle, one of pneumonia, two of phthisis, and two of paralysis. February, 1867, was an unusually fine month, mean temperature, 40.8, and the wind 21 days in south or westerly directions. In March the wind was from the north or east points on 23 days, the mean temperature fell to 36, and an epidemic of diarrhoea broke out in the female department. Some fresh

Table XVII.—Shewing the Seizures of Illness, the Number of Epileptics attacked by Fits, and the Number of Epileptic Fits in each Month, from 1st June, 1865, till 31st May, 1867, with the Meteorological Observations.

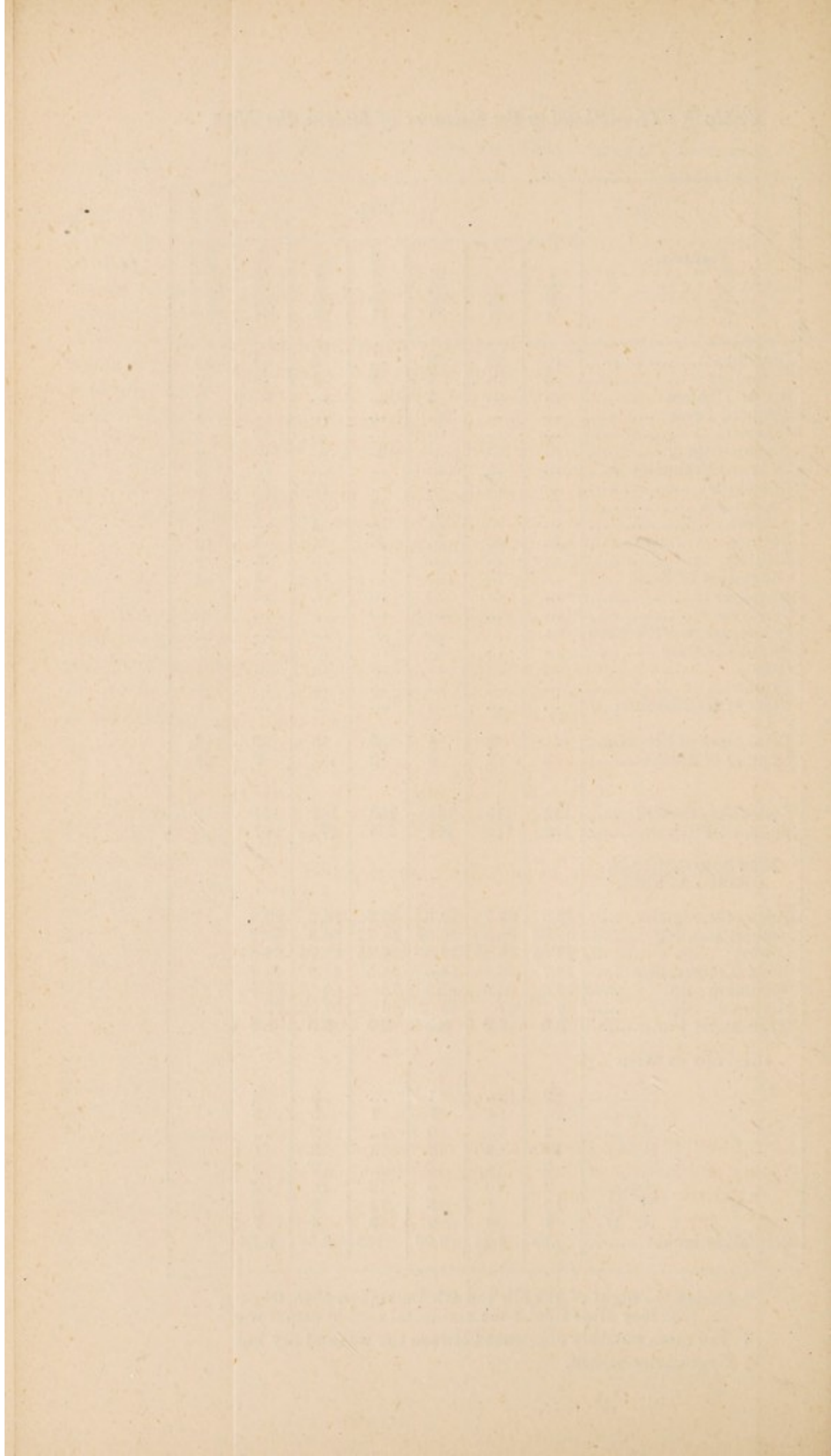
DISEASES.	1865.							1866.												1867.					Total attacks of Diseases in 2 years		
	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May			
Diarrhoea .....	...	2	2	...	4	1	...	...	...	8	4	1	3	3	...	1	2	...	...	...	1	6	5	10	53		
Dysentery .....	...	...	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	7		
British Cholera .....	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2		
Typhoid Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Influenza .....	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	4		
Rheumatism .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2		
Boils or Carbuncles .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	4		
Bronchitis .....	...	...	...	...	...	...	1	1	...	...	1	1	1	...	...	...	...	...	...	...	1	2	...	...	7		
Pneumonia .....	...	...	...	1	...	1	...	...	...	1	1	1	...	...	...	...	...	1	1	...	...	...	...	...	4		
Asthma .....	...	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	4		
Phthisis .....	...	...	...	...	...	1	1	1	1	3	1	1	1	...	...	...	...	...	1	2	1	2	...	...	15		
Pleurisy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Congestion of Brain .....	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	4		
Apoplexy .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Paralysis .....	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	2	...	...	2	...	...	...	...	6		
Inflammation of Stomach .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Bright's Disease .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Iritis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1		
Erysipelas .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1		
Ulcer of Gall Bladder .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1		
Total cases of illness.....	2	2	4	3	6	5	3	4	2	12	7	5	5	4	0	1	7	1	4	6	6	13	5	14	118		
Number of deaths .....	2	1	8	3	2	3	0	2	4	3	5	4	5	4	0	2	2	2	2	2	0	6	3	4	69		
Epileptics attacked .....	112	115	141	153	162	161	122	151	129	156	136	146	153	132	127	135	113	109	150	162	124	128	121	135			
Epileptic Fits .....	160	146	242	296	374	377	356	409	371	372	345	321	342	274	258	308	212	229	314	318	263	260	262	284			
<b>METEOROLOGICAL OBSERVATIONS.</b>																											
Mean of Barometer .....	30.0	29.7	29.6	30.0	28.0	29.6	29.8	30.5	29.3	29.5	29.7	29.8	29.7	29.8	29.5	29	29.9	29.5	29.4	29.5	29.4	29.5	29.6	29.4	29.79		
Highest Reading .....	30.35	30.2	30.02	30.32	30.2	30.2	30.55	30.2	30.13	30.2	30.45	30.4	30.1	30.1	29.92	29.95	30.35	29.85	30.15	30.0	30.3	30.55	29.95	30.1			
Lowest do. ....	29.65	29.43	29.3	29.45	28.75	28.8	28.7	28.45	28.9	28.75	29.23	29.39	29.35	29.05	28.9	28.95	29.29	29.1	29.1	28.73	28.5	29.05	28.8	29.4			
Mean Temperature .....	54.7	56.9	54.5	54.5	44.9	40.9	41.5	39.2	31.3	37.2	42.3	45.6	54.2	55.5	54	49.7	47.4	40.3	38.8	32.1	40.8	36.3	44.9	43.9			
Maximum do. ....	76	75.5	67.5	73	60	52.5	53.5	51.5	50	57	58	63	69	76.5	68.5	61	62	57	54	48	55	53	59.5	65.5			
Minimum do. ....	40	41	40	40	31	27	31.5	22.5	20	20	31	27.5	33	41.5	43	33	31.5	28.5	28	4	23.5	22.5	34	34			
Hygrometer † .....	3.0	4.0	2.0	3.0	3.0	1.0	1.0	1.1	1.0	†	†	†	3.4	4.2	3.3	3.0	1.8	1.8	1.6	...	1.5	.9	2.5	1.8			
<b>DIRECTION OF WIND.</b>																											
N .....	2	...	1	...	8	4	1	...	3	2	2	...	1	3	2	3	3	4	...	11	2	4	1	2			
NE .....	...	4	7	1	5	3	...	...	6	7	8	7	2	6	5	3	2	2	1	8	2	10	1	8			
E .....	2	...	3	...	2	...	...	...	...	4	4	2	6	...	4	2	3.0	...	...	...	...	5	...	12			
S.E. ....	10	8	1	...	8	1	4	...	1	1	5	10	7	...	4	3	2	1	...	1	3	4	6	5			
S .....	3	4	4	...	2	5	2	1	1	5	1	2	2	11	2	1	3.0	...	3	...	1	1	1	1			
S.W. ....	2	10	8	12	...	2	11	15	10	1	4	5	1	...	4	6	6	2	5	4	16	2	6	2			
W .....	10	1	5	14	2	8	10	10	2	9	4	4	9	10	8	10	7.0	14	14	3	2	2	6	1			
N. W. ....	1	4	2	3	4	7	3	5	2	2	2	1	2	1	2	2	5	7	8	4	2	3	9	...			
Rainfall in inches .....	.38	4.44	3.96	.42	3.50	3.78	1.45	1.68	1.90	2.24	1.19	1.22	1.32	2.37	2.05	3.01	2.94	2.24	2.31	1.584	1.66	2.33	2.69	3.36			

\* During the night of the 5th and 6th December, 1865, 60 persons were seized with colic and purging; all recovered within a few hours. The similarity of the cases lead to the suspicion that they arose from some accidental food or rather water poisoning.

† The mean monthly difference between the wet and dry bulb.

‡ Hygrometer broken.





cases appeared in the beginning of April, but after the 6th it was a healthy month, the temperature rising to 49, and the wind blowing on 22 days from south and westerly points. In May the temperature fell again to 44 deg., the wind was 27 days from north or easterly points, and an epidemic of diarrhœa broke out in the male department.

The healthiest months were June, July, December, 1865, January, February, August, September, November, December, 1866, and January, 1867; and all of these months except the last are conspicuous by a seasonable or high temperature, and a small proportion of north and east winds. It is somewhat curious that in March when diarrhœa was so prevalent in the female department there was none in the male department, and in May when it appeared among the men there was none among the women.

It will no doubt require observations to be made over a longer period before any reliable conclusions can be made, but at present it would seem that in this Asylum north and east wind and unseasonable cold are the great enemies to health.

#### *General Treatment.*

The treatment and general routine of the establishment have been much the same as in former years. Almost all patients physically capable have been industriously employed, and none confined to the airing court in good weather who could take more extended exercise. It has not been found necessary to use mechanical restraint or seclusion in any instance. 240 patients join regularly in Divine service, and 230 in the social amusements held during the week.

#### *Patients Boarded with Servants on Farm.*

During the last three years nineteen patients have been boarded with the servants on the farm. They were either convalescents or quiet chronic cases.

Of the 19, ten were ultimately discharged recovered, five were brought back to the Asylum, having been found unsuitable, and four still remain boarded:

#### *Conclusion.*

I have to express my thanks to the officers and servants for their co-operation, and to the House Committee for their support in the management of the Institution.

JAMES C. HOWDEN.

## LOWEST SCALE OF DIETARY.

### BREAKFAST.

<i>Males.</i>	2 Pints	Porridge and	$\frac{1}{2}$ pint	Sweet Milk, or	
	$\frac{3}{4}$	,,		Coffee and	8 ounces Bread and Butter.
<i>Females.</i>	$1\frac{1}{2}$	,,	$\frac{1}{2}$ pint	Sweet Milk, or	
	$\frac{3}{4}$	,,		Coffee and	6 oz. Bread and Butter.

### DINNER.

SUNDAY.—Broth, Bread, and 4 oz. Cooked Meat, without bone.

MONDAY.—Rice and Milk and Bread, or Broth.

TUESDAY.—Broth, Potatoes or Vegetables, and 4 ounces Cooked Meat.

WEDNESDAY.—Broth and Bread.

THURSDAY.—Broth, Potatoes or Vegetables, and 4 ounces Cooked Meat.

FRIDAY.—Broth, Bread, and 4 ounces Fish.

SATURDAY.—Pea Soup and Bread.

### SUPPER.

<i>Males.</i>	2 Pints	Porridge and	$\frac{1}{2}$ pint	Sweet Milk, or	
	$\frac{3}{4}$	,,		Tea, and	8 oz. Bread and Butter.
<i>Females.</i>	$\frac{3}{4}$	,,		Tea, and	6 oz. Bread and Butter.

Working Patients get 3 oz. Bread, 1 oz. Cheese, and  $\frac{1}{2}$  pint of Beer at 11 a.m., for Lunch.

	8 ounces	Oatmeal for	Males, and	6 oz. for	Females for Porridge.
	2	,,		Barley for	each Patient, for Broth.
	3	,,		Rice, for	Rice and Milk, for each Patient.
	4	,,		Split Peas, for	Pea Soup, do.
	$\frac{1}{2}$	,,		Sugar, for	Tea or Coffee, do.
	$\frac{1}{3}$	,,		Butter, do.	do. do.
	$\frac{1}{8}$	,,		Coffee for	each Patient.
	$\frac{1}{12}$	,,		Tea, do.	

Overhead Flour Bread used for dinner—Males 8 oz., and Females 6 oz.

When Potatoes for dinner, 1 lb. allowed for each Patient.

When Vegetables, Males get 6 oz. Bread and Females 4 oz.