Health Report for Hobarton for the Month of November 1856

The Meteorological phenomena for November 1856 were peculiar. The Mean Temperature - 58 - exceeds the average mean of the Month for 14 years - by two degrees. - The daily range was very high; on three days of the Month exceeding 30 degrees. The average daily range for the whole month was 21 degrees. This was much above the 14 years average, and was only equalled by two years out of the fourteen - 1843 - when it was 22 and 1847 - when it was also 21. -

There were 12 days on which rain fell, but only on three in such quantities, as to be effective in flushing the surface drains and water courses. Fortunately these three days were at considerable intervals. - The whole rain fall of the Month, as noted by Mr Abbott, is less than the average for the Month; but as the preceding Months fall exceeded the average; no doubt is told beneficially on the Mortality of November. The general prevalence of South East winds & Sea breezes, would tend to produce the same satisfactory result - The Deaths occurring and Registered in Hobarton during the Month, are classed in the following Table. -

No of Class	Registrar General of England's Classes	Specific Causes of Death as Registered in Hobarton	Months 1	3	4	6	8	11	Ages 2/3	3/4	4/5	10/15	15/20	20/40	40/50	50/60	60/80	80/90	..	Total
1	Zymotic diseases	Hooping Cough	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	1
		Croup	"	"	"	"	"	"	1	1	"	1	"	"	"	"	"	"	"	"	3
2	Dropsy &c	Dropsy	"	"	"	"	"	"	"	"	"	"	"	2	"	"	"	"	"	"	2
3	Tubercular diseases	Consumption	"	"	"	"	"	"	"	"	"	"	1	1	"	1	"	"	"	"	3
4	Dis.s of the Brain &c	Convulsions	4	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	5
		Infl.n of the Brain	"	"	"	1	"	"	"	"	1	"	"	"	"	"	"	"	"	"	2
6	Dis.s of the Lungs &c	Bronchitis	"	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	1
		Pneumonia	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	1
7	Diseases of the Stomach &c	Teething	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	1
		Dis.s of the Liver	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1
		Enteritis	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1
8	Dis.s of the Kidneys &c	Dis.s of the Kidneys	"	"	"	"	"	"	"	"	"	"	1	"	1	"	"	"	"	"	2
12	Malformations	Malformation of the Rectum	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1
13	Premature Birth Debility &c	Premature Birth	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1
15	Age	Age	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	1
17	Violence &c &c &c	Injury to the Spine	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	1
		Cold	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	1
			5	1	2	1	1	1	2	2	1	1	3	3	2	2	1	"		28

In 1851 the Deaths similarly recorded were . . 31
" 1852 do do do 82
" 1853 do do do 44
" 1854 do do do 36
" 1855 do do do 42

It will thus be observed that fewer deaths have occurred during the Month of November 1856, than in any of the preceding five years, during the same Month: November on the average of six years has been the healthiest Month of the Year.

I again this Month direct attention to the deaths from Consumption. One out of the three only — a youth aged from 19 to 20 years — was a native of the Colony. For three years however preceding the time of the disease exhibiting itself, he had been exposed to the hardships and privations of the life of a gold-digger at Victoria. In the Report for October I pointed out that only one out of six deaths from Consumption in that Month, occurred in a native of Tasmania — A child aged 2¼ years at the Orphan School. I have since ascertained at the Orphan School, that the Cause of death was incorrectly registered as Consumption, and ought to have been "Marasmus" So that all the five deaths were in Europeans. — I am most desirous to draw the attention of the Members of the Society, — particularly those of the Medical Profession, — to the apparently rare occurrence of Pulmonary Consumption in the native born. In twenty three years I have never had a Case under my care; and from enquiry, I can trace but few instances of deaths in Tasmanians from this disease. — At the same time it must be observed, that the deaths from Consumption on the whole, are greater in proportion to population, even than in London. On an average of 15 years, out of every 1 Million of the Inhabitants of the English Metropolis. 3,230 die of Consumption — by far the most fatal disease in the mortuary tables. The next on the list being little more than half, and the third — Old age, — little more than one third of that number. — The proportionate average of Hobarton from Consumption last year, exceeded that number by 300, and but few of the victims were Tasmanians. It must be at the same time considered, that the population under 20 years

of age in this Island, is much greater comparatively than
Rules in London. It is remarkable that this distemper
has proved very fatal in this Island amongst the Military, who when
enlisted are specially examined as to their tendency
to this disease, and rejected as recruits if they have
any symptoms indicating it - Last Month it will be
remembered that two Soldiers deaths from this Cause
were recorded. These curious facts are worthy of
particular examination; for if verified, by more extended
observation, they are of paramount interest as regards
the Climatic Character of the Island. - Inimical it
would appear to those Europeans who may have an
hereditary tendency to Consumption, yet wonderfully
exempting those born in the Colony from the ravages
of the same destructive disease. - In every future
Monthly Report I intend to specially to elucidate this
momentous subject -

E. L. Hall

Report
on
Sanitary Condition
of [illegible]
for
November 1886

By favor of Dr Hall, I am enabled to append the following observations on the public health of Hobart Town, and district during the Month

The recorded mortality has been less than that of any October for the four preceding Years, only 26 deaths have been registered within the month, of deaths occuring in October. In the following table, they are grouped in classes to correspond with the nomenclature adopted by the Registrar General of England and Wales, but in the specific diseases the entries made in the Register are adhered to

No of Class	Registrar General of England's Classes	Specific causes of Death as registered in Hobart Town	Ages							Total
							yrs	yrs		
1	Zymotic diseases	Fever	"	"	"	"	21	31	2	5
		Croup	6 m	4 m 4½	4 m 1				3	
2	Dropsy Cancer &c	Dropsy	"	"	"	"	"	34	"	1
3	Tubercular diseases	Consumption	2 m 4	2 m 26	30	38	38	45	6	4
		Decline	7 m	"	"	"	"	"	1	
4	Diseases of the Brain Spinal marrow Nerves and Senses	Convulsions	1 week 9	1 mo 14	"	"	"	"	"	2
6	Diseases of Lungs &c	Cold	1 mo 1	1 mo 3	"	"	"	"	"	2
7	" Organs of digestion	Diseased Liver	"	"	"	"	44 yrs	1		2
		Worms	"	"	"	"	60	1		
8	" Kidneys &c	Disease of the Kidneys	"	"	"	"	58			1
10	Rheumatism &c	Rheumation	"	"	"	"	58			1
17	Violence &c &c	Natural Causes	2 days	"	"	"	"	"	1	5
	Causes not specified	Prematurely born	2 days	"	1 hour	"	"	"	2	
		Decay of Nature	14 "	"	"	"	61	60	2	
							Total			26

Of the above four were of the military detachment, 2 men of Consumption one child of convulsions, and one of old — Of the six cases of consumption only one appears to be native born In 1855 within the same month there were 46 deaths registered under similar circumstances, but it must be observed that Hooping Cough, and Convulsions

&c

prevailed very extensively at that period -

In 1854 there were 27 deaths recorded

In 1853 there were 53 deaths recorded - 23 of these however were from Scarlet Fever which at that time was a very fatal Epidemic

In 1852 there were 40 deaths recorded

In 1851 there were only 23 recorded within the month but the number registered on the first day of the succeeding month, made the mortality exceed that of this year

Notwithstanding the very variable temperature of October 1856 the highest range of any one day 31 degrees has been exceeded in 7 years out of the fourteen - in the month of October, according to the published Observatory records -

The mean temperature of this month 55 exceeds that of the fourteen years average by 3.59 degrees, and the rainfall 2.22 inches exceeds the average by .625 inches. Hitherto every Month of 1856 has exceeded in both these particulars the average mean of the 14 preceding years - ——

On the average of the last 6 Years October has been amongst the healthiest months of the Year, being next to May and November, in the last of which occurs the lowest amount of mortality. —— Tho' the higher mean of temperature for October of this Year, would have led us to expect a higher range of mortality, this has been counteracted by the lower daily range, and above all by the numerous wet days -

Frequent Showers have a most beneficial effect on the public health, by purifying the Atmosphere, and flushing away decomposing refuse from the surface of the City. ——

Appendix by Dr. Hall
& Mr. Abbott
to F. Abbott's Report
for
October 1862

3

To be annexed to Page 1

(No. 14.)

1856.

TASMANIA.

RETURNS.

REGISTRATION OF DEATHS.

Laid upon the Table, and ordered by the Legislative Council to be printed, 13 February, 1857.

No. 1.

RETURN of DEATHS registered in Tasmania in 1855, distributed according to Age; not including those who have died without the Limits of the Island.

DISTRICTS.	Under 1.	Under 2.	Under 3.	Under 4.	Under 5.	Under 10.	Under 15.	Under 20.	Under 25.	Under 30.	Under 40.	Under 50.	Under 60.	Under 70.	Under 80.	Under 90.	Under 100.	Under 110.	Age not stated.	TOTAL.
Bothwell	7	..	..	..	..	..	..	..	..	..	1	2	1	1	..	..	..	..	..	12
Brighton	6	8	5	..	1	2	3	..	..	1	5	6	4	2	1	2	..	..	2	34
Campbell Town	11	3	2	..	..	..	1	..	1	2	6	1	5	3	..	1	..	..	..	35
Clarence Plains	7	..	1	..	..	..	2	1	1	2	1	2	2	1	..	..	..	..	..	21
Fingal	6	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	9
Great Swanport	11	..	1	..	..	1	..	1	..	..	1	2	..	2	1	..	..	..	..	20
Hamilton	1	2	..	..	..	2	1	..	..	1	3	5	1	1	..	..	..	..	..	16
Hobart	243	92	24	14	8	19	9	11	22	49	91	84	66	53	23	13	2	1	2	826
Horton	2	..	..	..	..	..	1	..	..	2	2	2	2	..	..	..	..	..	..	11
Launceston	93	33	10	6	2	10	4	9	9	23	35	32	33	17	9	3	..	..	6	345
Longford	13	5	1	1	..	2	1	..	1	3	11	9	7	1	2	..	..	..	2	59
Morven	10	3	1	..	..	3	..	2	..	2	3	2	6	1	3	..	..	..	1	37
New Norfolk	7	3	1	1	..	..	2	..	..	1	1	4	1	3	..	..	..	..	1	25
Oatlands	6	..	..	1	..	..	..	..	..	4	1	1	3	5	..	1	..	..	..	22
Port Sorell	2	3	..	..	..	1	..	..	..	1	..	..	2	..	..	..	..	..	1	11
Richmond	1	1	..	..	..	..	..	..	..	1	2	4	2	3	2	..	..	..	..	16
Sorell and Prosser's	7	1	..	..	..	2	1	1	..	1	2	4	3	..	2	..	..	..	1	24
Tasman's Peninsula	8	1	..	..	..	..	..	..	..	2	2	4	3	3	3	3	..	..	1	35
Westbury	13	4	1	1	..	2	3	..	2	3	7	8	2	3	1	..	..	1	..	53
Total	452	155	42	24	11	44	28	25	36	99	200	174	143	99	47	23	3	2	17	1563

1161

WM. SORELL, *Registrar of Births, Deaths, &c.*

General Register Office, 17th January, 1857.

1563 - 402 = 1161 = 74.3 % as 72.881 = 100

No. 2.

RETURN of DEATHS registered in Tasmania in 1855, distributed in Quarters.

DISTRICTS.	1st Quarter ending 31st March.	2nd Quarter ending 30th June.	3rd Quarter ending 30th September.	4th Quarter ending 31st December.	TOTAL.
Bothwell	3	4	4	1	12
Brighton	11	7	11	5	34
Campbell Town	6	6	15	8	35
Clarence Plains	3	8	5	5	21
Fingal	1	1	5	2	9
Great Swanport	7	4	4	5	20
Hamilton	4	3	5	6	18
Hobart	199	163	177	285	825
Horton	2	3	2	4	11
Launceston	112	95	64	64	335
Longford	16	12	18	13	59
Morven	10	11	11	5	37
New Norfolk	8	6	7	4	25
Oatlands	7	3	3	9	22
Port Sorell	3	5	3	..	11
Richmond	2	4	4	6	16
Sorell and Prosser's	3	4	6	11	24
Tasman's Peninsula	4	5	9	7	25
Westbury	13	14	15	11	53
Total	414	360	368	451	1593

General Register Office, 17*th January*, 1857. WM. SORELL, *Registrar*.

No. 1.

RETURN of DEATHS registered in Tasmania in the Year 1856; not including those who died without the Limits of the Island.

Distributed according to Age.

DISTRICTS.	Under 1.	Under 2.	Under 3.	Under 4.	Under 5.	Under 10.	Under 15.	Under 20.	Under 25.	Under 30.	Under 40.	Under 50.	Under 60.	Under 70.	Under 80.	Under 90.	Under 100.	Age not stated.	TOTAL.
Bothwell	4	1	1	..	..	..	..	1	..	..	1	..	..	4	..	..	..	..	12
Brighton	10	..	1	..	..	1	1	..	..	..	1	4	4	7	1	2	..	3	35
Campbell Town	15	..	1	1	1	2	2	1	..	..	6	3	3	2	2	..	..	..	40
Clarence Plains	6	1	..	1	..	..	..	1	..	..	1	..	4	3	..	..	..	2	19
Deloraine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*
Emu Bay	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1*
Fingal	1	3	..	1	..	..	..	..	..	1	2	1	2	..	..	..	..	..	11
Franklin	1	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	4*
Great Swanport	4	1	..	1	..	..	..	..	..	..	2	2	1	..	..	..	..	..	10†
George Town	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	3*
Glamorgan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*
Gordon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*
Hamilton	5	..	..	..	..	1	..	..	..	2	2	2	5	..	..	..	..	..	17
Hobart Town	189	41	29	10	12	13	6	12	20	38	77	64	68	33	14	7	2	6	632
Horton	6	..	..	..	1	..	..	..	1	2	1	..	2	1	..	..	..	..	14
Kingston	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2*
Launceston	50	18	1	2	3	7	2	7	6	14	36	29	22	16	7	1	..	1	229
Longford	14	2	..	1	..	3	..	1	..	5	5	4	3	4	1	1	..	13	57
Morven	13	2	1	..	1	..	..	..	..	4	..	4	2	1	1	..	..	..	31
New Norfolk	7	1	1	..	1	..	2	1	1	1	3	8	5	4	3	1	2	2	43
Oatlands	6	2	2	1	1	..	..	..	..	..	2	8	2	1	1	..	..	..	26
Port Cygnet	1	..	..	..	..	..	..	..	..	1	3	1	..	..	..	..	..	..	6*
Port Sorell	1	..	1	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	4
Ralph's Bay	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*
Richmond	5	1	1	2	..	1	..	..	..	..	3	1	5	..	3	..	..	..	21
Sorell and Prosser's	3	1	2	..	..	1	1	..	..	1	1	1	3	..	1	..	..	..	15
Spring Bay	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1*
Tasman's Peninsula	2	..	..	..	..	..	..	..	..	1	2	3	6	7	5	5	1	..	32
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*
Westbury	16	6	1	1	..	3	2	..	..	1	5	12	4	2	1	..	..	5	59
Total	361	89	33	21	20	33	18	25	29	72	155	151	143	85	40	17	5	34	1322

* These Districts were not established till the 25th October, 1856.

† Now divided and called the Districts of "Glamorgan" and "Spring Bay."

General Register Office, 2*nd February*, 1857. WM. SORELL, *Registrar*.

No. 2.

RETURN of DEATHS registered in 1856 in Tasmania; not including those who have died without the Limits of the Island.

Distributed in Quarters.

DISTRICTS.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	TOTAL.
Bothwell	4	4	3	1	12
Brighton	8	5	7	15	35
Campbell Town	16	10	10	4	40
Clarence Plains	8	5	4	2	19
Deloraine	..	..	..	..	*
Emu Bay	..	..	..	1	1*
Fingal	3	2	1	5	11
Franklin	..	..	..	4	4*
Great Swanport	4	7	2	..	13†
George Town	..	..	..	3	3*
Glamorgan	..	..	..	..	*
Gordon	..	..	..	..	*
Hamilton	6	5	5	1	17
Hobart Town	132	121	163	193	632
Horton	4	3	..	7	14
Kingston	..	..	..	2	2*
Launceston	72	59	50	41	222
Longford	17	17	11	12	57
Morven	17	6	7	1	31
New Norfolk	8	16	9	10	43
Oatlands	8	5	11	2	26
Port Cygnet	..	..	..	6	6*
Port Sorell	2	..	2	2	6
Ralph's Bay	..	..	..	..	*
Richmond	7	5	5	4	21
Sorell and Prosser's	1	4	5	5	15
Spring Bay	..	..	..	1	1*
Tasmen's Peninsula	9	7	10	6	32
Victoria	..	..	..	..	*
Westbury	19	17	10	13	59
Total	395	298	315	314	1322

* These Districts were not established till the 25th October, 1856.
† Now divided and called the Districts of "Glamorgan" and "Spring Bay."

General Register Office, 2nd February, 1857.

WM. SORELL, *Registrar.*

RETURNS.

Ordered to be printed, 13 *February,* 1857.

JAMES BARNARD,
GOVERNMENT PRINTER, TASMANIA.

1st Letter to D. Bedford. Abstract of matters subjects of his

Willing to notice small mortality of 1857 - last
it would be better that D B should furnish, a return
of deaths, Causes of death, ages, for as long a period
as public registration has existed, say 17 years -
To be accompanied with a Statement of daily strength
of children and their respective ages - I pledge myself
to add such a return as an appendix to my paper
Excessive mortality at OS each time I arrived in
the Colony, long before D B had medical charge -
about 1838. Sir J. Franklin admitted in Gazette
Mr Barnard in Tas. Journal Coroners deaths in
1846 out of 395 strength - page 454 another Case just publish - vide Vol 3 p. 454
Convict children not drafted to OS until 3 years
old, before June 1854 - rate of mortality from 3 to
15 in Country districts only 4 per 1000 - from birth
to 1 165 per 1000 - From 1 to 2 - 14 per 1000 -

No deaths from Syphilis returned for OS in
last 17 years - Children born with the Syphilitic
taint die before they attain one year old - Never
met with such a thing - 32 Labourers under 1 at
once -

Not easy to state the No of deaths for last three
yrs - being the time I have investigated and matters
and familiar with the subject - The scope of my
paper did not require any more extended review
Nothing to indicate that D B put their upcoming
mortality forwards as a mean - The Mean
of 17 years 15.45 is from six to seven times
more than that of children of the same age in
the Country districts

If Tasmanian Wheats are deficient in Gluten from unscientific
agriculture - by repeated cropping and taking all out of the soil
and returning nothing to it, i.e. the wonderful to the Cultivation
Concealed for by to long - Soil & manure be improved and the district
such complaint has ceased - as will be on improving
With respect to Gluten in Tasmanian Wheats
Evidence on Convict Question page 109 Stizelecki, D Saunt - Self - late experiments -
Shown that Liebig page 49 Chem of Agriculture & gives
attributed Inspection of Gluten in Wheats - In page 51
the cause of he says "The quantity of food required Gainings
per cent of Gluten for their nourishment depends upon diminishes
Tasmanian Self or increased in the same proportion as it contains
the other more or less of the substances containing Nitrogen
wheat of Tasmania The OS children only have 1/4 of Meat - Should
have by Johnsons Calculations 1 lb - as against 1/4 lb
Precedents for publication of Paper -

Sir W. Denison

read 9th Nov 1853 - page 576 Vol 2 part 3 Sess 1854
moved by Mr Crombie seconded by Mr Edward
M.Donell, supported by Dr Belford and others
and carried - "That it is desirable immediately
" to communicate to the Municipal bodies of
" Hobarton & Launceston the contents of the paper
" on drainage of towns &c, and that it is expedient
" the same should be published with the least
" possible delay" -

Mr Burbons paper "On the Potato
Crop of Tasmania" read 14th March 1853 - ordered
published and distributed forthwith -
See Vol 3 part 1 Sess 1853 page 76 -

Mr Reids paper on Vaccination
Motion to call attention of Parliament to the
desirability of immediate publication with the
Reports &c &c &c Sess 1853 -
Meeting of Council to make known the
Statistical facts in my paper - as to the excessive
Mortality in Hobarton & Launceston compared
with Country districts - Sir W. D. paper merely
enunciated general principles - Mine brings
them home to our own doors -

Opinions of Dr Gaunt

Dr Gaunt in addition to his education and experience as a Medical man - has been for 20 years engaged in trade as a miller. He says that even the most experienced hands, either Millers or Bakers have great difficulty in forming an accurate estimate of the working and keeping qualities of Flour, from mere external examination. That our climate is most admirably adapted for the growth of Wheat, and that when proper scientific skill is exercised in raising it, we shall not rank second to any people in the face of the earth, for producing first rate qualities. From the slowly process now generally adopted even with lands of the richest description, a fine looking, large round, but soft and immatured grain is produced - It contains a large proportion of starch and offal, but very little Gluten. and upon the latter mainly depends the strength and keeping quality of the flour. A large proportion of the grain grown in the Colony does not contain more than from 5 to 6 per cent of Gluten. While the average of Egyptian Wheat contains 24, Odessa 26, and the average of France and Prussia 22½ - Has had no opportunity of Chemically testing the South Australian Wheats, but from samples seen, there can be no doubt that they are particularly rich in Gluten - Tasmania can and does grow Wheat equal to any part of the world, both in quantity and in quality, but such is not the character of that generally grown - The sample of Wheat shewn by Mr Gibson and which obtained the "Paris Medal" proves nothing for the subject in dispute. The presumption is that the sample was of the finest in the world, and still it might contain but a small quantity (in proportion) of Gluten, as compared with other kinds of

Wheat

Wheat, that in mere appearance would seem to be decidedly inferior. For instance compare any of the White winter creeping Wheats, such as the Lammas "Jersomed", Prolific golden drop or Wellington and many other fancifully named, but in reality mere varieties of the good old White Lammas, with the many varieties of Spring Wheats, which are all by far the richest in Gluten; and any mere ordinary judge would at once pronounce in favour of the former. There are also many circumstances in favor of the Winter Wheats in the eye of the Farmer, such as standing better up to the Sickle in reaping, easier to thrash, not so brittle in the straw and therefore less subject to loss in harvesting, and perhaps upon the whole more certain in returns. One can therefore scarcely wonder that the Farmer should under such circumstances prefer the better looking, and generally more valuable kind of grain, so long as it suited the Miller and the Merchant to buy; and they neither knowing nor caring what were the elements of the grain or whether it contained Gluten in abundance so long as it was sold to a profit. — But we have now met with an Competitor who from many favorable circumstances surrounding his position gives him vantage ground so high, that it will require our best and most skilful efforts both in labor and science to keep pace with him, and it will not be by merely endeavouring to repudiate his position and denying his merits that we shall make our own ground good. There is no denying that our Farmers are generally very careless both in regard to the kind of grain sown, and also the tilth of their ground, and

when

When we further take into consideration that Wheat grown upon rich moist soils and more especially where the climate itself is moist that the grain grows large and coarse and runs into what Millers term offal or Bran, and that this bran contains by far the largest portion of gluten / I think I am correct when I say in the proportion of 18 to 10 against the Flour / we shall cease to wonder at the deficiency in strength and quality of the Flour Manufactured in Tasmania

On The Medico-Vital Statistics of Tasmania in 1856

By Edward Swarbreck Hall M.R.C.S.L. &c &c &c

The Deaths registered for the whole Colony in 1856 were more than one sixth, or 17 per cent less than in 1855.

It is therefore not merely an interesting, but a very important enquiry to ascertain as far as our data will permit, from what causes this diminished mortality arose. Whether; 1st, from improved sanitary care; 2d, from more favorable climatic conditions; 3d, from a reduction in the absolute amount of the population, or a change in the relative proportions of its elements; or 4th, from two or all of these causes combined. — It will be instructive also to point out in what portions of the country or town population, this decrease in mortality was most obvious. I shall first contrast in the table below, compiled from the published official Returns of the Registrar General of Tasmania annexed to this paper, the total deaths registered for the two years at the different ages. —

— Table N°1 —

Total of Deaths in Tasmania, registered in 1855 and 1856

	Under 1	2	3	4	5	10	15	20	25	30	40	50	60	70	80	90	100	110	Age not stated	Total
In 1855	452	155	42	24	11	44	28	25	36	99	169	174	143	99	47	23	3	2	17	1593
In 1856	361	80	33	21	20	33	18	25	29	72	155	151	143	85	40	17	5	0	34	1322
Less in 1856	91	75	9	3		11	10	0	7	27	14	23	0	14	7	6		2		299
More in 1856					9												2		17	28
Nett Decrease																				271

It will be seen by the above table, that only in one annual and one decennial period were the deaths more numerous in 1856 than in 1855; namely 9 more between the ages of 4 and 5, and 2 more, between the ages of 90 and 100. To these however must be added 17 more under the "Age not stated". — Between 15 and 20, and 50 and 60, the deaths were the same in number in both years. In the fourteen periods of life enumerated, the deaths were fewer in 1856 than in 1855; the total diminution being 271, or 1322 deaths in 1856, to 1593 in 1855. — More than one third (ie 91) of the whole decrease took place under the first year of age, More than three-fifths (ie 166) under two years of age, and nearly three-fourths under fifteen, or below that ages when children pass into adults. Only eleven-thirtieths (ie 98) of the falling off occurred between the ages of 20 and 100, with the exceptions before stated.

The mortality in those country districts, which in 1855 were distinct registration-districts, from Hobarton and Launceston and their associated adjoining country districts, was 21 more in 1856, than in 1855, as follows.

— Table No 2 —

Shewing Increase and Decrease of Deaths in Country Registration Districts in 1856. —

Bothwell same in both years ie 12

Increase		Decrease	
Brighton	1	Clarence Plains	2
Campbell Town	5	Great Bramput	6
Fingal	2	Hamilton	1
Horton	4	Longford	2
New Norfolk	18	Morven	6
Oatlands	4	Port Sorell	5
Richmond	5	Sorell and Prosser	9
Tasmans Peninsula	7	Total	31
Westbury	6		
	52		
	31		
	21	Total increase in Country	

districts. By this it is proved, that not only did the 271 total diminution of deaths in 1856 occur in the two towns and their associated districts, but 21 more, or 292 altogether. Hobarton 182, and Launceston 110. From the preceeding statements I think we shall be justified in supposing that the mortality was not likely to have decreased in the adjoining country districts of Glenorchy, Queenborough, Kingborough and Franklin, associated with Hobart-City; or in George Town and Selby with Launceston. I shall however have to make an exception with respect to Glenorchy in as far as regards two public establishments for children — the Convict Nursery and the Orphan School. — In both of these places the reduction of deaths was very great, — that is, as officially registered, from 71 children to 40; or more than one ninth of the whole diminution of Tasmanian mortality for 1856. This was upon children numbering about 500, to 26.843 for the rest of the Island.

The daily average of deaths at all ages for 1856 was 3.621; but little more than one death to three births as will be shewn hereafter. — The last accounts from England brings us the intelligence of the Registrar General of England's gratulations on exhibiting the fact, that the mortality of 1856 was less than in any of the ten preceeding years, which he attributes to the "sanitary improvements though only carried out within limited areas" During the same year more births had been registered, than in any previous year — The births were 657.704 and the deaths 391.369, or not 5 births to 3 deaths — The Tasmanian increase was nearly 8 births to 3 deaths, or 3626 births to 1380 deaths on total population, free and bond. Moreover the male sex preponderates in Tasmania at the Census of 31st March, 1857, in the

proportion of 45.916, to 34.886 females, but was even still greater in 1856. —

To establish a fair standard for comparative mortality, it is necessary to calculate the amount of population for each district in 1856. I shall do this by adopting as my basis, the recently published Census abstracts. I may premise however that by computation from the previous official data, of births and immigration, against deaths and emigration, that the population on the 31st December 1856 was 171 less than on the 31st December 1855 By the Comptroller General of Convicts official returns, there were on the 31st December 1855. 5,398 male, and 2,342 female Convicts, or total of 7.740. On the 31st March 1857, these were reduced to 2,139 men, and 869 women, or total of 3.008. I have therefore in estimating the population for the middle of 1856, doubled the number of Convicts in every district, as shewn by the Census abstracts, and deducted the amount from the total population of each district. I do not know any other mode of calculation by which I could more nearly approximate to correctness. By this process I assume the total number of bond on the 30th June 1856, to have been 6,016 and adopt that number for the average of the year. The total number of free persons, including the Military &c I estimate to be 75.647. In the following table No 3 I have reduced to a numerical form the results for each Electoral district, and compared them with the number of deaths in each registration district.

5

Table 3

Population and Deaths in 1856, contrasted for each district of Tasmania

Central or Electoral District	Free Population average of 1856	Registration Districts for Births, Marriages and Deaths	Deaths	Total Deaths 1856	Deaths per 1000 of Population	Remarks
Hobart	17.026	. . . .	.	. .	28½	on 485 deaths for Hobart City after subtracting the 15 Military deaths
Glenorchy	3.603	Hobart Town	632			
Queenborough	1.851					One death to 37.12 persons
		*Kingston	2	644		
Kingborough	2.862	*Port Cygnet	6		13¾	On 144 deaths for Glenorchy, Queenborough, Kingborough and Franklin population 10.491. — The Lunatic Asylum increases this percentage over other Country districts 31 out of the 43 being adults with an excess at those ages in 1856 of 16 over 1855
Franklin	2.175	*Victoria	0			
		*Franklin	4			
New Norfolk	2.471	New Norfolk	"	43	18	
Brighton	2.566	Brighton	"	35	14	
		Clarence Plains	19			
Clarence	1.524	*Ralphs Bay	0	40	12¼	
Richmond	1.665	Richmond	21			
		Sorell and Pittwater	15			
Sorell	1.950	*Spring Bay	1	16	10¾	On 1500 free persons
		Tasmans Peninsula	32	32	70	On 450 Invalids, Officers, Coal miners &c
Oatlands	2.106	Oatlands	"	26	12¼	
		Bothwell	12			
Cumberland	2.401	*Gordon	0	29	12	
		Hamilton	17			
		Great Bransport	13			
Glamorgan	1.139	*Glamorgan	0	13	11¼	
Fingal	1.318	Fingal	"	11	8	
Campbell Town	2.355	Campbell Town	"	40	17	A free Hospital, the only one in the interior of the Island, must probably raises this above the average mortality of other Country districts.
Ringwood	1.458	Longford	"	57	15¾	
Norfolk Plains	2.157					
Morven	3.168	Morven	"	31	10	
Selby	3.617				20¼	On 158 deaths for Launceston Town - One death in 48.99 persons
Launceston	7.740	Launceston	222	225		
George Town	1.283	*George Town	3		13¾	On 67 Deaths for Selby and George Town. The proportion of deaths to population for the average of all the Country Districts 13¾ is one death to 72.72 persons.
Westbury	3.343	Westbury	59	59	11	
Deloraine	1.967	*Deloraine	0			
		Norton	14			
Devon	3.101	Port Sorell	6	21	6¾	One death to 147.66 persons
		*Emu Bay	1			
Military &c	690	. . . . .	.	†	. . .	† Deaths included in the General Registry of districts above
	75.476					
add more 1856	171					
Total free	75.647			1322	17½	
do bond	6.016			60	10	
Total pops 1856	81.663			1380	17	One death to 59.17 persons

* all Registration districts marked with the asterisk were not established as distinct registration districts until 25th October 1856

I have intentionally avoided decimals in proportioning the deaths per thousand of population, that the contrasts of districts may be seen without calculation, by a glance at the figures -

Of the 27.517 souls embraced in the death registration of Hobarton up to the 25th October 1856 - 17,026 dwelt within the municipal boundaries of the City, and the remaining 10.491 in its rural suburbs, and the adjoining country districts, north and south of it. -

Their respective proportions of children under 14 years of age, are arranged in the following table -

Table No 4

Number of Children under 14 years of age in Hobarton Registration districts by the Census of 1857 -

	Males			Females			Totals	
	under 2 yrs	2 years of age to 7	7 to 14	under 2	2 years of age to 7	7 to 14		
Hobart	751	1122	1190	737	1191	1334	6.325	
Glenorchy	184	306	358	147	293	358	1646	
Queenborough	96	149	165	89	150	163	812	4238
Kingborough	134	212	163	120	220	181	1.030	
Franklin	99	158	122	105	151	115	750	
	1264	1947	1998	1198	2005	2151	10563	
		1264			1198			
		1998			2151			
Total Males		5.209		Total Females		5.354	Total	10.563

The proportion of children to population is greater in the country than in the City. Glenorchy stands the highest, but this is owing to the Orphan School and the Convict Nursery, being within that Electoral district. 2.956 children were registered as born for the whole islands in 1856 - Of these 1203 were registered for Hobarton and its associated districts. These were

78 less than in 1855, though the total of the island was 8 more than in that year - 653 were males, 550 females. By the foregoing table it is seen that at the end of 13 years, the females exceeded the males. More male children here as elsewhere dying in childhood than females. — The proportion of children to adults in our population exceeds the European standard, which is that one third of the total should be under 14 years of age - Tasmanian children are about 13 per cent more than that rate - In England the females are five per cent in excess of the males on the total population at all ages Of the 16.954 adults in the section of the population under examination, about 8.954 are males to 8.000 females, a disparity very much less than has been generally imagined Every day is diminishing it - so that by the end of another year, the reverse may be the fact Of the total population of 27.514 in these southern districts, about one half of the number are married people -

I have carefully classed and tabled from the Rotarton Registry all the deaths that occurred in 1856 in this City and its associated registration districts, with the exception of the 12 registered at Kingston Port Cygnet and Franklin, created distinct registration districts since 25th October 1856 - The Complete Tables is annexed to this paper It is gratifying to see how closely my numbers approximate to those enumerated at being registered from the 1st January to 31st December The Registrar Generals total is 632 - mine is 617. In no former year, did such close correspondence exist - So much more promptly are deaths now registered than they were formerly, that for the first seven months

of 1857, I have not noted a single death delayed registering beyond the month following, that in which it happened. Previously the delays were numerous beyond three months, some extending even beyond twelve months — The 617 deaths tabulated by me were distributed in quarters and months as follows —

Hobarton &c Table No 5
Deaths in ~~1856~~ 1856 in Quarters and Months

1st Quarter		2d Quarter		3d Quarter		4th Quarter	
January	60	April	49	July	47	October	46
February	57	May	46	August	48	November	44
March	67	June	43	September	51	December	59
	184		138		146		149

During the first Quarter therefore, or the hottest season of the year, much the greatest mortality existed — In England the contrary is the rule! The least number of deaths were in the second quarter, and the other two are nearly alike — Except under the disturbing influence of casual epidemics prevailing, the above seems to have been the rule for many years past, in fact of all that I have examined

The deaths were, as enumerated below — at the different ages

Hobarton &c Table No 6
Number of Deaths in 1856 at different ages

Under	one	Month	59	Under	2 years	42	Between	30 and 40	78
"	2	"	19	"	3 "	23		40 - 50	65
"	3	"	13	"	4 "	9		50 - 60	60
"	4	"	14	"	5 "	13		60 - 70	36
"	5	"	10	Total between 1 & 5 yrs		87		70 - 80	15
"	6	"	12					80 - 90	7
"	7	"	8	Between	5 and 10 yrs	13		90 - 100	2
"	8	"	9	"	10 - 15 "	7	Total 30 upwards		263
"	9	"	17		15 - 20 "	14	5 to 30		90
"	10	"	3		20 - 25 "	18	1 to 5		87
"	11	"	9		25 - 30 "	38	under 12 Months		177
"	12	"	4	Total between 5 and 30 yrs		90	Total Deaths		617
Total under 12 Months			177						

The ratio of deaths to population for the first year of age, for the whole island, is shewn to be 361 in Table 1, one fifth or 20 per cent less than in 1855 I have before stated that the total Tasmanian births registered for 1856 were 2956, that is only 8 more than in 1855. This was far short of the progressive increase during all the previous years from 1848 From 1851 to 1852 births increased by 33. From 1852 to 1853 the increase was 119. For the next year 370; and 1855 was more by 345 than 1854. —
It is patent from the Census abstracts, that a large proportion of the births during 1855 and 1856, could not have been registered at all, or there could not have been 6,350 children under 2 years of age in the Colony at the Census enumeration on 31st March 1857 out of the 5,904 registered as born in 1855 and 1856 893 are registered (see Table 1) as having died under the age of 2, leaving only 5,011 It is thus clear that at least 1339 children born were never registered It is probable that they were even still more, for by the official returns, a balance of 121 departures of children under 14 years of age, is shewn against arrivals in the Colony. Calculating from these premises that there were really 3,626 children born in Tasmania in 1856, the births would be at the rate of 9.931, very nearly 10 per day. The total daily births I have before stated were not quite 3 3/4. —
361 deaths in the first year of age, is only about a tenth of the whole - 10 per cent! — This proportion is very small when compared with the average English rate of more than One seventh or 146 per thousand. Two thirds of the 361 deaths fall to the share of the two town Registrys - Hobarton 241 to only 50 for Launceston &c. The rest of the Country districts have only one third, or 120 of the deaths at this age. - Of the children born a larger number are probably registered in proportion in Hobarton than in

The

country districts. Mr. John Abbot the late Registrar-General, conjectured, that about 200 per annum were unregistered in Hobarton registry, which agrees with my own calculations pretty closely. I may therefore adopt the equal number of 1400 children, as the amount that ought to have been registered in Hobarton in 1856. I have for Hobarton de in my table 177 deaths under one year old (14 less than in the Registrar-Generals) out of this number of births; or rather more than one eighth or nearly 13 per cent; - Three per cent greater mortality, than the average of the whole colony at the same age, including both Hobarton and Launceston - Making the proportion to allowance for unregistered births for Launceston and the country districts; the 3624 births would be thus apportioned. Hobarton de 1400. Launceston de 532 and the other country districts not enumerated with the foregoing 1694. The 120 deaths on these country births would be about one fourteenth, or about 7 1/4 per cent - That is 46 1/2 in the thousand less than the Westmoreland mortality - one of the best in England -

Adopting this as a standard for calculating all the country deaths at this age, I can separately deduct the country population registered with the city, and arrive at an approximate proportion for the urban mortality of Hobart. The share of the children for the country districts registered in Hobarton, in comparison with Hobart City, is about 3 1/4 eighths, to 4 3/4 eighths - of the 1400 births assumed, consequently about 568 would be the portion for the country - At the rate of the rest of the country mortality as before stated at 7 1/4 per cent, the share of the 177 deaths, falling to the sub-urban districts would be about 41 (more than one third or 14 of the number being at the Brickfields Nursery). This would leave

leave for Hobart City 136 deaths out of 832 births, or about 16½ per cent, or nearly one sixth of the whole. This mortality is more than twice that of the country infants, and about 2 per cent more than the English average, but 3½ per cent less than the London. — The 50 deaths at this age on the 532 births at Launceston be, is very little more than 9½ per cent, only 2¼ per cent more than the country rate, and 7 per cent less than the rate in Hobart City. It would be most ungenerous not to examine this matter further. Science has no personal, or local, or national prejudices. The exposition of truth, whoever may be the loser or the gainer in reputo by it, alone guides its researches. I shall therefore separate the deaths and births of the suburban districts of Selby and George Town, from the municipal district of Launceston, and ascertain how much credit is due to the Northern Capital in this question. I find that out of the 50 deaths at this age in Launceston and its associated districts. 36 will be about the share of Launceston town, out of about 330 births, or 11¼ per cent or 5¼ less than Hobart City. — From what cause this very honorable hygienic superiority of Launceston town, over Hobart City, at this age, arose, I am unable to point out. But I hope that some of my professional brethren there, will take the trouble to elucidate the phenomenon. — While Launceston justly reaps the glory, we may profit, by the information elicited.

I have elaborated and detailed these facts with much care because superficial computations calculations based upon the aggregate of city with country mortality, had led to many persons

persons astray from the real truth. If we refer to Table 3, we there find that the deaths on the whole Tasmanian population are only 17 per thousand; Four[illegible] per thousand less than the Registrar General of England glories so much at having been achieved for the first time in England in 1856. Such an apparently satisfactory comparison for the whole of the island will suffice for shallow minds accustomed only to skim the surface of facts and figures. They will think that no improvement can be required in the salubrious a country. The philosophic mind will scrutinize the details, and what will be find? - Why that the mortality of Hobart Tt, even in so unusually favourable a year as 1856, exceeds the 15 years average of London by 3½ per thousand; While our County mortality on the general average is below that of England by 5 per thousand; and our minimum County mortality in a population over 30000 souls, is below that of the lowest in England by 8 per thousand, or less than one half! By such examinations as these we can discover where our defects lie, and may learn how to remedy them.

I invite from the Society the most rigid investigation of these calculations. It would be unjust to leave this division of my researches without remarking, that the mortality at the Convict Nursery in 1856, out of a probable average of 100 children, was only 17; two of the number however being between one and two years old. This reduces the mortality in that establishment to nearly the same rate that prevailed in the City during the same period. When we remember that the deaths in the Convict Nurseries, on the total of all children passing through them

in

in a years, not once calculated at from 26 to 43 per cent, on a successive series of years (though really it was much greater) no man need despair that by persevering statistical scrutiny, great sanatory triumphs will be ultimately won, and numerous lives saved.

The deaths for the next period of life, that is between one and two years of age, it is important to examine monthly; for it is the age of weaning and teething, and the capability of taking voluntary exercise in walking. Nature's own well adjusted parental veto is now withdrawn, and the child's nutrition becomes dependent, it may be, upon an ill regulated, capricious, insufficient or hurtful supply of food. Possessed of volition however, it is less likely to suffer at each day from the impure air of confined rooms, than children in arms. Children in this climate will be out of doors whenever they can, Contrive as soon as ever they can run about.

The total deaths at this age for Tasmania is in the Registrar Generals Table 80. — Hobarton 41 (One less than nine) Launceston 18, and the rest of the Colony 21. There would be according to the Census about 474 children of this age in Launceston &c, 1200 in Hobarton &c, and 1500 in the rest of the Country. The mortality in the country children would not be quite 14/10ths per Cent or 14 per thousand. Subtracting therefore the sub-urban proportion of children at this age from the Hobarton &c total, we shall have 700 in the city to 500 in the sub-urban district connected with it. The deaths in the latter at 1.4 per cent will be

7

7, leaving 34 deaths for the City, or 4.883 per cent; more than twice as much as that in the country; nevertheless it is still 1½ per cent less than the English average. At this age Launceston takes in comparison with Hobarton, for its percentage is greater, about 5 per cent or 15½ deaths out of 297 children. The Launceston deaths at this age are more than one third of the number of those under one, while Hobart City, proportion is not much more than one fifth — In regard all the subsequent ages of childhood Launceston again maintains a great superiority.

"As the ages in the Centesimal Table," do not follow the universal rule of
" European Statists in regard to a quinquennial
" classification, but adhere to the old clumsy
" Colonial method of clubbing the people together
" biennially, septennially &c to the great
" detriment of the Statistical comparative worth
" of the representative figures" (I have used the forcible and appropriate language of one of our "Fellows", the able Assistant Registrar General of Victoria) I am unable to compare the deaths to population ~~in each age~~ during each annual or quinquennial period of the remaining years of childhood. It will be of practical and local value however to examine the whole period from above one to 14 years of age collectively. In the whole island there are 23.669 children in this group of ages. - 10.397 for all the country districts separately registered. 9.363 for Hobarton &c, and 3,909 for Launceston From the Registrar Generals Return, the aggregate deaths, after deducting the proportion for 14 to 15. will be 202. The Hobarton &c share being 102, and the Launceston &c 33, leaving 69 deaths to 10,397 for those country districts not registered with the two towns. This is a little more than 6½ per thousand (ie 6.63) The

Centesimal

Centrus proportion of children at this age for the country districts of Glenorchy, Queenborough, Kingborough and Franklin is 3.723; from which deducting 400, the strength of the Orphan School, leaves 3323. at the rate of 6½ per thousand, the mortality on this number would be about 20. Add to this the 23 deaths for the Orphan School, and we have 43 to subtract from the total mortality of 102 for Hobarton and its associated districts. For Hobart City therefore we have 59 deaths out of 5.640 children, or little more than 10½ per thousand, though 4 per thousand more than that of the country districts at the same age. - The rural population at this age associated with Launceston was about 1465. At the rate of mortality of the other country districts, the deaths would be about 9, leaving 24 deaths out of 2.444 children in Launceston town; about 10 per cent or a little less than Hobarton. 23 deaths out of 400 average strength for the orphan school, is 57½ per thousand, or more than five times greater than the mortality of children of the same age in the City of Hobart and town of Launceston, and very nearly nine times as great as the average rate of the whole of the Country districts - Nevertheless enormously disproportionate as is this rate of deaths in that Institution for 1856, it was more than 35 per cent less than in 1855, and more than 50 per cent less than in 1854 - The mortality in that establishment must be considered excessive whenever it exceeds on the present strength, three to four deaths per annum - ~~Many of the country districts with managed exceptions~~ Seeing that so many deaths from drowning, burns, and various other accidents occur elsewhere which

which do not make a part of the mortality in the Orphan School, this is giving a very liberal allowance, for any other disturbing influences in its behalf. An institution of a similar character at Brixton Hill in the neighbourhood of London, having an average strength of 150 children of metropolitan paupers, had only two deaths in three years. Were it necessary to adduce further proofs, that in well conducted modern establishments of children of this class, the mortality is not higher than the rate I state, I could cite many additional instances.

The total of Tasmanian deaths enumerated in the Registrar Generals Return for 1856, between the ages of 15 and 20 is 25. 12 for Hobarton Te, 7 for Launceston Te, and six for all the country districts not registered in the two towns. My table for Hobarton Te shews two more or 14. The total population in the Census abstracts from 14 to 21 is 7.886. Deducting the numbers for the first and last years of this group, we shall have 5.646 as the total population between 15 and 20 years of age on which to calculate the deaths. Independently of those country districts associated with Hobart and Launceston, there would be 2.396 youths of this age & the 6 deaths, or about 2½ per thousand. Proceeding by the same mode of calculation we must subtract 2, for the country mortality from the Hobart Te numbers, which leaves 10 (or 12) deaths on 1502 individuals of this age for the City of Hobart. That is somewhat less than 6 3/4 per thousand, more than double the country mortality, still even the City deaths

deaths at this age are far below the English ratio. Taken altogether the mortality at this age in Tasmania is very much less than that of any country, whose vital statistics I have been analysed, and supplies unequivocal testimony to the eminent salubriousness of this climate —

From the defects in the Census Tables, I am now compelled to group 15 years of life in my comparisons, that is from 21 to 45, at which age there are 34.523 souls in the Colony. Most of the 6.016 convicts in the Island on 30th June 1856, would be included within these ages; therefore I shall deduct three fourths of that class from the total, and assume that there were 30.011 free people of this age at that time, out of which for the whole Colony 326 deaths are returned by the Registrar General. The rate is nearly 11 per thousand. During the same period there died out of the estimated 6016 convicts, 46 men and 14 women, or 10 per thousand, which is only one per thousand less than took place on the average of all the London prisons in 1855. Through the latter, there passed in that year upwards of 43.000 prisoners, with an average daily strength of 6.500. The deaths were 71, fourteen being females. The London prisons consequently had only the same rate of mortality at all ages as that which prevailed in 1856, on the average of the whole free people of Tasmania, at the age I am examining — the very prime of life — Surely such a Contrast speaks language that cannot be misunderstood — in behalf of sanitary management and hygienic discipline; for to these alone can this wonderful

wonderful healthiness in the prisons of such a city as London, be attributed - It exceeds even that of the Military barracks in England, the average mortality in which is 16.8 for Infantry of the line, and 19.8 for the Foot-Guards I need not compare it with the ruthless mortality which ruled in the time of the philanthropic Howard, when prisons where lot-beds of disease, and to send human beings there was to doom two out of three to certain death, on the average of a year. I quote the proportions from memory for I have not been able to refer to "Howard's book "on Prisons", for that precise accuracy of quotation, which is so important in all statistical comparisons - But I may contrast it with that of the Model-lodging houses in London, where on the average of some years, at all ages of life, from the infant just ushered into the world, to the oldest, the annual average mortality is only 12.6, to 13.9 per thousand, or half that of the whole metropolitan mortality and about two per thousand less, than that of Tasmanian Country mortality. Can any person believe for a moment that were the precautions of sanitary science, duly carried out in all Tasmanian Country houses, that our mortality ought to be any thing even approaching to equality, with that of lodging houses - Model though they be - in so unhealthy and dense a City as London? But it would be most unjust to the reputed salubriousness of this Island, were I to remain content, as it is generally the case, by calculating the mortality in gross only. In Table No 3 I have exhibited the total mortality at all

all ages to population, for every electoral district in the island. It is there shown that Devon with upwards of 3000 inhabitants, had only a mortality of 6 3/4 per thousand, while the City of Hobart had 28½ in the thousand. The average of London for 15 years according to the admirable standard calculated by the Secretary of the Statistical Society = 25 Gray was not quite 25. (i.e. 24.888) On the other hand the healthiest country district of England on the authority of the Registrar General, was more than double that of our Devon — i.e. 15 per thousand. — I shall therefore, tedious and laborious as the analysis is, proceed as I have before done, and separate country from City mortality, in the 15 years of life now under review. Of the total 326 deaths between 21 and 45 years of age, Hobarton by Mr Sorells return had 169, (in my table it is nearly the same) Launceston had 72. all the rest of the country 85. But it must be borne in mind, that many of the last named deaths took place in the Lunatic Asylum at New Norfolk, the Invalid Station on Tasmans peninsula (Sorell district) and the free Hospital in Campbell Town. altogether perhaps 15 to 20 out of the 85 — A Proportion equally as great as the deaths in the two Hospitals in Hobart, bear to the total deaths, for Hobart and its associated districts, as will be seen by the details hereafter given —

The free population between the ages of 21 and 45 in all the country districts not registered with Hobarton and Launceston was 14.045; so that the deaths were about 6 per thousand, 2 per thousand less than on Country lines at the same age in England; about one third of that which prevails amongst Soldiers in English Barracks

barracks; and 4 per thousand less than occurs on the average of all the bond in this island. This fact gives most conclusive testimony to the justice of the character awarded to this Island, as being naturally so favorable to health. — At the same rate, on the free population of the Electoral country districts associated with Hobart City - viz 4,152, the deaths would be not quite 25; leaving for the City of Hobart 144 deaths to 6,495 inhabitants of this age, or 22 per thousand; that is more than 3½ times as great as the country rate. On the other hand Launceston town with 2,086 souls of this age had 58 deaths, or 19 per thousand, three per thousand less than Hobart City, but a little more than three times as much as in the Country districts It will not be here out of place to allude, to remark on the comparative general mortality to population of Hobart City and Launceston town. In table No. 3, the former with 17,026 free inhabitants had 485 deaths or 28½ per thousand; the latter with 7,740 population, had 158 deaths or only 20¼ per thousand. To what local causes can we trace this superior physical health on the part of Launceston? In its favour, Launceston has a more equable, milder and moister climate, and a greater purifying mechanical power, in more frequent thunder, and a greater annual amount of rain. It has not a great sewer with its vast amount of arrested decomposing matters, like our City would, traversing the very heart of it. Its drainage falls into a stream which conveys it rapidly away — On the other hand it does not enjoy such frequent purifying sea-breezes in summer as Hobart does

docks. It has swamps contiguous, and is more subject to fogs. Whether its municipal authorities have done more to improve it, than ours have done, I am unable to say, as I have not visited Launceston during the last six years — It has become an axiom in sanitary science, that physical and moral health will always coincide. By the "Statistics of Crime" compiled by the late Chief Police Magistrate of Tasmania, Launceston seems to be a striking exception to this rule. Notwithstanding the disproportionate excess of crime attributed to Launceston, owing to the omission of the population of the Electoral district of Selby, in computing the per centage, it has been with this oversight rectified, about 4 per cent more offences to inhabitants than Hobarton. Drunkenness, that prolific source of physical disease and death, appears to be even more rife there than here. We are thus driven into a corner to account for the Hobart excess of deaths, and must conclude, that, from less sanitary care and a more ineffective hygienic police, this bad eminence of the Tasmanian Capital alone ~~attaches~~ arises —

The next group of ages to be examined is that between 45 and 60. The total deaths of free persons in the island between these ages are in the Registrar Generals Return, 218 — i e 103 for Hobarton and associated districts (11 more than noted in my table) 37 for Launceston &c, and 78 for all the country districts not

not registered with the foregoing. The country rate of mortality is about 21½ in the thousand, the free population of that age in those districts being 3,604. Calculating upon the 842 free persons in Glenorchy, Queenborough, Kingborough and Franklin, the deaths at the country rate, the numbers will be about 19, which leaves 84 for Hobart City out of 1639 free people of this age, or about 51 per thousand much more than twice that of the country. — on the smaller number of deaths in my table the proportion would only be about 45 per thousand, but still above double that of the country. — Launceston town with 731 free people of this age had 27 deaths, about 36 per thousand, or 9 to 15 per thousand less than Hobart City.

Above 60 years of age all the free deaths in the island amounted to 147. Hobart City 43 deaths to 483 souls, or 85 per thousand. Launceston town 17 deaths to 165 persons or 102 per thousand. All the country districts 87 deaths to 1597 individuals or 55 per thousand. This group of ages and that between one and two are the only ones in the population in which the mortality in Launceston town, exceeds that of Hobart City. In the much greater numbers at all other ages, the rule is the reverse — of the population above 60 years of age a much greater number in Tasmania appear to survive to extreme old age, than in Great Britain.

The distribution of the places of death of the 617 recorded in my table, is as follows

H. M. S. Hospital

Her Majesty's General Hospital		99
St. Mary's Self supporting Hospital		19
Orphan School New Town		23
Convict Nursery		17
Military		15
Inquests -	Hobarton 44	
	Kingborough and Franklin 21	65
In Hobart City exclusive of above		346
In Glenorchy Electoral District		15
In Queenborough do do		6
In Franklin & Kingborough - less the inquests		12
	Total	617

As near as I can ascertain the truth, about six of the deaths in the Hospitals were Sailors from Vessels in harbour, and about as many of emigrants just arrived —

Classed according to Causes of deaths, the 617 recorded by me for Hobarton and its associated districts in the table appended, are arranged as nearly as possible in conformity with the system adopted by the Registrar General of England, on the recommendation of a Committee appointed by the Medical Colleges of England For the sake of ready comparison I have put in the margin, the totals number of deaths from the same diseases in 1855. (already published in the Melbourne Medical Journal) The blanks will shew where 1856 had deaths from diseases not in the Table for 1855, and I have added a memorandum to 1856 table to shew what deaths from diseases in 1855 have no corresponding deaths in 1856. —

Dr. Guy Secretary to the London Statistical Society and a Professor at Kings College London has

has compiled a Table of mortality from 15 years average of the deaths in London, on each million of inhabitants. This valuable scale I shall adopt as my standard of comparison in examining the mortality in Hobarton to from different diseases. —

In the 1st or Zymotic class, I have enumerated 100 deaths out of the 617. That is about 16 per cent or One eighth of the whole. The London proportion is much higher 5.957 out of 24.883, or nearly 24 per cent, not far short of one fourth of the Whole. But the Zymotic class in my table is only constituted of 10 diseases, while in the London there are 29. In the nineteen absent from our mortality there are diseases which form a very large share of the London deaths, as Small Pox, Measles, Scarlatina, Cholera, Scurvy, Agne, Typhus, Syphilis, Hydrophobia, 3074 out of the total of 5,957. —

The 7 deaths from Hooping Cough in my table is less than one third of the average of London. Croup 34, out of 27.517 souls for the united districts registered in Hobarton, is nearly eight times greater than the London average of 167 out of a million. But this might be stated still more disadvantageously for Hobart City, for I find only 3 out of the 34 deaths noted as having occurred beyond the City bounds. —

In all my experience of 24 years in so many different parts of the Colony, I never saw a case of Croup out of Hobarton, Yet I had charge for three years of an establishment for Children at Ross, and have practiced privately in seven different districts in the island. —

Thrush is 12½ times oftener a Cause of death in Hobarton than in London. Diarrhoea is exactly the same in both - But in the London

table

table, that disease includes choleraic diarrhoea which within the 15 years embraced, was a very fatal epidemic. – Dysentery is 5½ times greater here than in London. – Cholera being only one cannot be compared with London. ours was only a "bilious attack". There then terrible Indian disease swells the amount to 780 annually on 15 years average for each million of inhabitants. – Influenza was not epidemic in Hobarton in 1856; the solitary case recorded was probably only Catarrh. – Fever 14 cases was less than one ninth of the London proportion of all febrile diseases in the Zymotic class. – Erysipelas was nearly on a par with London. Cancrum Oris 2 cases, cannot be compared with the London standards, as there is no disease in it to distinguished. I never saw the disease any where but in the Convict nurseries –

Class 2, "Dropsy, Cancer, and other diseases of uncertain or variable seat," had 34 deaths out of the 617, or about one eighteenth of the whole number. The London proportion of the same class is about one twentieth. – Dropsy is one eighth more fatal in my table than in the London one. – The Hobarton proportion for Cancer is only two thirds of the London.

Class 3. "Tubercular Diseases" 79, is more than one fourth less than the London or the whole class. Our Scrofula is only one third of London. We have no Tabes Mesenterica recorded. Consumption 66 is in the proportion per million for Hobarton to 2574, to 3,230 for London, or about one fifth less in Hobarton to In 1855 there were registered 93 cases in Hobarton of

Consumption

Consumption, which exceeded the London average. Since that period I have scrutinized all the entries in the Registry minutely - I have struck off for 1856 all under the age of puberty and transferred them to Atrophy. I have also found on careful enquiry that many registered as Consumption died from other Chronic diseases and I have removed them to their appropriate places. I have been specially anxious to ascertain whether the opinion I formerly expressed, as to the great Comparative exemption of the native born of this Colony, in juxta position with the European settlers, it was borne out by more precise and more extended examination. Of the 66 deaths tabled by me for 1856, only five appear to have been Tasmanian born. By this years population Census it appears that the native-born are to the whole population as 30.160 out of 80.802. — of the 26 deaths from this dire disease registered in Hobarton for the past ~~seven~~ eight months of 1857 five were native born. In all these cases I have taken the pains to ascertain the particulars and have commented upon them in each months "Health Report" read to the Society. These facts shew that the conclusion I formerly came to on this very interesting and important point, was well founded. Hydrocephalus is a much more fatal disease in London, than here — the proportions being London 767 — Hobarton 468 per million. —

The 4th Class. "Diseases of the Brain, Spinal Marrow, Nerves and Senses" shows the highest mortality in Hobarton of any Class in the table, being 112, or 4,368 per million to London 2,858. — Cephalitis is high for Hobarton &c being 429 to London 280 — Apoplexy is 780 to 524. — Paralysis on the contrary is only 234 to

458

458. Only one case of Delirium Tremens is returned, and that was from one of the Hospitals Private persons registering will not record so disgraceful a Cause of death. Nevertheless intemperance found directly or indirectly a very large portion of the adult deaths. Epilepsy is not quite so fatal here as in London. For various reasons "Insanity" cannot be satisfactorily compared, though it there much higher than the London rate. "Convulsions" - 65 - is a fearful item in our mortuary table. More than double that of London, or 2,535 per million to 1.098. It is well known that every where more are registered under this disease than fairly ought to be. The vulgar almost universally attribute the "Cause of death", to this, the terminating symptom of many diseases. The whole number recorded in 1856 were under 5 years of age. 29 of them died within the first month after birth. I am quite convinced that Tobacco-smoking is one Cause of this. Another is insufficient Clothing, for this variable climate with a range of so many degrees of temperature in a few hours. A third equally potent is the generally impure air of lying in chambers. The immense reduction of Mortality effected in Nedying-in Hospital in Dublin by attention to Ventilation, is familiar to every well read Medical Practitioner. In 75 years that Institution afforded relief to 129.000 poor Women. At one period it was usual that every sixth Child died within nine days after birth, of the Convulsive or tetanic disease called Trismus Nascentium, but after means of thorough Ventilation had been adopted, the Mortality of the infants was reduced to nearly one in twenty on an average of five successive years. This refers to

more

more than sixty years ago.- During the seven years from 1826 to 1833, (in the first year of which I was pursuing my medical studies in that City as a pupil of the Royal College of Surgeons and in other Medical institutions) 16.654 children were born in the Dublin Lying in Hospital, 1121 were still born, but only 214 died out of this number under the same circumstances as those before alluded to - that is only one in 72.61 children instead of one in 20. These facts can be verified by reference to the valuable "Annual Reports of the British association", which enrich the shelves of our Library. But at the risk of being prolix I cannot refrain from citing still more recent testimony to the like effect. While I have been engaged in preparing this paper the Royal Society has received, a number of the Journal of the Royal Institution of Great Britain part VI July 1855 to July 1856 - In page 244 I find the following statement as to the mortality in a Lying in Hospital, given on the high authority of Dr Benjn Jones -

- Mortality of Mothers -

During 4½ years before systematic ventilation		60
do 7 " with Dr Reids system of ventilation		9
do 4 " again without it	. . .	24

- - Mortality of Children - -

During 5½ years with ventilation	. .	6
do 4 years without it	—	36

The last disease in this Class - so destructive to us - is "Disease of the Brain", but the term is so indefinite, that no satisfactory Comparisons can be instituted on the two deaths so recorded

The 5th Class "Diseases of the Heart and Blood vessels" shows 32 deaths - 34 per cent more than in 1855 - It is also much larger than London or 1248 to 785 per million

 The

The cases of Aneurism are eight times as many as in London.

The 6th Class "Diseases of the Lungs and the other organs of Respiration", are 44; less than one half of the London rate, or 1716 to 3747. This is a very remarkable fact for a place with so much greater a daily range of temperature than that of London.

The 7th Class, "Diseases of the Stomach, Liver, and other organs of Digestion" has 50 deaths; a larger proportion than London, or 1950 to 1504. — "Teething" is at the rate of 624 per million, for Hobarton &c to 325 for London. "Quinsy" is nearly equal. - "Gastritis" and "Enteritis" is less, or 234 to 316. - "Ascites," is very much more or 273 to 43. - When it is remembered that I have before noted that "Dropsy" in Class 2 is one eighth more fatal here than in London, and conjoin it with the nearly six and a half times greater mortality in "Ascites", I think it will more than make up for some of the apparently fewer deaths, in other diseases consequent upon intemperance. — "Hernia" is more than the London rate, but too small to afford conclusive data. The same remark applies to "Obstruction of the Bowels" - "Jaundice" is too small for comparison. "Hepatitis" is a little larger than the London rate. "Disease of the Liver" is larger 273 to 241. "Worm-fever" does not appear in the London table, unless we consider it synonomous with "Infantile Fever", in which case the Hobarton &c rate is four and a half times as much. "Dyspepsia" does not appear in the London standard, and I should have tabled it as "Disease of the Stomach" had it not been returned under the former designation

designation from a public institution. —

The 8th Class "Diseases of the Kidneys and Urinary organs" has 11 deaths, nearly double the London rate, or 429 to 231. All but one were in persons above 30 years of age, and very probably resulting from intemperance in drinking.

The 9th Class, "Childbirth, Diseases of the Uterus &c" is higher than the London rate "Childbirth" is too vague a term for useful comparison. "Rupture of the Uterus" is not named in Dr Guy's table. There were two deaths from this cause in 1855 as well as in 1856. I have only seen one such case in the whole of my medical career in that I was called in for consultation by the medical attendant. —

The 10th Class "Rheumatism and diseases of the Bones and Joints" has 5 deaths nearly the proportion of London

The 11th Class "Diseases of the Skin, Cellular tissue &c" has only one death from "Carbuncle"

The 12th Class, "Malformations" requires no comment. The solitary case was from "Imperforate rectum"

The 13th Class, "Premature Births and Debility" has 41 deaths. 19 of them during the first month of existence. Only 5 were above eleven months old. This class is nearly three times as great as in London or 1599 to 579. The splendid remarks I made on the cause of the great mortality from "Convulsions" are equally applicable to this Class. —

The 14th Class "Atrophy" has 13 deaths, being greater in comparison with London, as 507 is to 470. Ten out of the 13 enumerated were Marasmus. i.e. 7 in the Orphan School and 3 in the Brickfields. —

I have elsewhere, before expressed my opinion

as to

as to the great error that has been committed in regarding the bread we consume here, weight for weight, as of equal nutritive value with that in English diet scales. My opinion has recently received more than confirmation from a Gentleman of still more experience on this matter than myself. He considers the Tasmanian wheats at the present time, notwithstanding the improved cultivation that has been supposed to have taken place in the last few years, that have elapsed since Count Strzelecki's elaborate exposition of this fact — not to average more than 5 or 6 per cent of Gluten; while that of European production is about 22 per cent. Such being the case we must increase the proportion of azotized elements, by enlarging the amount of animal food in those establishments where the inmates are confined to limited rations — Unless this is done diseases resulting from, or rendered more fatal by, imperfect nutrition and defective stamina — such as atrophy and Marasmus — will continue to abound in them beyond all comparison with what prevails in the community at large — I had personal demonstration given to me, of the good effects to be so obtained, when nursing Mothers, had their rations of meat doubled, and a more liberal allowance was given to children after weaning. —

The 15th Class — Age — has 29 deaths, — nearly the proportion of London, or 1131 to 1298 per million. Two were between 40 and 50 years of age, One between 50 and 60, and eleven between 60 and 70 — I think none of these ought to have been registered as

at dying from old age. Of the rest ten were between 70 and 80, four between 80 and 90 and one between 90 and 100. In 1855 there were 24 deaths between 70 and 80, ten between 80 and 90, two between 90 and 100 and one at 104. These facts argue favorably for longevity in Tasmania. —

The 17th Class, "Violence, Privation, Cold and Intemperance", has 48 deaths; - more than double the London proportion or 1872 to 769. In all this class Inquests were held; a large share were the effects direct or indirect of drunkenness. - Nine cases are entered without any notice of the Cause of death"; this ought not to be the case were registration what it ought to be. No deaths ought to be registered except on a proper Medical Certificate of "Cause of death" The Science of vital statistics would then be grounded on safe data - Still when we know that 87 deaths in 1855 had no "Cause of death" assigned, we may rejoice at the improved attention paid to registration, as evinced by the comparatively small number &c. characterised in 1856. In concluding this analysis it is satisfactory to remark, that not one death out of the 617 is recorded for Syphilis - Dr Guy's table has 43. —

The next point to examine, is the climatic differences between 1855 and 1856, and to ascertain how far these may have affected the comparative mortality. Unfortunately we have no data on which to compare the relative atmospheric purity of the two years - Barometrical observations were not commenced in this Colony until April last. Hereafter this the most influential circumstances of all as regards public health, we shall be in a position to demonstrate. Nevertheless the experience we have now gained of the accompanying atmospheric conditions by which its purity or otherwise is affected, gives me some clue to the state in which it probably was at the periods I shall examine. In 1855 the annual extreme ranges of the Barometer was greater than in 1856, both rising higher and falling lower. The mean pressure was .050 higher in 1855. — In 1855 the mean temperature of the year was higher than 1856 by 1.49 degrees. The monthly means of temperature and extremes varied considerably, and it may be useful to contrast these, and the number of rainy days and amount of rain-fall, with the number of deaths in each month for each year, in a tabulated form.

Table No. 7

~~Meteorological~~ Thermometrical, maxima, minima and means for each month, - Daily ranges and highest extremes of Temperature - Number of rainy days and amount of rainfall, - and Monthly number of Deaths, - for the years 1855 and 1856 Contrasted.

	1855			1856			1855		1856		1855		1856		1855	1856	
	Max.	Min.	Mean	Max	Min	Mean	Daily range	Highest extremes	Daily range	Highest extremes	No. of days on which rain fell	Amount of rainfall	No. of days on which rain fell	Amount of rainfall	Deaths	Deaths	
January	88	42	65	91	42	71.10	14.14	24	25.13	35	5	.48	9	.99	52	60	
February	95	41	68	94	42	64.51	18.30	29	23.44	51	3	.18	7	.68	62	57	184
March	84.5	38	61	91	38	64.64	17.16	33	23.80	38	7	1.38	12	1.63	61	67	
April	89	36	62	90	37	58.38	15.9	22	21.80	30	11	1.17	15	5.01	62	49	
May	67	35	51	69	35	51.90	13.21	19	19.51	32	18	3.31	14	2.42	60	46	~~158~~ 138
June	72	31	50.5	71	33	48.8	13.14	19	20.46	32	10	1.29	12	1.15	62	43	
July	67	31	49	69	31	46.6	13.24	21	20.77	31	12	1.42	10	1.89½	86	47	+
August	73	33	53	66	32	57.4	15.28	27	20.25	28	11	.69	14	1.70½	50	48	146
September	77	33	55	80	33	53.10	15.13	23	23.90	39	15	2.60	17	1.79	62	51	
October	85	36	60	74	35	55	17.00	32	22.00	31	14	1.51	15	2.22	69	46	
November	85	39	62	80	38	58	17.10	31	21.76	33	13	1.49	12	1.55	61	44	149
December	96	38	67	85	39	62	15.11	44	23.03	37	12	2.73	15	1.85	88	59	
			58.60			57.11	×15.7		×22.15		131	18.25	152	22.89	775	617	

× the average daily range - mean of 15 years is 16.8

It appears by this table that there were 8 more deaths in January 1856 than in January 1855. In the disadvantage of 1856, the mean temperature of the month, was 6 degrees higher than in 1855. The Maximum temperature higher. The daily range higher by 11 degrees. In its favour there were 4 more rainy days, and nearly double the amount of rain fall! But we should not institute a fair comparison, without also examining, what the weather and the mortality was in the Month preceding i.e Dec^{r} 1855 We find that December 1855 mortality was 28 more than January 1856, and even 27 more, than November 1855. Decembers extremes of temperature had also been greater, though its diurnal ranges were less, and more rain had fallen than in either the month preceding or succeeding. The legitimate inference therefore is, that notwithstanding a higher mean temperature, and a greater daily range; the influence of the heavy rain-fall that had taken place in December and was continued in January, had the effect of diminishing the mortality about 31 per cent. On the other hand there must be taken into account, that under the malign conditions that caused the great December mortality, the weakest part of the population, and those most susceptible of its effects had already fallen victims. Hooping Cough, which in December had destroyed 10 Children, only caused the death of 1 in January. Croup on the contrary had 2 in January to 1 in December. 11 Children died from Convulsions in December only 8 in January. From Pneumonia 8 died in December to only 3 in January. Teething was the cause of death to 4 in December but to only 2 in January.

In February 1856, the deaths

deaths were 5 less than in February 1855, for the temperature was lower with more rainy days and a heavier rain-fall, though with a greater diurnal range of temperature. -

The March deaths in 1856, were 6 more than those of 1855; moreover they were 10 more than in February 1856, while March 1855 had 1 less than February 1855. The mean temperature of March 1856 exceeded that of March 1855 by 3.64 degrees. This showed its effects principally in "Diseases of the Brain &c" which in 1856 were 12, to only 5 in 1855. In those of the "Digestive organs" too, in 1856 there were 10, to only 6 in 1855 - In "Premature Births and Debility" there were 5 in March 1856, to nil in the same month of 1855. This item I always find to be much increased by great diurnal ranges of temperature, as was the case in March 1856. I have before shown how great was the difference in the diurnal ranges of the temperature, between the two years; and they are marked by a corresponding difference in the mortality in this class. Only 13 for 1855, to 41 for 1856 - Before children are able to maintain vital warmth by their own volition, they require most careful guarding against the rapid changes of temperature which characterise our climate. Warm clothing, pure air, and abundant food are the essential requisits for this purpose. - Unfortunately a perverse idea of hardening children by scanty clothing very generally prevails, in spite of the indignant protests of the most eminent physiologists. Few persons have any idea of generating or preserving warmth, otherwise than by fires and excluding the cold but pure air. They

Cannot

cannot be made to comprehend that to generate heat in the human body; food is as essential, as fuel is to a fire; and that without an ample supply of Oxygen by the admission of pure air; - in the one example as well as in the other - fuel will not burn and liberate heat; that heat cannot be conserved for the bodys use, without its dissipation is prevented by a sufficient covering of that species of clothing, which is a bad conductor of heat; of which woollen fabrics are the best examples. The pernicious fashion of exposing the limbs and extremities of the most susceptible and weakest of our kind to the heat-abstracting influences of thorough draughts and cold winds, cannot therefore be too often or too forcibly denounced. Were it not for this cruel folly Croup would not commit the terrible ravages that it does in this City -

In April the 1856 mortality was 13 less than that of 1855, and 18 less than that in the previous month. A very heavy rain-fall and a diminished mean temperature are the most remarkable deviations in this month compared with the other. The diminution of deaths was principally in the "Diseases of the Organs of Respiration &c", and in the class of accidents and other causes not influenced by the weather.

All the climatic phenomena are in favour of May 1855, yet the mortality of May 1856 was 14 less. Four of that number occurred in the "Zymotic" class, there being 6 cases of "Croup" in 1855, to 2 in 1856. In "Diseases of the Organs of Respiration &c" there were 12 in 1855, to only 3, in 1856. In the last class not dependent upon climatic changes, there were double the

number

number in 1855; or 5 more than in 1856. —

In June 1856, the minimum monthly ~~mortality~~ 43 — of the year took place. — The minimum of 1855 was 52 in January — The deaths in June 1855 were 19 more than in June 1856. The monthly extremes of the Thermometer were greater, and the mean temperature higher in 1855; but the daily ranges were greater in 1856. The rainy days and the amount of rainfall were nearly alike. In the "Zymotic" class the deaths were the same in number. In the next class there were three cases (Dropsy) more in 1855. In the 3d or "Tubercular Class" there were 5 more cases of "Consumption", and one of "Hydrocephalus" in 1855. In "Diseases of the Brain &c" there was a majority of one in 1855. Two more in "Diseases of the Heart &c" in 1855. Five more in "Diseases of the Lungs &c", Two less in the "Digestive organs" and two less in the next class. Two more in the 9th class. Two less in the 10th. One more in the 13th. Three less in the 14th. Four less of old age. Nine more in the last class

In July 1856, the deaths were only 47, to 86 in July 1855. The Meteorological phenomena were to the disadvantage of the former. But two establishments alone, — the Orphan School, and the Convict Nursery, had 15 deaths in 1855, to only 2, in 1856. — In the 1st or "Zymotic" class there were 2 more in 1856. In the 2d class there were 2 less. In the 3d or "Tubercular" class there were 13 less. In the 4th or "Brain &c diseases" there were 5 less. In the 5th "Diseases of the Heart &c" there were 2 more. In the 6th "Diseases of the Lungs &c" there were 12 less. In the next two classes there was only a difference of one. In the 9th class there were 3 less. In the 13th there were 2 more. In the 14th

there

there were 5 less; — all belonging to the two institutions before alluded to. In the 17th accidents and other causes unconnected with weather there were 9 less. The great disparity between the corresponding Julys of these two years is most pretty evidently shewn not to have been originated in atmospheric differences or a more unhealthy season in 1855, but from purely local or accidental causes.

In August the number of deaths more nearly correspond, than in any of the months of the two years; there being 48 in 1856 to 50 in 1855. All the meteorological phenomena are in favour of 1855, except the number of rainy days and the amount of rain-fall. The deaths too would have been less in 1855, but for the mortality in the Orphan School and Convict Nursery which was 8 in 1855, to not a single one in either establishment in 1856.

September 1856 had 11 less deaths, than in 1855. The temperature was more equal in 1855, and there was a greater rain-fall, but 1856 had two more rainy days. "Zymotic" deaths were alike in both years. There were 4 less in the 2nd class in 1856, but weather has comparatively little influence on this group of diseases, — "Dropsy Cancer &c" In the next there were 4 less. In "Diseases of the Brain &c" both were the same. In the next 1856 had one more. In Diseases of the Lungs &c 3 less. In the "Digestive organs 5 less. In the 9th class 2 more. In the 13th one more. In the 14th there were 4 less — all in 1855 being Orphan School deaths from Marasmus. In the 15th class 1856 had 3 less.

In October the inequality between the two years is very great — 23 more in

1855

1855. In every respect but the diurnal variations of temperature, the weather was more favourable to health in 1856. The mean temperature of October 1855 was 8 degrees higher than the 14 years mean. October 1856 was not quite 2½ degrees above that mean. The "Zymotic" deaths in 1855 were double those of 1856. One death from Scarlatina in 1855, none in 1856. 12 deaths from "Hooping Cough" (4 of them at the Orphan School) to none in 1856 On the other side 1 case only of "Croup" in 1855, to 4 in 1856. One case "Diarrhoea" in 1856 to nil 1855 Two "Fever" in 1856 – to nil 1855.

Hooping Cough had not carried a death of any child under 3 years of age, for nearly five years before. The Epidemic commenced in September 1855, when one death was recorded. It continued until March 1857, but its greatest fatality was in the Months of October, November, and December 1855. The total mortality was 34 in the period named, and only 4 out of the whole number were above 3 years of age. The deaths in the 2° class in October 1856 were 4 less than in 1855. In the 3° Class, half the number, or 6 less than in 1855 In the 4th class, half the number, or 4 less than in 1855. In "Heart Diseases" only 1 less. In "Diseases of the organs of Respiration" 1856, had one more than in 1855. In the "Digestive organs" 1856 had only half the number of 1855 or 3 less. In the "Urinary organs" 1856 had one to nil in 1855. In Class 9 the reverse of the former occurred In Class 10 – 1856 had One more than in 1855. In Class 13 "Premature Births and Debility" 1856 had 4 to none in 1855 – exhibiting again the effects of great diurnal ranges of temperature on the weak and newly born. In 14th Class 2 Cases, one of Marasmus at the Orphan School in 1856

1856 against nil in 1855. In the 17th Class, "Accidents &c and Causes not Specified" 15 in 1855 to only 7 in 1856.

November 1856 was 1° less than November 1855. The weather was in favour of the first in regard of its extreme and monthly mean of temperature, being less than 2 degrees above the 14 years mean, while November 1855 was nearly 6 degrees above; but against it in diurnal range, and nearly equal in rainy days and rain-fall. For though 1855 had one more rainy day, 1856 had a slight excess in amount of rain that fell. In other causes we must therefore search for the wide differences of mortality in the two months. In the 1st Class or Zymotic diseases, nearly half the amount of difference is at once thrown by 8 deaths from Hooping Cough in 1855, to nil in 1856. The other items of the class are equal. In the 2d Class 1855 has an excess of 2. In the 3d Class 1856 has one more than 1855. In "Brain &c diseases" 1856 has 2 less than 1855. In "Heart &c diseases" 1855 had 2, to 1856 nil. In "Diseases of the Lungs &c" 1855 - 8, to 2 in 1856. In "Digestive organs &c" 1856 had one more. In "Urinary organs" 1856 had 2, to nil 1855. In No 9 Class 1 in 1855, to nil 1856. In Class 13 - 3 in 1856, to nil in 1855. In Class 14: 3 Cases Marasmus (Orphan School) in 1855, to nil 1856. In the last class, double the number in 1855, or 14, to 7 in 1856.

The December disparity of deaths in the two years is very great, 59 in 1856, to 88 in 1855. Some remarks have already been made on the latter in the observations upon January. The mean temperature of the month in 1855 was 5 degrees higher than 1856, and 7 degrees above the 14 years

Standard

Standard mean. The extreme range of the month 10 degrees greater. The diurnal range between 7 & 8 degrees less. The raining days less by 3; but the amount of rain that fell more by .88 of an inch. It is constantly obvious how much more conducive to health are frequent moderate showers, than less frequent but heavier rain-falls. — The "Zymotic" deaths in 1855 were 20, in 1856 only 11. The "Hooping Cough" in 1855 caused 10 of these deaths; in 1856 only one. On the other hand only one case of "Croup" is tabled in 1855, to 4 in 1856. The effects of the greater daily range of temperature in this disease, is here again evident. In Class 2. 1855 had 7 deaths to only 3 in 1856. In Class 3. 10 in 1855, to 7 in 1856. In "Disease of the Brain &c, the hotter December of 1855 had twice the number of deaths to 1856, or 14 to 7. "Convulsions" one disease in this Class had 11 in 1855, to 3 in 1856. In "Diseases of the Hearts" 1856 was greatly in excess of 1855, or 7 to 1. In "Diseases of the Lungs" 1855 had a majority of one over 1856. In the "Digestive Organs &c" 1855 had 7, to 1856-2. In class 8. 1856 had 1 to, nil in 1855. In class 9. 1856 had 2, to 1855-1. In Class 13. 1856-3. to 1855-2. In "Marasmus" 1855. 2 to ~~nil~~ one in 1856. In class 17 "Accidents &c" 1855 had 15 to only 4 in 1856.

It will have been remarked throughout, that in Class 17, the numbers greatly predominated in 1855. This arose altogether from so many more deaths being registered in 1855, without a specified "Cause of death" being assigned, than in 1856. or 87 in the former year, to only 9 in the latter. In the other items of "Accidents", "Suicide", "Murder" "Drowning" &c &c 1856 had

48, to 44 in 1855. The few deaths registered in 1856, without specifying the "Cause of death" indicates how much more precise registration has become. Nevertheless there is still ample room and verge enough for further improvement It never will be as perfect as it might and ought to be, until the Registrars are empowered to demand from the persons on whom devolves the legal responsibility of registering the deaths — a medical certificate of the "Cause of Death".

I have not in the foregoing comparisons alluded to the effects of either the pressure or the movement of the atmosphere. Not because I doubt their influence upon relative mortality, but because this "Society" has unfortunately only a most imperfect meteorological record for 1855 to refer to. This gap in our meteorological treasures, will be a source of annoyance to all future explorers The 14 years rich store of facts accumulated at the Ross Bank Observatory, and so usefully condensed for practical purposes by Mr Jeffreys, and the valuable Monthly Meteorological Tables commenced by Mr. Francis Abbot in 1856 and continued to the present time, are much impaired in value by the deficiency I have alluded to. Is it not possible to explain this neglect, and render our collection of Meteorological phenomena for the last 16 years, continuous and complete? I believe that Mr Abbot has data that would enable him to effect this. — I have consulted some of them, as well as those that were kept at Government House, in my examination of the mortality of July 1855. It will be remembered that an excess of 18 deaths occurred in the July of that year over 1856, in the 3d Class which includes "Consumption", and in the 4th Class "Diseases

Diseases of the Brain &c" Both of these classes are
disease and much influenced by atmospheric pressure.
I find that July 1855 was characterised by wide
and sudden ranges of the Barometer, much greater
than in the month preceding or succeeding. The
range of the month being 1.144 inches, while that
of 1856 was only .975 of an inch. On the 10th day of
that Month in 1855, between the 7 A M, and 2 P M
observations, the Barometer varied more than 1/4
of an inch. It differed nearly as much between
the 9 P M observation on the 21st and the morning
observation of the 22d, and from the evening
observation on the same day to the next morning
it ranged .356, or more than one third of an inch.
In my January, and February "Health Reports"
of this year, I made some remarks upon the
effects of atmospheric pressure upon the body.
Every two inches range of the Barometer, makes
a difference of One pound of pressure on every
square inch of our bodies, or of One ton, on the
whole superficies of a full sized man. It is
reasonable to expect that this should, in the
one extreme be attended by dilated vessels
and a vigorous cutaneous and capillary
circulation of the blood; and in the other, by
impeded circulation and a congested state of
the large internal vessels.—

The rapidity of atmospheric
movement accompanying high winds, will act
in two ways; beneficially by renewing the air
so much faster; injuriously by abstracting vital
heat and moisture from the body too quickly.—
From the accurate data we are now supplied
with, in the Monthly Meteorological Tables,
these phenomena can receive their due

weight

weight in future investigations. —

It is obvious from the preceding, necessarily minute and tedious comparisons, that to the climatic differences between the two years we can only ascribe a small portion of the very large diminution of mortality in 1856. Whatever the effects were in Hobart City and Launceston town, of the heavier rain-fall, greater number of rainy days, and diminished mean-temperature in 1856; they were not appreciable on the Country mortality. The deaths in the latter were more numerous in 1856, than in 1855, but only keeping pace with the increasing population. It is quite in accordance with scientific induction to expect, that more frequent and heavier showers, should improve public health more where the population is concentrated, and decomposing refuse is constantly accumulating. No great exertion of human skill is required to enable us to reap some of these advantages by artificial means. They were known, appreciated, and applied, two thousand years ago. — But besides these natural causes there must have been some additional ones to account for the very large diminution of 21 per cent of deaths in Hobart. That it did not arise from a lessened population we have the evidence of the recent census to prove. That it could not have arisen from the change in the elements of the population, the merest tyro in medico-vital statistics would at once pronounce when he was informed, that the population had decreased in men in the prime of life — from 21 to 45 years of age, — and increased only by children born, youths below 21, and old people

people above 45 years of age. In every part of the world the rule is, that the mortality will be the greatest where the infant population is the largest. So that, even had the mortality of 1855 and 1856, been on a par absolutely, - yet 1856 would have been relatively the healthier year, as from the elements of its population having increased in those whose chances of life are the least, - the mortality ought to have been greater, not equal, still more not less than 1855. In the very large and gratifying diminution of mortality in the Orphan School and Convict Nursery, compared with former years, we have an indubitable proof of what may be accomplished, by increased attention, irrespective of climatic superiority. From constant personal attention to matters of this kind I can testify that more vigilance was exercised by the municipal authorities in 1856 than in 1855, in the removal of such nuisances as necessarily deteriorate atmospheric purity. Moreover the advantages of surface drainage was much extended, though still far short of what is absolutely essential to the maintenance of public health. Of the sub-drainage of the City I cannot say a word in commendation. At the I have met with several instances in which individuals have effected local improvements about their premises in consequence of the attention I have directed to the evils arising from bad drainage, impure water, inadequate ventilation, and other causes inimical to public health.

The results therefore of this lengthened enquiry to the questions propounded in the Commencement

commencement of my paper are these. To a greater amount of sanitary care in the first place; and to a greater number of rainy days and greater amount of rainfall, with lower mean temperature, in the second; Can we alone attribute not merely the 21 per cent less mortality of Hobart in 1856, but the additional deaths that by the ordinary laws of mortality ought to have followed on the increase in numbers in the most susceptible part of the population.

I have no desire that scientific papers of this kinds, should consist of nothing else, but a dry detail of facts and figures - It is by the practical application of knowledge so acquired, that science can promote the interests of humanity - An Institute like this, - constituted of intelligent men, in earnest to apply the means by which such truths can best be made available to the advantage of their fellow men, - and the preservation of health and life is surely second to no other object, —— Can do much good, as kindred scientific institutions - to wit - the British association and Royal Society, and others in England, have done. - Individual efforts such as mine are very partial in their effects without Corporate Cooperation. I have worked out the details of this momentous question, without sparing time or labour. Convince yourselves that I have done this correctly, and then with the irresistible weight of united action,

impress

impress upon those who have the power to carry out reform, the imperative necessity and moral obligation of doing so. There are ample grounds for it in the facts I have laid before you. — In England the difference of mortality, between town and country districts is only about 25 per cent (6 per thousand) more in the former. I have proved to you, that while a large portion of the country districts of Tasmania have an mortality ranging from 6¾ - 8. - 10 - 11 - 12 per thousand up to the 18 of the highest, — that the average of the whole is 13¾. — 25 per cent added to this average would only make 17¼ per thousand, as the legitimate rate of mortality which should prevail under our climatic advantages in Hobart City and Launceston town. Yet by Table 3 you see that that of the former is 11¼ more per thousand, or 28½ — or more than 50 per cent above the country rate — while that of the latter is 3 more, or 20¼ per thousand —

Much as we may congratulate ourselves upon the amount of diminished mortality effected last year, it is quite clear there can be no difficulty in saving the lives of more than 200 human beings annually in Hobart City and Launceston town alone, by reducing their mortality to the usual difference between town and country populations. — Much more might and ought to be realized in both. — Many hundreds of lives may yet be annually preserved to this youthful Colony by the timely

timely exercise of the influence possessed by such a body as the Royal Society — You have lately, wisely and vigorously displayed that spirit, in a mere material object, let me implore you to repeat it on this the first interest of all. In no other way can your influence be more legitimately honorably, scientifically, humanely or beneficially exerted. —

To conclude I to-day closed the words of Dr. Bland of Sydney in his paper on Sanitary Reform of Towns and Cities with; sent in July last to the Philosophical Society of New South Wales (a copy of which he has favored me with)

"No price — that we could afford
" to pay, — could be too high in order to secure
" to our "towns" and "Cities" the largest possible
" extent of protection against those "epidemics"
" which so frequently devastate the entire
" globe, — as well as to the inhabitants
" generally, the largest attainable amount
" of longevity and sound health." —

Edm. Swarbreck Hall

Claremont House
Ealanton
September 1857

Table No

Registered in the District of Hobarton Taymania and Franklin / Classified and arranged in Months,

Months of 1856													
Jan'y	Feb'y	March	April	May	June	July	Aug't	Sept'r	Oct'r	Nov	Dec'r	Total	Classes of Disease	Causes of Death
1	1	2	..	..	..	..	1	..	..	1	1	7		Hooping Cough
2	2	3	2	2	3	2	3	4	4	3	4	34	N° 1	Croup
..	..	1	1	3	..	1	..	..	..	..	..	6	Zymotic	Thrush
4	3	5	..	..	1	1	..	2	1	..	2	19	Diseases	Diarrhea
4	1	3	..	1	..	..	..	1	..	..	2	12	Total Deaths	Dysentery
..	..	..	1	..	..	..	..	..	..	..	..	1	100	Cholera
..	..	..	..	..	..	1	..	..	..	..	..	1		Influenza
2	1	1	2	..	1	2	..	1	2	..	2	14		Fever
..	..	..	1	..	..	2	..	1	..	..	..	4		Erysipelas
..	..	..	..	2	..	..	..	..	..	..	..	2		Cancrum Oris
1	..	..	..	1	..	..	1	..	..	1	1	5	N° 2	Hemorrhage
2	3	3	..	2	..	1	2	..	1	2	1	17	Dropsy, Cancer	Dropsy
..	..	..	..	..	..	..	1	1	..	..	1	3	and other diseases	Abscess
..	..	1	..	1	..	..	..	..	..	1	..	3	of uncertain or	Ulcer
..	..	..	1	..	1	..	2	..	1	1	..	6	Variable seat	Cancer
													Total Deaths 34	
..	..	..	1	..	..	..	..	..	..	..	..	1	N° 3	Scrofula
6	8	3	6	5	1	7	9	5	6	4	6	66	Tubercular Diseases	Consumption
1	1	1	..	..	..	..	1	6	..	1	1	12	Total Deaths	Hydrocephalus
													79	
1	..	..	4	..	..	3	1	..	..	2	..	11	N° 4	Syphilitic
2	1	3	..	1	..	..	5	5	2	..	1	20	Diseases of the	Apoplexy
1	..	1	..	..	2	..	1	..	..	1	..	6	Brain, Spinal	Paralysis
..	..	..	..	..	..	..	1	..	..	..	..	1	Marrow, Nerves	Delirium Tremens
1	1	..	..	..	..	..	..	..	..	..	1	3	and Senses	Epilepsy
..	..	1	1	..	..	..	..	..	..	..	1	4	Total Deaths	Insanity
8	10	7	6	6	4	6	6	2	2	5	3	65	112	Convulsions
..	..	..	..	..	..	1	..	..	..	..	1	2		Disease of the Brain
													N° 5	
1	1	..	..	1	1	..	..	2	..	..	..	6	Diseases of the Heart and Blood Vessels	Aneurism
2	3	1	1	1	..	5	1	2	3	..	7	26	Total Deaths 32	Disease of the Heart
2	..	3	1	1	2	1	1	4	3	1	5	24	N° 6	Bronchitis
..	..	..	..	..	1	..	..	..	..	..	..	1	Diseases of the Lungs and of the other organs of Respiration	Pleurisy
3	2	..	1	2	1	..	2	..	1	1	2	15		Pneumonia
1	..	..	2	..	..	..	..	..	..	..	1	4	Total Deaths 44	Disease of the Lungs

Deaths for 1856

(including until the 25th October, the Electoral Districts of Kingborough

classes, Causes of Death, and ages, with corresponding totals for 1856

Edward Swarbreck Hall M.R.C.S.L. &

Ages in Months												in Annual periods				in Quinquennial					in Decennial								Total	
under 1	" 2	" 3	" 4	" 5	" 6	" 7	" 8	" 9	" 10	" 11	" 12	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	100 to 110	1856	1855
"	"	"	1	"	1	"	1	"	"	1	"	1	1	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	7	31
"	1	"	"	1	"	1	1	2	"	1	1	7	8	3	3	4	1	"	"	"	"	"	"	"	"	"	"	"	34	16
1	2	1	2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	6	nil
2	"	2	1	2	"	3	1	"	1	"	"	3	"	"	"	1	"	"	"	"	"	"	3	"	"	"	"	"	19	19
1	2	"	"	"	1	"	1	1	"	1	"	1	1	"	"	"	"	"	"	"	1	1	"	1	"	"	"	"	12	23
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1	nil
1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	5
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	1	2	"	3	"	6	1	"	"	"	"	"	"	14	13
"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	1	"	"	"	"	"	4	2
2	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	nil
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	1	1	"	1	1	"	"	"	"	5	nil
"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	1	1	"	"	1	1	1	6	5	"	"	"	"	"	17	28
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3	"	"	"	"	"	"	"	3	7
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	1	"	"	1	"	"	"	"	3	2
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	2	1	2	"	"	"	"	6	6
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	1	2
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	9	10	9	19	12	5	1	1	"	"	"	66	93
"	1	1	"	"	1	"	"	2	"	"	"	2	2	"	1	1	"	"	"	"	1	"	"	"	"	"	"	"	12	27
"	"	"	"	2	2	"	"	"	"	1	"	3	1	"	1	"	"	"	1	"	"	"	"	"	"	"	"	"	11	4
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	2	3	4	6	3	1	"	"	"	20	16
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	2	1	1	"	1	"	6	12
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1	6
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	1	1	"	"	"	"	"	3	2
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	2	1	"	"	"	"	4	3
29	4	3	6	"	2	2	2	4	1	"	1	7	2	1	1	"	"	"	"	"	"	"	"	"	"	"	"	"	65	78
1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	2	nil
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	4	1	"	"	"	"	"	6	1
																1	1	"	1	2	5	6	5	3	1	1	"	"	26	17
1	1	1	2	1	1	"	1	3	"	"	"	2	2	"	"	"	1	"	"	1	2	4	1	"	"	"	"	"	24	5
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1	nil
"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	"	1	2	3	2	3	2	"	"	"	"	15	70
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	2	"	1	"	"	"	"	"	4	nil

F	T	M	A	M	J	July	Aug	S	O	N	D			
2	2	7	1	"	2	"	"	"	"	1	1	16	N°1	Teething
"	1	"	"	"	"	"	"	"	"	"	"	1	Diseases of the	Quinsy
"	"	1	"	"	1	"	"	"	"	"	"	2	Stomach, Liver	Cholera
"	1	"	"	1	"	"	"	"	"	1	1	4	and their Organs	Enteritis
"	"	2	"	2	1	"	1	"	1	"	"	7	of Digestion	Ascites
"	"	"	"	"	"	1	"	1	"	"	"	2	Total Deaths	Hernia
1	"	"	"	1	2	"	"	"	"	1	"	5	50	Obstruction of the Bowels
"	"	"	"	"	"	"	"	"	1	"	"	1		Jaundice
"	"	"	"	"	"	"	1	"	"	1	"	2		Hepatitis
1	"	"	1	1	2	"	"	1	1	"	"	7		Disease of the Liver
1	"	"	1	"	"	"	"	"	"	"	"	2		Worm Fever
"	"	"	"	1	"	"	"	"	"	"	"	1		Dyspepsia
"	"	"	1	"	1	"	"	"	"	"	"	2	N°8	Asphyxia
"	"	"	1	"	"	"	"	"	"	"	1	2	Diseases of the	Ischuria
"	"	"	"	"	1	"	"	"	"	"	"	1	Kidneys and	Cystitis
"	"	1	"	"	"	"	"	"	"	"	"	1	Urinary Organs	Stricture of the Urethra
				1	"	1	"	1	2	"	5		Total Deaths 11	Disease of the Kidneys
"	1	"	1	"	1	"	"	2	"	"	1	6	N°9 Childbirth, Diseases	Childbirth
"	"	1	"	"	"	"	"	"	"	"	1	2	of the Uterus &	Rupture of the Uterus
													Total Deaths 8	
1	"	"	"	"	"	"	"	"	"	"	"	1	N°10 Rheumatism,	Arthritis
"	"	"	"	"	2	"	"	2	"	"	4		Diseases of the Bones, Joints &	Rheumatism
													Total Deaths 5	
"	"	"	"	"	"	1	"	"	"	"	1		N°11 Diseases of the Skin, Cellular Tissue &c	Carbuncle
													Total Deaths 1	
"	"	"	"	"	"	"	"	"	"	1	"	1	N°12 Malformations	Malformation of the Kidneys
													Total Deaths 1	
5	6	5	3	3	2	3	2	2	4	3	3	41	N°13 Premature Birth, Debility &	Premature Birth and Debility
													Total Deaths 41	
"	2	1	1	"	3	1	"	"	1	"	1	10	N°14 Atrophy &	Marasmus
"	"	"	1	"	"	"	1	"	1	"	"	3	Total Deaths 13	Atrophy
													N°15 Age	
1	3	2	3	1	4	2	1	6	1	2	3	29	Total Deaths 29	Age
"	1	"	1	1	2	1	1	1	"	1	"	9	N°17	Burns
"	"	"	"	1	"	"	"	"	"	1	1	3	Violence	Scalds
2	1	2	3	2	"	"	"	"	3	"	1	14	Privation	Drowning
"	"	"	"	"	1	"	"	"	"	"	"	1	Cold	Fractures
"	"	1	"	1	"	"	"	"	"	"	"	2	Intemperance and	Contusions

		2	3	4	5	6	7	8	[illegible]	[illegible]	[illegible]	[illegible]	1 2	2 3	3 4	4 5	5 10	10 15	15 20	20 25	25 30	30 40	40 50	50 60	60 70	70 80	80 90	90 100	100 110	1856	1855
.	"	"	"	"	1	1	1	1	3	"	2	2	5	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	16	23
.	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	2
.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	"	"	"	"	"	2	1
.	"	"	"	1	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	1	1	"	"	"	"	"	"	"	4	12
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	2	3	"	1	"	"	"	"	7	nil
.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1	"	"	"	"	2	nil
ld	1	"	1	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	1	"	"	"	"	5	2
.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	4
.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	"	"	"	"	"	"	2	10
.	.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	4	1	1	"	"	"	"	7	nil
.	"	"	"	"	"	"	"	"	"	"	"	"	"	1	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	nil
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1	3
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	1	"	"	"	"	"	2	nil
	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	2	nil
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	1	nil
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	1
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	4	"	"	"	"	"	5	nil
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	2	3	"	"	"	"	"	"	"	6	9
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	"	"	"	"	"	"	"	2	2
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	1	nil
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	"	"	2	"	"	"	"	"	4	4
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	1	nil
tuml		"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	nil
lity	19	7	3	"	2	3	1	"	"	"	1	"	"	"	"	"	"	"	"	"	"	3	"	2	"	"	"	"	"	41	13
	"	"	"	"	1	"	"	"	1	"	2	"	1	2	1	2	"	"	"	"	"	"	"	"	"	"	"	"	"	10	22
	"	"	"	1	"	"	"	"	"	"	"	"	1	"	"	"	1	"	"	"	"	"	"	"	"	"	"	"	"	3	nil
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	1	11	10	4	1	"	29	nil
	"	"	"	"	"	"	"	1	"	"	"	"	1	"	1	1	"	"	"	"	3	"	"	1	"	"	1	"	"	9	7
	"	"	"	"	"	"	"	"	"	"	"	"	1	1	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	3	2
	"	"	"	"	"	"	"	"	"	"	"	"	2	1	"	"	1	"	1	.	2	2	4	"	1	"	"	"	"	14	13
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	"	1	3
	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	"	"	"	2	nil

J	F	M	A	M	J	July	Aug	S	O	N	D		
1	"	"	"	"	"	"	"	"	"	"	1	Causes not specified	Rupture of the Spleen
"	"	2	"	1	1	"	"	1	"	1	1	7	Accidental
"	"	"	"	"	"	"	"	"	"	2	"	2	Total Deaths
"	1	2	"	"	"	1	1	1	"	2	1	9	57
"	"	1	1	"	"	1	1	1	4	"	"	9	

Murder . .
Suicide . .
Causes not specified

1856	60	57	67	49	46	43	47	48	51	46	44	57	617	5
1855	52	62	61	62	60	62	86	50	62	69	61	88	775	7

	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	10	15	20	25	30	40	50	60	70	80	90	100	110	1856	1855
													2	3	4	5	10	15	20	25	30	40	50	60	70	80	90	100	110			
22	"	-	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	nil
.	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	2	3	"	"	"	"	"	"	"	7	8
.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	1	"	"	"	"	1	"	"	"	"	"	2	2
.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	2	3	2	2	"	"	"	"	"	9	4
1	"	"	"	"	"	"	"	"	"	"	"	"	1	1	-	1	"	"	"	"	"	2	1	1	1	1	"	"	"	"	9	87
	59	19	13	14	10	12	8	9	17	3	9	4	42	23	9	13	13	7	14	18	38	78	65	60	36	15	7	2	.	617		
	35	32	28	16	7	19	14	8	6	11	12	11	82	23	17	15	11	8	32	35	91	75	63	47	24	10	2	1	. . .	775		

Memorandum of deaths from diseases in 1855 which have no corresponding causes of death in 1856

Measles	2	Tumours	5	Laryngitis	2	Dysuria	2	Wounds Gunshot	2	
Scarlatina	3	Tetanus	1	Asthma	8	Matritis	1	Concussion of the Brain	2	53
Syph: prim:	2	Dis: Spinal		Catarrh	7	Mensium suppressio	1			
do consec:	5	Rup: Aorta	2	Hæmoptysis	1					
Natiæ Pock	2	do Veins	1	Peritonitis	2	Wounds	1			