

Treatment of Meningococcal Meningitis With Sulphanilamide

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SULPHANILAMIDE and allied drugs are proving valuable in the treatment of infections other than those caused by the haemolytic streptococcus. Favourable results have been recorded in *Bacillus coli* and other infections of the urinary tract (Helmholtz 1937, Walther 1937, Kenny et al. 1937). Gonococcal infections seem to yield rapidly (Crean 1937, Ballenger et al. 1937), as also infections with *Brucella abortus* (Richardson 1938, Francis 1938), and a considerable number of workers have claimed success in the treatment of meningococcal meningitis and meningococcal septicaemia. Buttle, Gray, and Stephenson (1936) showed experimentally that mice infected with virulent meningococci could be cured with sulphanilamide, and Proom (1937) demonstrated that the efficacy of the treatment diminished markedly with increase of the time-interval between infection with the meningococci and treatment with sulphanilamide. In the treatment of meningococcal meningitis sulphanilamide has been used successfully in conjunction with serum by McIntosh, Wilcox, and Wright (1937), Mitchell and Trachsler (1937), Brennemann (1937), Bernstein (1937), Basman and Perley (1937), and Zendel and Greenberg (1937), and alone by Schwentker, Gelman and Long (1937), Carey (1937) and Eldahl (1938).

Until recently our routine treatment of the disease consisted in lumbar puncture and the intrathecal injection of antimeningococcal serum. In some

Table I

—		C.S.F.			Prontosil.		Intrathecal serum (c.cm.)
		Cells per c.mm.	Diplococci in films.	Culture.	P. sol. (c.cm.)	P. alb. (g.).	
Nov.	2nd	2500	+	No growth.	10	3.3	10
"	3rd	2700	+	Ditto.	20	3.3	..
"	4th	240	-	Ditto.	10	3.3	10
"	5th	270	-	Ditto.	..	2.0	..
"	6th . . . .	..	..	..	..	2.0	..
"	7th . . . .	..	..	..	..	1.3	..
"	8th	210	-	No growth.	..	1.3	..
"	9th . . . .	..	..	..	..	1.3	..
"	10th	28	-	No growth.	..	1.3	..
"	11th . . . .	..	..	..	..	1.3	..
"	12th . . . .	..	..	..	..	1.3	..

P. sol. = Prontosil soluble (2.5 per cent. given by intramuscular injection).
P. alb. = Prontosil album given by mouth.

cases serum was also injected into the cisterna magna and the ventricles. Our results had been so disappointing that we were prepared to try any other line of treatment that offered a reasonable prospect of success. From published reports sulphanilamide seemed worthy of trial. In using it our routine has been as follows. As soon as a tentative diagnosis is made from microscopic examination of the spinal fluid, and before the results of culture have been ascertained, Prontosil soluble is given by intramuscular injection and Prontosil album (sulphanilamide) by the mouth. All drugs containing sulphur are prohibited and eggs are excluded from the diet. This treatment has been continued until there is definite clinical improvement and the cerebro-spinal fluid has become sterile. Lumbar or cisternal puncture has been done daily. In our last 4 cases sulphanilamide in a concentration of 1 per cent. in normal

Table II

		C.S.F.		Prontosil.		Intrathecal serum (c.cm.)
		Cells per c.mm.	Culture.	P. sol. (c.cm.)	P. alb. (g.)	
Dec.	2nd	308	Meningococci.	10	1.5	10
"	3rd	250	Sterile.	10	3.0	..
"	4th	100	Meningococci.	10	3.0	..
"	5th	..	..	10	3.0	..
"	6th	..	..	..	3.0	..
"	7th	50	Sterile.	10	3.0	..
"	8th	..	..	10	3.0	..
"	9th	201	Sterile.	10	3.0	..
"	10th	}	..	..	1.5	..
"	to					
"	13th	..	..	..	1.5	..
"	14th	50	Sterile.	..	1.5	..
"	17th	52	Ditto.	..	..	..

saline has been injected either into the spinal theca or the cisterna magna. The drug is not very soluble and to get a solution of this concentration it is necessary to warm the saline to body temperature. During the last six months we have treated 10 cases in this way.

Case Records

Case 1.—Girl aged 3 years 11 months. Admitted to hospital on Nov. 1st, 1937. She had previously been healthy, but for three days had complained of severe headache and had been restless and sleeping badly. Her temperature was 102° F. and she was very ill. The tonsils were acutely inflamed. Next day there was definite nuchal rigidity, and the cerebro-spinal fluid (C.S.F.) obtained on lumbar puncture was found to contain 2500 cells per c.mm., mostly polymorphonuclears. Intracellular diplococci were seen in films of the sediment though culture of the fluid was sterile. (Unfortunately there was some delay in making cultures of the fluid.)

Lumbar and cisternal punctures showed a steady decline in the cell count of the fluid. Diplococci were seen in films of the fluid from the first two punctures, but subsequently no organisms were detected either in films or cultures. The temperature came to normal in 48 hours and the child made an uninterrupted and apparently complete recovery.

Treatment consisted in the intrathecal injection of 10 c.cm. of antimeningococcal serum on the second and fourth days and in the administration of prontosil for thirteen days, in all a total of 23 grammes (Table I). Slight cyanosis was noted on the third day, but rapidly cleared after cessation of the intramuscular injections.

Case 2.—Female aged 12 months. Admitted on Dec. 2nd, 1937. Three weeks previously she had been fevered with abdominal pain and vomiting, and "spots" had been noted on the limbs and face. She had then become listless and her appetite had been poor; a week before admission, fever with vomiting and constipation had recurred. When admitted she was extremely

Table III

	C.S.F.			Prontosil.	
	Cells per c.mm.	Polymorphs (%)	Culture.	P. sol. (c.cm.)	P. alb. (g.)
Nov. 10th	13,000	95	Meningococci.	10	1.3
" 11th	..	..	Contamination.	5	2.0
" 12th	2,500	..	Sterile.	10	2.0
" 13th	610	60	Ditto.	10	2.0
" 14th	530	27	Ditto.	20	2.0
" 15th	..	..	..	20	2.0
" 16th	121	41	..	10	2.0
" 17th	..	..	..	20	2.0
" 18th	..	..	..	10	2.0
" 19th	170	46	Sterile.	10	2.0
" 20th	..	..	..	10	2.0
" 21st	..	..	..	..	2.0
" 23rd	..	..	..	..	1.3
" 24th	46	33	Sterile.	..	1.3
" 25th	..	..	..	..	1.3
" 26th	33	5	..	..	1.3

irritable; there was nuchal rigidity and a positive Kernig's sign. The C.S.F. (lumbar puncture) showed 308 cells per c.mm., mostly polymorphonuclears. Meningococci were seen in films of the deposit and were grown on culture.

Lumbar puncture, performed frequently during the next fortnight, showed a steady decrease in the number of cells. The fluid became sterile on the third day after admission. The temperature fluctuated between 98° and 101° F. during the first week but thereafter remained normal. Clinical improvement was rapid and no abnormal signs were present after two weeks' treatment. She now appears perfectly well.

Treatment.—Antimeningococcal serum (10 c.cm.) was given on the day of admission only, and during twelve days 32 g. of prontosil was administered (Table II).

Case 3.—Female aged 4 months. Admitted on Nov. 10th, 1937. Five days previously she had become fevered with a nasal discharge, and two days later there was twitching of the limbs. On admission she was acutely ill with fever, a bulging fontanelle and much nuchal rigidity. The C.S.F. contained 13,000 cells per c.mm. (95 per cent. polymorphonuclears) and meningococci were grown on culture. During the first 48 hours the temperature varied widely (99°-103° F.) but thereafter it fell gradually, reaching normal

on the eighth day of treatment. The infant's condition improved steadily; by the sixth day she was bright and taking interest in her surroundings, but some spinal rigidity persisted until about the twelfth day. When dismissed on the eighteenth day she seemed well, and at 8 months she can sit up alone and is beginning to crawl; she appears to be a perfectly healthy infant.

During seventeen days' treatment the child received 35 g. of prontosil (Table III). There was no cyanosis.

Case 4.—Girl aged 3 years. Admitted on Dec. 27th, 1937, with two days' history of headache, increasing drowsiness, and some twitching of the hands. She was semicomatose, with a temperature of 102° F. Kernig's sign and nuchal rigidity were strongly positive. The C.S.F. (lumbar puncture) contained 11,200 cells per c.mm. mostly polymorphonuclears, and meningococci were grown from it. The temperature settled on the fourth day by which

Table IV

	C.S.F.			Prontosil.	
	Cells per c.mm.	Polymorphs	Culture.	P. sol. (c.cm.)	P. alb. (g.)
Dec. 27th	11,200	92	Meningococci.	20	1.5
“ 28th	3,400	89	Sterile.	20	3.0
“ 29th	430	64	Ditto.	20	3.0
“ 30th .....	..	..	..	..	2.0
“ 31st	17	14	Slight meningo- coccal growth.	..	..
Jan. 1st	18	3	Sterile.	20	2.0
“ 2nd .....	..	..	..	..	2.0
“ 3rd	24	18	Sterile.	..	2.0
“ 4th .....	..	..	..	..	2.0
“ 5th	6	..	Sterile.	..	..

time there was no nuchal rigidity. She was sent home after ten days in hospital, being apparently well. There is no evidence of sequelae.

Treatment.—Altogether the child received 21.5 g. of prontosil during nine days (Table IV). No cyanosis was evident.

Case 5.—Male aged 8 months. Admitted on Jan. 10th, 1938. He had been irritable for a week and head-retraction had been noted for two days. He was semicomatose and opisthotonos was marked. The C.S.F. (lumbar puncture) contained 1600 cells, mostly polymorphonuclears, and on culture showed a meningococcal growth.

Treatment.—During eleven days he received 20 g. of prontosil (Table V). There was no cyanosis. He was gravely ill for three days but the temperature settled on the fourth day and improvement became rapid. Some nuchal rigidity persisted for a fortnight but on dismissal after eighteen days in hospital he seemed well. There is no evidence of sequelae.

Case 6.—Male aged 10 months. Admitted on Feb. 7th, 1938. Six weeks before admission head-retraction was noticed during an illness regarded as a “feverish cold”. After this he was constipated, with frequent vomiting and loss of weight. During the week before admission he had become in-

creasingly drowsy. On admission there was marked nuchal rigidity, emaciation, drowsiness, and a bulging fontanelle.

During the sixteen days' treatment the infant received 35 g. of prontosil. There was no cyanosis. No clinical improvement was seen, and there was irregular low pyrexia until the twentieth day in hospital when the temperature rose sharply. He died twenty-two days after admission. It is to be noted that although the C.S.F. became sterile in six days (Table VI) no clinical improvement occurred.

At *post-mortem examination* the ventricular system was found to be greatly dilated. There was a moderate amount of fibrino-purulent exudate at

Table V

	C.S.F.				Prontosil.	
	Cells per e.mm.	Polymorphs (%)	Culture.	Sulph.* (mg./100 e.cm.)	P. sol. (e.cm.)†	P. alb. (g.)
Jan. 10th....	1600	79	Meningococci.	..	20	0.5
" 11th....	1700	66	Sterile.	1.39	..	2.0
" 12th....	80	45	Ditto.	..	5	2.0
" 13th....	71	16	..	..	5	2.0
" 14th....	27	14	..	3.1	5	2.0
" 15th....	..	..	..	..	..	2.0
" 16th....	26	6	..	2.0	..	2.0
" 17th....	..	..	..	..	..	1.5
" 18th....	27	5	..	6.7	..	1.5
" 19th....	..	..	..	..	..	1.5
" 20th....	..	..	..	3.2	..	1.5
" 22nd....	25	3	Sterile.	..	..	..

* Sulph. = sulphanilamide.

† In this and the remaining cases the 5 per cent. solution was used.

the base of the brain, with extensive matting of the meninges in this area. Cultures taken from the exudate remained sterile.

Case 7.—Girl aged 2 years 5 months. Admitted on Jan. 11th, having had fever and rhinitis for a fortnight, with headache and stiff neck for two days. She was gravely ill, with drowsiness and nuchal rigidity. The C.S.F. (lumbar puncture) contained 4500 cells per e.mm., mostly polymorphonuclears, and culture yielded meningococci. She remained very ill, with fever, irritability, and rigidity for seventeen days. Rigidity then passed off and, although fever continued and culture of C.S.F. gave a heavy meningococcal growth, there were no physical signs of meningitis. Unfortunately cyanosis became severe at that time and vomiting was troublesome so that it was necessary to discontinue prontosil treatment for twelve days. The treatment was then recommenced, but cyanosis soon returned and the C.S.F. still yielded meningococci. In an attempt to minimise the toxic effects of the drug a 1 per cent. solution of sulphanilamide in normal saline was then given intrathecally, other forms of the drug being withheld. After five days the fluid became permanently sterile and five days later the temperature settled. There were no further relapses. The child's physical condition improved steadily after the seventeenth day, but she remained peevish and irritable.

Table VI

	C.S.F.				Prontosil.	
	Cells per c.mm.	Polymorphs (%)	Culture.	Sulph. (mg./100 c.cm.)	P. sol. (c.cm.)	P. alb. (g.)
Feb. 8th....	750	40	Meningococci.	..	..	3.0
" 9th....	700	38	Ditto.	6.7	10	1.5
" 10th....	830	..	Sterile.	..	10	2.0
" 11th....	600	43	Ditto.	1.7	10	2.0
" 12th....	590	19	Ditto.	3.1	10	2.0
" 13th....	96	..	..	1.4	10	2.0
" 14th....	73	2	Meningococci.	1.2	10	2.0
" 15th....	..	..	..	..	10	2.0
" 16th....	32	8	Sterile.	2.0	10	2.0
" 17th....	..	..	..	..	10	2.0
" 18th....	..	..	..	..	..	2.0
" 19th....	40	5	Sterile.	3.8	..	2.0
" 20th....	..	..	..	..	..	2.0
" 21st....	800	2	Sterile.	2.9	10	2.0
" 22nd....	..	..	..	..	..	2.0
" 24th....	26	..	Sterile.	..	..	..
" 27th....	32	10	Ditto.	..	..	..

When she was dismissed after two months in hospital there was slight rigidity of the legs, though the reflexes were not abnormal. When seen six weeks later she appeared to be perfectly healthy.

Treatment.—The child received in all 335 c.cm. of 5 per cent. prontosil soluble intramuscularly, 53 g. of prontosil album (sulphanilamide) by mouth and 120 c.cm. of 1 per cent. sulphanilamide in normal saline intrathecally—in all 71 g. (Table VII).

Case 8.—Boy aged 2 years. Admitted on Feb. 15th, 1938. He had been well until four days previously when he became drowsy and irritable. There was some vomiting, and twitching of the limbs was noticed on the day before coming to hospital. On admission there was much head-retraction and a profuse purpuric eruption over the lower limbs. The temperature was 101° F. Lumbar puncture gave a fluid containing 9400 cells per c.mm., mostly polymorphonuclears, with a heavy growth of meningococci.

Treatment.—During the next seventeen days he received 42 g. of prontosil by intramuscular and intrathecal injection and by the mouth (Table VIII). Irregular pyrexia continued until the fourteenth day and clinical improvement was slow. Drowsiness and nuchal rigidity persisted for twelve days, but thereafter he rapidly became brighter and the nuchal rigidity soon passed off. Moderate cyanosis appeared on the fourth day of treatment but cleared up gradually after the substitution of intrathecal for intramuscular injections. The cell count in C.S.F. fell somewhat irregularly, but the culture became sterile 48 hours after treatment commenced. When he was dismissed after twenty-four days in hospital there was a suspicion of an early spastic condition of the legs. He now seems very well, but his walking is not yet as good as it was before the illness.

Case 9.—Boy aged 9 years 8 months. Admitted on Feb. 22nd, 1938. He had complained of severe headache and dizziness for three days and there had been frequent vomiting. The temperature was only 99° F., but nuchal

rigidity and Kernig's sign were strongly positive. A few petechial haemorrhages were scattered over the body. The C.S.F. (lumbar puncture) contained 11,100 cells per c.mm., mostly polymorphonuclears, and culture gave a heavy meningococcal growth. Prontosil treatment was commenced at once.

Treatment.—Prontosil was given for seven days and he received 21.5 g. orally and by intramuscular and intrathecal injection. Clinical improvement was rapid, the temperature settled on the sixth day by which time the headache and nuchal rigidity had cleared up. Cyanosis appeared after 24 hours' treatment but cleared rapidly after the substitution of intrathecal

Table VII

	C.S.F.				Prontosil.		
	Cells per c.mm.	Poly-morphs (%)	Culture.	Sulph. (mg./100 c.cm.)	P. sol. (c.cm.)	P. alb. (g.)	Intra-thecal sulph. (c.cm.)
Jan. 11th	4500	76	Meningococci.	..	10	1	..
" 12th	2900	86	Sterile.	15.4	10	3	..
" 13th	2300	85	..	..	10	3	..
" 14th	700	87	Meningococci.	17.8	15	3	..
" 15th	500	78	Ditto.	2.4	15	3	..
" 16th	420	78	Ditto.	2.0	15	3	..
" 17th	..	..	..	..	..	3	..
" 18th	1850	89	Meningococci.	0.6	15	3	..
" 19th	1320	90	Ditto.	5.0	30	3	..
" 20th	1600	92	Sterile.	5.6	30	3	..
" 21st	620	81	Ditto.	5.9	30	3	..
" 22nd	480	98	Ditto.	7.8	30	3	..
" 23rd	1300	93	Meningococci.	5.9	15	2	..
" 24th	310	72	Ditto.	3.6	15	2	..
" 25th	250	87	Sterile.	10.0	15	2	..
" 26th	..	..	..	..	15	2	..
" 27th	600	78	Sterile.	6.9	10	2	..
" 28th	800	95	Meningococci.	..	Prontosil stopped.		
Feb. 1st	157	80	Ditto.	Trace	..	..	..
" 9th	900	76	Ditto.	..	20	3	..
" 10th	..	..	..	..	15	3	..
" 11th	320	68	Sterile.	5.3	10	3	20
" 12th	210	..	Ditto.	4.5	..	..	20
" 13th	112	49	..	1.1	..	..	20
" 14th	1070	93	Meningococci.	1.3	..	..	20
" 15th	820	78	Sterile.	Trace	..	..	30
" 17th	200	41	Ditto.	"	..	..	10
" 18th	..	..	..	..	10	..	..
" 19th	440	68	Sterile.	..	Prontosil stopped.		
Mar. 1st	600	81	Ditto.	..	..	..	..
" 10th	450	67	Ditto.	..	..	..	..

for intramuscular injections. The C.S.F. became sterile after 48 hours' treatment and the cell count in the fluid fell rapidly (Table IX). On dismissal after sixteen days in hospital the boy was perfectly well.

Case 10.—Girl aged 3 years. Admitted on March 28th, 1938. She had been healthy till a week previously when she became drowsy and out of sorts. Three days later she complained of severe headache, vomited several times and became delirious. On admission she was wildly delirious; there was a purpuric rash on the trunk and limbs and generalised muscular rigidity, and

the temperature was 100° F. The C.S.F. obtained by lumbar puncture was purulent and under greatly increased pressure. It contained 30,000 cells per c.mm. (99 per cent. polymorphonuclears), and abundant extra- and intracellular diplococci; culture yielded a heavy growth of meningococci. The temperature ranged between 100.4° F. and normal during the first ten days in hospital; thereafter it was normal.

Treatment with prontosil by the mouth and by intramuscular injection was instituted immediately after admission and, on the seventh, eighth, and ninth days in hospital, 20 c.cm. of a 1 per cent. solution of sulphanilamide

Table VIII

	C.S.F.				Prontosil.		
	Cells per c.mm.	Poly morphs (%)	Culture.	Sulph. (mg./100 c.cm.)	P. sol. (c.cm.)	P. alb. (g.)	Intra-thecal sulph. (c.cm.)
Feb. 15th...	9,400	76	Meningococci.	..	20	1.0	..
" 16th...	15,500	90	Ditto.	5.0	10	3.0	..
" 17th...	1,700	83	Sterile.	4.1	..	3.0	30
" 18th...	1,200	70	Ditto.	5.2	10	3.0	10
" 19th...	2,300	95	Ditto.	10.5	10	3.0	20
" 20th...	110	30	Ditto.	7.7	10	3.0	20
" 21st...	..	..	..	..	..	3.0	20
" 22nd...	140	27	Sterile.	5.4	..	3.0	20
" 23rd...	..	..	..	..	..	1.5	..
" 24th...	40	24	Sterile.	..	No prontosil.		..
" 25th...	..	..	..	Trace	..	2.0	..
" 26th...	..	..	..	..	..	2.0	..
" 27th...	350	70	Sterile.*	..	..	2.0	..
" 28th...	..	..	..	..	..	2.0	..
Mar. 1st...	..	..	..	..	..	2.0	..
" 2nd...	..	..	..	..	..	2.0	..
" 3rd...	6	..	Sterile.	..	..	2.0	..

was given intrathecally. Although the C.S.F. became sterile three days after admission the child's condition improved very slowly until intrathecal injections of sulphanilamide were started; thereafter the general condition improved rapidly and signs of meningeal irritation ceased. Convalescence was uneventful and she now seems to have recovered completely. In all she received 33 g. of prontosil in eleven days (Table X).

Discussion

Treatment with sulphanilamide seems to give very much better results than those we had from treatment with antimeningococcal serum. Of the 10 children treated with sulphanilamide only 1 has died, whereas in a series of 30 cases treated with serum there were only 4 recoveries. Of these 30 patients, 19 were infants under one year of age and all save 1 of them died. In our present series of 10 cases 4 were under one year of age and only 1 of these has died. This child (Case 6) was admitted to hospital after he had been ill for six weeks and death was probably due to hydrocephalus, for cultures of the cerebro-spinal fluid before death and of the meninges at autopsy were sterile.

There seems to be considerable difference of opinion about the dosage of the drug. Cases have been reported in which the cerebro-spinal fluid was

permanently sterilised by giving 3 grammes of sulphanilamide spread over three days (McIntosh et al. 1937), whilst as much as 38 g. in eighteen days has been given to a child aged 17 months (Bernstein 1937). In view of the very high mortality-rate in our previous cases we felt justified in giving large doses. In infants we have commenced by giving 2-3 g. per day, divided into

Table IX

	C.S.F.				Prontosil.		
	Cells per c.mm.	Poly-morphs (%)	Culture.	Sulph. (mg./100 c.cm.)	P. sol. (c.cm.)	P. alb. (g.)	Intra-thecal sulph. (c.cm.)
Feb. 22nd...	11,100	87	Meningococci.	..	30	1.0	..
" 23rd...	3,600	97	Ditto.	3.1	10	3.0	..
" 24th...	3,900	80	Sterile.	2.7	..	2.5	15
" 25th...	870	64	Ditto.	3.3	..	2.5	10
" 26th...	420	79	Ditto.	..	..	2.5	10
" 27th...	..	..	..	..	..	2.5	..
" 28th...	..	..	..	..	..	2.5	..
Mar. 1st...	..	..	..	..	..	2.5	..
" 3rd...	9	..	Sterile.	..	..	..	..

six doses, the total amount given depending on the course of the disease. The smallest amount we have given is 21 g. in seven days, whilst the largest amount is 71 g. spread over a period of twenty-six days. Except for cyanosis in a few of the cases there have not been any symptoms of poisoning.

In 6 of the cases the concentration of sulphanilamide in the cerebro-spinal fluid was estimated and was found to vary considerably; the maximum

Table X

	C.S.F.				Prontosil.		
	Cells per c.mm.	Poly-morphs (%)	Culture.	Sulph. (mg./100 c.cm.)	P. sol. (c.cm.)	P. alb. (g.)	Intra-thecal sulph. (c.cm.)
Mar. 28th...	30,000	99	Meningococci.	3.2	35	3.0	..
" 29th...	25,000	94	Ditto.	2.9	30	3.0	..
" 30th...	1,500	..	Sterile.	..	10	3.0	..
" 31st...	2,150	..	Ditto.	..	10	3.0	..
April 1st...	300	34	Ditto.	2.9	10	3.0	..
" 2nd...	2,500	..	..	2.4	..	3.0	..
" 3rd...	610	57	Sterile.	1.3	10	3.0	20
" 4th...	160	58	Ditto.	2.1	..	3.0	20
" 5th...	140	..	Ditto.	1.2	..	1.5	20
" 6th...	..	..	..	..	..	1.5	..
" 7th...	61	22	Sterile.	..	..	..	..
" 13th...	8	0	Ditto.	..	..	..	..

amount detected was 17.8 mg. per 100 c.cm., the minimum 1.2 mg. The amount found in the cerebro-spinal fluid did not seem to bear any relationship to the course of the disease, nor to the speed with which the fluid was sterilised. In Case 7 a concentration of the drug of 17.8 mg. per 100 c.cm.

failed to sterilise the cerebro-spinal fluid, while in Case 5 it became sterile with a concentration of 1.39 mg. It is possible, however, that there may have been higher concentration at some time in the intervals between spinal punctures.

Our experience of the intrathecal or intracisternal injection of sulphanilamide suggests that it may prove a highly efficient way of giving the drug. In Case 7 where we had failed to render the cerebro-spinal consistently sterile by oral and intramuscular administration, injection of a 1 per cent. solution into the subarachnoid space rapidly achieved this end. In Cases 8 and 9 intramuscular injection caused cyanosis. By giving the drug by intrathecal instead of by intramuscular injection cyanosis was abolished and recovery took place rapidly. In Case 10, in spite of the fact that cultures of the cerebro-spinal fluid were sterile, clinical improvement was delayed until the drug was given by intrathecal injection. Thereafter signs of meningeal irritation rapidly disappeared and convalescence proceeded satisfactorily. It seems, therefore, that this method of treatment may be of value in cases in which the cerebro-spinal fluid does not rapidly become sterile, in cases which show intolerance to the drug when given by intramuscular injection, and in cases in which the meningeal symptoms do not clear up rapidly.

Without wider experience one is not justified in claiming that sulphanilamide is superior to the remedies previously used in meningococcal meningitis, but from our results and from those obtained by others it appears to be at least as effective as any other form of treatment. In this country, where serum therapy has not met with the same success as it has in the United States, it seems especially worthy of further trial.

Summary

1. Ten children suffering from meningococcal meningitis have been treated with sulphanilamide.
2. The cerebro-spinal fluid became sterile in all the cases.
3. Four of the patients were less than a year old, and one of these died.
4. All the six patients over a year old recovered.

We have pleasure in expressing our thanks to the staff of the pathological and of the biochemical laboratories for their assistance in the investigation of our cases, and to Messrs. Bayer for a supply of prontosil.

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Historical Sketches of Old Hospitals and Alms Houses in Halifax, Nova Scotia, 1749 to 1859

MARGUERITE H. L. GRANT.

Temporary Hospitals for Epidemics Lead to Establishing of a Quarantine Hospital at Lawlor's Island, 1872 and an Infectious Hospital at Rockhead, 1876.

(Continued from April and May BULLETINS)

WE have seen that during the first hundred years hospital facilities in Halifax were poor and uncertain, and there was no method of teaching the medical pupils until after 1832, when a request was made for a general hospital or for the use of the Poor House for such purposes. The long needed hospital, the Victoria General, was not founded until 1859 but in the meantime, whenever epidemic diseases were introduced, especially through immigration, it was necessary to establish temporary hospitals.

Such diseases as typhus fever, smallpox, cholera, yellow fever, diphtheria, malignant measles and scarlet fever frequently made their appearance in Halifax and throughout the Province—typhoid fever was prevalent from 1867 to 1870. Of these diseases smallpox was the most common being an annual visitor. The more serious outbreaks of this disease have been recorded in 1775; 1800-01; 1814-15; 1827; 1841; 1847; 1849 and 1861.

The first outbreak of smallpox after the founding of Halifax in 1749, was during the winter of 1750-51 when it wrought great havoc among the inhabitants and in 1755 it broke out among all the settlements in the Province. In 1757 a council was held to consider measures for the prevention of smallpox which had again appeared and was quite prevalent in town. Dr. Alexander Abercrombie of the old public hospital, which was erected on the site of Government House in 1750, was called in as so many families were infected. He was of the opinion that it would be very difficult to make any order for that purpose and requested that the several surgeons in town be advised not to inoculate any person unless first obtaining permission from the Lieutenant-Governor.

In 1758 we read of an attempt to introduce smallpox into Halifax; "After the fall of Fort William Henry 1758 it was said that the Marquis de Montcalm sent a number of prisoners taken at that place in a vessel to Halifax. They were provincial soldiers, chiefly in New England provinces—this was said to have been an attempt to introduce the smallpox into Halifax, many of the men being ill of the disorder on their embarkation. Providence however, frustrated this benevolent design. The prisoners being kept on a low diet, half starved and exposed to the cold, soon recovered, while the French in charge of the vessel having indulged in the use of wine and strong fare were thrown down with the disease and nearly all perished."

There are no official records of the epidemics until 1800-01, when it was shown that: "Out of a population of 6,627 including the blacks 182 died from September 1800 to February 1801. Of 1422 cases inoculated 44 died and of 832 who had it naturally 138 died." (Signed) W. J. Almon, M.D.

Another report of this epidemic shows that; "There were 1,000 houses with 1,265 families, 3,146 males and 3,194 females—total 6,340—758 had smallpox in the natural way, 1,406 through inoculation—163 died of the disease, 119 in the natural way and 44 through inoculation. There were 293 coloured people, 19 of whom died."

In 1799 the Governor of Nova Scotia, Sir John Wentworth, submitted to the Council an application made to him by some of the physicians and other inhabitants of the town of Halifax for "leave" to inoculate for the smallpox—in which year an act was made to regulate the practice of inoculation. The act provided that persons desirous of being inoculated may do so provided that the house or place where they reside, during the time of their being infected, shall be at least 160 rods distant from any other house and that they take care to prevent or restrain any persons infected from leaving further than 80 rods from such house; and that they make it known to the township.

The first account of inoculation with smallpox as a preventive measure was published in England by Dr. Kennedy in 1715 when it was pointed out that in Constantinople "a fresh and kindly pock" was taken from a person suffering with the disease and introduced into incisions on the wrist or leg. A few years later this practice was made fashionable by Lady Mary Wortley Montague and was practised in Boston in 1721. It was introduced among the white inhabitants of Canada about 1764. Smallpox first made its appearance in the Western Hemisphere about 1507, fifteen years after the discovery of America and the earliest records of smallpox among the Indians of Canada are to be found in the "Jesuit Relations" 1627-1663. In 1702 the disease was fatal to one quarter of the population of Quebec and high mortality occurred in the years 1731-33; 1755-57; 1769 and 1783.

In 1801 an act was made in Nova Scotia "to repeal the act made in 1799 as this act was prejudicial or inconvenient to the inhabitants of the province". It was not until 1802 that vaccination by cow pox, the work of Jenner, which had been completed in 1796, was introduced into Canada. In 1802 it was also introduced into Nova Scotia by Dr. Norman Bond of Yarmouth, while in 1817 a Vaccine Institute was founded in New Brunswick.

It is interesting to note here that an act was passed in 1799 to prevent the spreading of distemper among the horses and cattle of the province and in 1833 "as there had been several recent instances of the dangerous disease arising from the bites of dogs or other animals in a rabid state in this province", an act had been passed to prevent the disease called "*Canine Madness*".

Since the improvised hospital which was established in 1746 at "French Landing", near Prince's Lodge, for the care of the victims of the typhus epidemic, which broke out among the fleet of the Duc D'Anville in Chebucto Harbour, no temporary hospitals appear to be recorded for the care of the sick during these epidemics until 1815, when the naval prison on the island, at first called Cowie's, later (1803) Kavanagh's and now Melville Island, was used as a temporary hospital. This island on the North West Arm, formerly called Sandwich or North West River, was purchased by the British Government in the early part of the nineteenth century and appropriated for a naval prison for seamen captured during the wars between Great Britain, Spain, France and the United States from 1812-1815.

In the early part of 1815 smallpox was prevalent in town and on the arrival of black refugees this prison was prepared for them where they were to be vaccinated. A sum of £731:11:8 was required for this purpose but by

December a reduction of £100 was made on the expenses of the establishment. It was at this time that many of the refugees were being treated at the Poor House Hospital off Spring Garden Road by Dr. W. B. Almon at an expense of £136:14:6.

This old building is described in a plan proposed for the prison in 1805 and was to be of the following dimensions; "150 feet long and 50 feet wide—one story in height—14 feet posts from sills with pitched roof". In 1813 it was surrounded by a stone wall 150 ft. long and 8 ft. wide. There was a burial ground on the mainland connected with the prison and a writer in the Recorder of 1819 stated that in his younger days he frequently saw skulls unearthed from the falling away of the earth which formed the embankment of the cemetery.

In February 1827 a sickness prevailed in town which was credited to pups found drowned in the well on Hollis Street known as the "Two Sisters"—In 1826 lobsters and fish in decayed state had also been brought up from this well. The town wells were neglected and frequently found without locks. During the summer of 1827 several vessels arrived from the south of Ireland in a sickly and crowded state—smallpox and typhus were introduced and the Government promptly answered the call for assistance. Again, requests were made for a "hospital for relief" or a "fever hospital", as the Poor House was crowded and other victims were lodged in marquees furnished from His Majesty's stores. This arrangement which at first appeared so satisfactory and with so little expense was found undesirable, the diseases spread in all directions. Melville Island was named as a proper place for a "hospital for relief" but it was wisely and firmly refused. It was then recommended that an asylum should be appointed without the town for the reception and uses of the sick to prevent the diffusion of the disease among the inhabitants. A committee was authorized to engage an unoccupied farm building at Bank Head in the suburbs, about a mile west of the town and convert it into a "temporary hospital". Persons with fever were removed there and also others from the Poor House and "though numbers fell victims with the best of care, the benefits of fresh air on health and spirits was visibly seen". By August 268 persons had been received at this hospital, the number including many inhabitants of the town. Two cases were sent from the Bridewell on Spring Garden Road. There were 36 deaths reported in August. In the final report 61 deaths at the hospital were recorded.

A professional gentleman, Dr. Lewis Johnston, living near Bank Head came forward at the request of the commissioners of the poor and devoted himself day and night to the sick, regardless of the consequences to himself and family. The thanks of the house was voted to him and £50 granted for a piece of plate to be presented to him. In 1821 Bank Head, the property of Jonathan Tremaine, was assessed at £1500, the poor rates tax was £1:1:3.

The following letter from a citizen was published in the *Acadian Recorder* of Saturday, September 22nd., 1827.

"Mr. Holland:

Sir, I was a little surprised at seeing in the *Nova Scotian* of last Thursday that the emigrants who arrived in the Brig Fame from Belfast had been landed—no notice was taken of the Quarantine orders having been broken, nor was any disapprobation expressed at it—we have really been too much overrun by diseases this summer and had need of the protecting arm of the law to prevent the further contagion and a further call upon charity which is always sufficiently active.

I remain yours,
Quarantine."

In 1828 smallpox and typhus were reported at Annapolis, Port Medway, Preston, Pope's Harbour, York Redoubt, Musquodoboit, Liverpool and Aylesford. Again in 1831 when smallpox appeared in town, Melville Island was prepared as a temporary hospital and was placed under a committee of magistrates and medical men. Dr. Samuel Head, Dr. John Stirling and Dr. Matthias Hoffman were appointed. In July eight cases of smallpox were reported and moved to the infirmary of Melville Island, "the patients were allowed to be accompanied by such of their connexions as chose to attend them, by a medical man, a nurse and other attendants". At subsequent periods eight other cases were moved there and all recovered. The Governor felt that the doctor's fees of £83:17:0 were justifiable, but the committee decided that £30 were sufficient.

In the Colonist of May 15th., 1849 it was stated that, "Smallpox is raging in town. Several have died of it. Where is the Board of Health? Surely we are unthankful in not acknowledging the blessing we are deriving from the Great Liberal Government. We suppose that we shall be told that the great Liberals are not responsible for the smallpox being here than they are for the distress of the Country, but at least they might take some steps to stop its ravages and if they had known how to govern they might have had about 40,000 pounds on hand which would have gone a good way in relieving the inhabitants of the Country."

In 1850 it was recommended that a Mr. Naylor was entitled to high recommendation for valuable service rendered in 1849, in preventing the spread of smallpox and conducting a "*public hospital*" where not less than fifty cases were admitted and cured without compensation. £22:1:4 were paid to the commissioners of the poor for sustaining pauper cases transferred to this hospital at Bellevue.

In 1861 smallpox was reported by the Medical Society as having been present for a long time and so a disgrace to the city.

Cholera was another dreaded disease and in the past was one of most importance. It is still endemic in India, in the Ganges and Bramaputra districts. It has spread to other parts of the world along the routes of travel in five epidemics. The first lasted from 1817 to 1823 and was confined to Asia and Africa; the second from 1828 to 1836; the third from 1846 to 1862; the fourth from 1864 to 1875 and the fifth from 1882 to 1896. The second, third and fourth epidemics or pandemics invaded England. In 1831 cholera morbus made its appearance on the shores of the Baltic at Riga, Danzig and Memel in the month of May, at Vienna and Berlin in August, at Hamburg in October and reached England in the beginning of November, finally America in 1832. On June 8th., of that year a vessel called the "*Carricks*" from Dublin arrived at Quebec, 39 persons died of cholera en passage and the disease was introduced into Canada. In Halifax the alarm was spread and on April 9th, 1832, at a meeting of the Council, His Excellency Major General Sir Colin Campbell suggested the propriety of providing temporary hospitals for the reception of cholera patients, should that disease make its appearance in Halifax. His Excellency added that as he considered the Government House very conveniently situated and well adapted for one of the hospitals, he intended to cause the northern wing to be fitted up for the purpose. Dalhousie College was also suggested but objections were made to this as noted in the "*Nova Scotian*" of July 5th., "as in the center of the town so an act of madness". "The college was within less than one hundred yards of the post office where

many of the commercial men had frequently to go and about two hundred yards from St. Paul's Church, which was more numerously attended than any other place of worship in the town." It was the opinion of many that a temporary building should have been erected on the Commons and that the paltry expense it would have cost, should not have been put in competition with the health of twelve or fourteen thousand inhabitants. His Excellency the Governor General Sir Peregrine Maitland directed the attention of the Council to two acts of the legislature just passed—entitled "an Act to prevent the spreading of Contagious Diseases and for the Performance of Quarantine" and an act, "more effectively to provide against the introduction of Infectious or Contagious Diseases and the spreading thereof in the Province". And was pleased to appoint the Hon. T. W. Jeffery, Enos Collins, H. H. Cogswell, James Tobin and Joseph Allison to be a committee to suggest the measures most proper to be adopted with the view of giving full effect to those acts and preserving this province from the malignant distemper then so prevalent in Great Britain and other countries in Europe.

It was decided to establish a board of health as a further means toward prevention and the following circular was sent to the medical men.

Provincial Secretary's Office
June, 1832.

Sir:—

His Excellency the Lieutenant Governor with the advice of His Majesty's Council deem it expedient to constitute a Board of Health in the town of Halifax and thinking it proper that four of the medical practitioners in the town be requested to form part of the Board. I am desired to communicate the same to the faculty and to request that the gentlemen belonging to it will have the goodness to meet at three o'clock in the Committee Room of His Majesty's Council in the Province Building, and choose from among themselves four persons whose other avocations will permit them to devote a part of their time to this very important duty.

Your attendance is requested accordingly.

I have, etc.

(Signed) R. D. George,

Halifax, 26 June, 1832.

To the several medical practitioners resident in Halifax.

The following reply was received.

Sir:

I have the honour to inform you that in obedience to your communication the medical practitioners met this day at the Council Chambers and nominated Messrs. Hume, A. Wallace Stirling and Grigor as members of the Board of Health for His Excellency's approbation.

I have the honour to be,

Your humble servant,

(Signed) William Bruce Almon.

To Sir Rupert D. George, etc., etc.

At the Council held at Government House on 26th., day of June, 1832, His Excellency stated that a Board of Health under the title of the Central

Board was to be established at Halifax and to consist of the undermentioned gentlemen, viz:

The Hon. Henry H. Cogswell	president,	
Dr. Allan—Inspector of Hospitals	} vice-presidents,	
Dr. Johnson,		
The Attorney General		
The Solicitor General,		
James Foreman, Esq.		
Dr. Shoreland, Surgeon	96th. Regt.	

Drs. Hume, A. Wallace Stirling and Grigor, Michael Tobin and George P. Lawson, Esq., and William Cogswell, Esq., Secretary to the Board. "And the said Central Board of Health is hereby appointed and established accordingly with free power to make and cause to be observed, any rules and regulations which they may deem necessary for the preservation of Public Health. And it is further ordered that the Board of Health be established at the undermentioned places"—Pictou, Sydney, Lunenburg, Liverpool, Windsor, Yarmouth, Annapolis and Digby. This later was extended to K ngs, Cumberland, Antigonish, Guysborough, Shelburne, Barrington and Colchester. The various boards not to be at variance with any regulation established or to be established by the Lieutenant Governor-in-Council or by the Central Board of Health at Halifax and it was further ordered that the local boards report their proceedings to the Central Board.

In Prince Edward Island an act was also passed in 1832 to prevent the importation and spread of infectious diseases into the island. The first health act in New Brunswick was passed on March 19th., 1832, entitled "An Act to prevent the importation and spreading of Infections and Distempers in the City of St. John".

At a meeting on July 31st., a committee was appointed to procure and fit up those buildings previously mentioned. They reported; "That they have procured a large airy building in the north end of the town near the Dockyard, Dalhousie College in the center and the north wing of Government House in the south end, in which building they had placed iron bedsteads and bedding of all kinds, hospital frannel, dresses for males and females and all such necessary utensils for the comfort of patients as required time in collecting.

They also had made arrangements for supplying the hospitals with medicines and such other articles as may be necessary for the accommodation of the sick immediately after the actual appearance of the disease.

The Committee have also prepared hot air baths and specimens of different apparatus for applying internal warmth to the body and one wagon with a heater and covered litters for the removal of sick to the hospital. They have engaged two male and two female attendants and are making diligent inquiry for such other male and female nurses of good character as may be wanted for serving and attending the sick patients. They would now recommend that the Board of Health make applications to His Excellency the Lieutenant Governor to appoint at least two medical gentlemen to each hospital to be ready to give their attendance should the disease appear in town."

Rt. Hume, Chairman.

The Asiatic cholera which had been hovering around the Maritime Provinces for a year or more finally made its appearance in Halifax early in August, 1834. On the first appearance of this plague the lunatic building in the Poor House had been fitted up as a cholera hospital, but as the disease rapidly spread among the inhabitants and the military, this hospital was reported by Drs. Almon and Sawyers, the medical gentlemen in charge, to be unfit for the purpose and it was therefore necessary to establish a more suitable place. Dalhousie College was recommended but the inhabitants of the neighborhood again objected as in 1832 as well as some members of the Central Board. A request was made for another building for a cholera hospital and to take into consideration a letter from the Secretary of the Province on the subject. Those present were: James Tremaine, C. R.; Richard Tremaine; Samuel Head; Rufus Fairbanks; G. N. Russel; John Albro; Matthew Richardson; John Liddell; J. L. Starr; W. H. Roach; J. H. Tidmarsh; John Howe, Jr.; Mr. Tremaine moved, seconded by Mr. Albro, that Dalhousie College be recommended as a suitable building for the cholera hospital. All were for the motion except Mr. Howe.

The college was fitted up and a large fire kept burning in front sending off fumes and great terror prevailed among the inhabitants. Barrels of chloride were also placed at different points in the neighborhood to purify the air. Reports show that from August 6th to 30th the Poor House, Dalhousie College and private practice had over thirty new cases daily. By September 27th there had been 762 cases with 284 deaths. Dalhousie College was closed on December 8th.* The year ended with a meeting of the Health Wardens on December 9th when a report was submitted pointing out the most efficient way to suppress contagious diseases. In 1861 and 1862 during an outbreak of yellow fever on boats in Halifax Harbour and smallpox in the city, Dalhousie College was again used as a hospital when it was handed over to the military authorities for that purpose. The Medical Society at that time was holding its meetings there but on this account was obliged to find another place for the annual meeting in January 1862.

Cholera was prevalent in Europe and America in 1849 and visited Halifax that year when it proved fatal to many children. The Indians also fell victims to a violent form of the disease and it was felt in other parts of the province. In a letter from Wolfville is an account of the deaths of six young persons from the malady and in Annapolis, Dr. Leslie reported he had treated three coloured families ill with spasmodic cholera. Similar cases said to be Asiatic cholera were reported in Sydney, C. B., and the disease was epidemic in Montreal and Toronto at this time. In 1862 several cases of "English" cholera were reported in Charlottetown. Again in 1866 Halifax was threatened with cholera. The story of the arrival of the plague ship "*England*" in that year is well known to Haligonians when Dr. John H. Slayter, one of the province's most beloved doctors fell a victim to the disease.

This boat left Queenstown on March 25th., 1866, for New York and arrived in Halifax on April 10th with a great number of cases of cholera. After being four days out there was a death on board from Asiatic cholera—it was kept quiet and two days later another case developed, which proved fatal in four hours. The disease now began to spread among the crew. On arrival in Halifax 160 cases were reported, with 56 deaths and there were 30 cases under treatment with fresh cases appearing daily. The pilot brought the boat into quarantine at McNab's Island, a boat with dead bodies was afloat

* See, "Epidemic of Cholera in Halifax 1834" Bulletin Nov. 1935.

at the stern and graves were dug for them at Thrum Cap, the extreme southern part of the island. Dr. Slater, Health Officer of the port, went on board on April 10th., the day of arrival and perceiving the desperate condition of the ship placed himself in quarantine. The disease was of the most virulent type. Dr. Gossip, Dr. Garvie and his brother Frank Forbes Garvie, a medical student volunteered to help Dr. Slater and devoted their time to alleviate the suffering and mitigate the disease. The doctors buried the dead bodies themselves—two priests who were passengers also assisted cheerfully and courageously—"not a saloon passenger was attacked due to ventilation and cleanliness". On April 17th Dr. Slater died of the fever after having gone to the ship feeling unwell. He suffered much pain at first but remained perfectly sensible, however soon his speech became unintelligible and he expired in the presence of Dr. Gossip and one of the medical officers of the steamship. He was buried at McNab's Island between two willow trees and later his body was removed to Camp Hill Cemetery. Besides the fifty odd deaths reported before arrival, two hundred died while in the harbour. The boat sailed for her destination on April 18th. The pilot who brought the ship in, returned to his home at Herring Cove, where he died a victim of the disease. His wife, who washed the clothing, also contracted cholera and died, while their daughter, the only other person in the house, was attacked but recovered. A physician named Pryor was sent to Herring Cove by Dr. Tupper who had control of the situation, he being at that time Premier of the Province and City Medical Health Officer.

Though the disease did not extend to the town, an old cottage known as Bremner's, which stood near the foot of Inglis Street on the site of the Ocean Terminal Office, figured in the tragedy and was a great menace to Halifax that year.

One Sunday morning while the "*England*" was quarantined, a poor Welsh peddler who lived in this house, asked Dr. Tupper to visit his child. The moment the doctor saw the little girl, it was evident that she was suffering from the dread disease. Dr. Tupper called a policeman and gave orders that no one be allowed to enter or leave the house until his return. He drove to the hospital, where he arranged for a room to be completely isolated. He then took the horse from his carriage and put it in the ambulance, drove back to the house and took the child with the father and mother to the hospital. He asked the mother if she had used anything that washed ashore from the "*England*", which was anchored about two miles distant, she said she had not. The child died, the mother also died and the father was attacked but recovered—the mother before her death confessed that she found a piece of fine canvas on the shore and made a petticoat for the little girl. No other cases occurred in Halifax but "the death of the mother and child furnished the most conclusive evidence of the terrible contagiousness of Asiatic cholera. Had the epidemic spread from the cottage, the fate of Halifax would have been deplorable".

The hospital hulk "*Pyramus*", which had been used in 1861 for yellow fever cases, was taken to McNab's in 1866 to house those in quarantine with cholera; on May 7th., it was towed back to its former stand off the dockyard. A piece of this old boat with a cannon ball, which was imbedded, is now in the possession of Mrs. William McNab, 321 South Street.

In appreciation of their bravery and devotion to the sick, gold watches were presented on June 25th., 1866 to Dr. Garvie, his brother Frank and Dr. Gossip by Mrs. Richey, wife of the Mayor of the city of Halifax. Dr. Garvie was appointed city medical and health officer to the port in place of Dr. Slayter.

Again in 1871 Halifax was threatened by the cholera ship "*Franklin*" which arrived in port in November with a large number of cases among the passengers—Halifax escaped but a young man named Lapiere belonging to Chezzetcook went home after coaling the ship and developed the disease—he recovered but a cousin died of it and several other serious cases developed at Chezzetcook and elsewhere. Measures were taken to prevent the spread of the plague in Nova Scotia. Dr. Jennings and Dr. Rigby went to their assistance—the disease was of a severe type with death in less than three days. "What it cost! We heard that Dr. Jennings has presented to the Central Board of Health "*his little bill*" for medical services at Chezzetcook in connection with the cholera. The amount is trifling—only FIVE HUNDRED POUNDS (£500) '*cholera morbus*'!—" (Dr. Rigby's account was \$547.)

Charges of negligence were brought against Dr. Gossip, health inspector, for allowing the boat to dock—a meeting of the Board of Health was called to look into the matter, as he had gone on board three times but did not visit the ship's hospital, no illness having been reported. The question arose, how could Dr. Gossip have done otherwise as there were no quarantine regulations in force at the time and no place to send the sick? A few days later another boat of the same line arrived with cholera cases on board. On November 27th the Board of Health met to prevent the spread of the disease. A letter was read from the Lieutenant Governor defending the determination of the military authorities to use their new hospital on Gottingen Street for soldiers who may be taken with cholera.

Epidemic cholera still exists in India, as in the *Halifax Mail* of June 15th, 1938, the following is noted: "CHOLERA TAKES 12,000 LIVES"—"Lucknow, India, June 15—(AP)—One of the worst cholera epidemics has taken 12,000 lives in the past seven weeks in the United Provinces, an area in India's extreme north. 2,000 died in one week alone. British and Indian medical authorities have mobilized hundreds of physicians to combat the disease."

To go back again to the cholera epidemic of 1834 we find that though faced with these problems, there was still no special hospital for immigrants until 1840, when a temporary one was established to receive them, but from this time on there were repeated demands for a hospital for infectious disease. In 1832 a poll tax had been levied on the immigrants brought to Nova Scotia. This tax was one dollar for each one landed from Great Britain having a government certificate and two dollars for those who had not. The proceeds of this immigrant tax were placed under the control of the various Lieutenant Governors for hospital purposes. According to calculations made, it was expected that the amount would be sufficient to meet all claims on the charity of the residents of Halifax.

In 1840 it is evident that a building had been leased for this purpose as in March, 1841, Mr. McNab presented accounts of expenses incurred at Waterloo Hospital for poor persons affected with smallpox. This was a small building which had been leased for the care of sick immigrants, shipwrecked seamen or sailors and cases of smallpox, while other victims were placed in the Poor House and looked after by Dr. Hoffman. On the 24th of April the commissioners of the poor reported that the lease of this small building which had been hired by them and was used as a temporary hospital would expire on the 30th inst. The council authorized the building to be engaged for another year. A committee appointed to look into matters concerning

this building reported, "that the Waterloo Hospital was provided by the direction of His Excellency the Lieutenant Governor for the reception of some emigrants, who arrived in Halifax in 1841 in a sickly state, the nature of their disease rendering it imprudent to admit them into the poor asylum, that provision was made by this assembly for the expenses incurred during the year 1841 (£22:9:8). That the present claim of the commissioners amounts to £65:11:4 incurred in the past year in providing within the same hospital, medicines, attendance and necessaries for a number of diseased persons who were thrown on the care of the commissioners and entitled to relief and your committee are informed that it was deemed necessary from the nature of the disorders to keep them also separate from the inmates of the poor asylum, that they were composed both of native and transient persons.

Your committee in stating the foregoing particulars submit to the house whether it would be advisable to provide for the expense incurred by separate grant, independent of that usually made for the support of the transient poor in the town of Halifax—but your committee are of the opinion that the said hospital ought not to be continued at a further cost to the Province.

All of which is respectfully submitted."

Samuel P. Fairbanks, chairman.

Samuel Chipman.

R. McG. Dickey.

However the hospital continued as at a meeting in September 1847 it was moved that the ten patients convalescing from typhus fever at Melville Island be moved to Waterloo Hospital as paupers under the care of the commissioners of the poor. The maintenance of these sick immigrants amounted to £58:7:6. In 1848 and 1849 reports were again made on expenditures and a memorial read from the Mayor on the subject of this immigration hospital.

Typhus Fever was another plague recorded in Nova Scotia—the word "typhus" came into being about 1760. This name was given to ships' fever in 1769, previous to this it was known as pestilential, malignant or putrid fever, camp, jail and ships' fever.

The first epidemic in Halifax was in 1746 before the settlement of the town, then called Chebucto, when a fleet of 3,150 soldiers under Duc D'Anville left France on June 22nd, to capture Louisbourg, then Annapolis, then Boston, and finally to pay a visit to the English sugar islands in the West Indies.

They arrived at Chebucto, Acadia, on September 10th having lost between 1200 to 1300 men at sea, and while encamped 1130 more died of scorbutic fever with dysentery, diagnosed as typhus fever. The Indians contracted the disease and died in numbers. A temporary hospital was established at French Landing near Prince's Lodge. This epidemic was followed by smallpox. The victims were buried along the western and northern shores of Bedford Basin also at Dartmouth where bones have been frequently dug up near Canal Bridge. D'Anville died suddenly on September 15th at about the age of 45. He was buried on George's Island and later his body was removed to Louisbourg—Detourville, the Vice Admiral of the Fleet, killed himself on his sword while in a fever and was also buried on the island. The boats were scuttled in Bedford Basin where in 1828 it was reported that they were still visible.

Typhus fever appeared in Halifax in 1827 and together with smallpox broke out also at Annapolis in 1828, at Port Medway, Preston, Pope's Harbour, York Redoubt, Musquodoboit, Liverpool and Aylesford.

In 1847 typhus fever was prevalent everywhere in Europe and America, which year was known as the "Typhus Year". In January 1847 it was reported that a fearfully malignant fever was raging among and sweeping off the Indians at Dartmouth. The sickness was said to be the "Black Fever", and on January 23rd, we read "The poor Indians who have been affected with a very fatal epidemic which previous to medical interference was sweeping them off in large numbers, are now convalescing"; in the *Nova Scotian* of January 25th, "There have been several deaths among the Indians at Dartmouth caused we understand by fever, which has led to some action on the part of the executive who have humanely directed that '*an hospital*' be prepared for those indisposed in the vicinity of their encampment; so far the Government have given satisfaction but not so in their choice of medical gentlemen, as Superintendent Jennings, a comparative stranger being preferred to Dr. Desbrisay, who has practised some fourteen years of his life at Dartmouth, during the greater part of which he has been in the habit of giving both advice and medical assistance to the Indians gratuitously. The appointment may have meant well but many have their doubts. The claims of the two gentlemen will not bear comparison. This may appear a small matter but as there are pickings, it is but right that these should be the reward of the senior practitioner."

In May 1847 typhus was reported in Halifax when fifteen applications had been made to the commissioners of the poor, on behalf of the residents of the city suffering from fever, for admission into the hospital of the Poor House. The commissioners were obliged to refuse for they had no accommodation and could not take the risk of communicating the disease to the inmates of the institution. The matter was laid before the Board which could do nothing until the Lieutenant Governor furnished means and directions.

On June 4th., the Board convened to adopt such measures for the prevention of the spreading of typhus fever which was very prevalent and endangering the health of the community. It was resolved—that in consequence of the spreading of typhus fever into the city by immigrants who lately arrived, applications be made for Melville and George's Islands for placing them, and for examinations and that means be adopted for prevention: that fifty iron beds and bed sacks be given the Board of Health; that a guard be placed at Melville Island to prevent communication with Halifax. An immigrant hospital was established at Richmond in the north end of the town in May 1847 under the care of Dr. Hoffman, Health Officer. Mary Fitzgerald was appointed matron. In a petition received from her, it was stated that on May 1st. 1847 she was engaged by Dr. Hoffman, the Health Officer, to take charge of the hospital at Richmond as matron, and ordered to go there immediately as the sick were already there and was promised by Dr. Hoffman that she would be paid twenty shillings a day, that he also sent her son to assist; that shortly afterwards Dr. James Hume who was attending the hospital with Dr. Hoffman hired her daughter Catherine to act as a nurse and assistant in the hospital at 7/6 per day; she then stated that she had been in the hospital about a fortnight when she received information that the sick were to be removed to Melville Island and she and her two children were directed to accompany them in their respective positions; that all the time that they were employed at Melville Island and Richmond, she and her son for 26 days, and her daughter for 15 days, that with the exception of £6:5:0 paid by Dr. Hume, they had not received their salaries; that she had frequent-

ly applied for payment to Drs. Hoffman and Hume but always without success; that she had applied to the Mayor who had visited the hospital and the Board of Health but received the answer that they were not authorized to pay her unless the bill was certified by Dr. Hoffman who always refused this. The bill presented amounted to £40:13:2½ less £6:15:0—£33:18 2½.

In a petition of Dennis Hiffernan, cooper and oil gauger of Halifax, further references are made to the hospital at Richmond.

Hiffernan stated that on or about May 22nd., 1847 he was called upon by the chief Health Officer of Halifax to supply a quantity of tubs for the use of the immigrant hospital at Richmond; that he went there to see the said articles safely delivered and seeing the wretched state of the immigrants stopped to assist and to help make the poor fever patients comfortable and instruct those in charge of the hospital, having had previous experience of the knowledge of a superintendent in the duties they had to perform, that he remained several hours giving gratuitous assistance and the Health Officer seeing this, prevailed upon him to remain the rest of the afternoon as no person was to be found who could take his place and that he would be imprisoned if he did not do so—he remained eight days and nights at the risk of his own life as patients were dying around him from malignant fever, thus he requested payment for his services.

On August 2nd we learn from the *Guardian* that "the hospital at Melville Island under the care of Dr. Matthias Hoffman and James Hume is in very efficient operation. There are now about 70 invalids. From the time of the opening of the building for its present use there have been received about 170 sick persons of whom only 18 have died!" On August 30th, "There now remain only 32 patients in the hospital, 7 having been discharged yesterday. Since the opening of the hospital about three months since there have been 200 cases of typhus of which 37 have died, the majority of whom were very aged persons—the remaining patients are in a fair way to recovery under the judicious care of Drs. Hoffman and James Hume."

In October a report of Melville Island was issued.

Number of patients admitted.....	203
Number of patients died.....	30
Transferred to Waterloo Hospital for the poor.....	10

Total expenses.....£1007:9:9

By December 1st 1847 the Health Officers reported that the fever was still prevalent and drew attention to the fact that there was no public hospital and that during the last summer the necessity was lamentably proved, scores of afflicted immigrants and no public building for their reception.

Dr. Hoffman was paid £266 as Health Officer and his assistant Dr. Hume £244 for their attendance upon the sick at the two hospitals established at Richmond and at Melville Island. Dr. Hoffman from May 21st and Dr. Hume from May 29th to the 30th Sept. 1847. It was a dangerous service and both doctors secured the favorable report of the Board of Health, for zeal and fidelity of exertion. Dr. Hoffman on one occasion had to perform the disagreeable duty of putting the dead body of one of the victims into his coffin. He also urged that better accommodation should be provided him as Health Officer by the purchase of a boat as he once had been thrown into the water by the insufficiency of the boat. Dr. Hoffman had formerly been

appointed surgeon of the war frigate "*Endymion*", when in the battle of Corunna, May 14th., 1808. He died about 1852 while in charge of public duty.

It is interesting to note here—"That when the Imperial troops of the fifties of the last century imitated Waterloo in mimic battles, broken and wounded soldiers were treated in convalescent hospitals that covered Camp Hill."

On March 20th., 1848 the barque "*Aurora*" arrived at Halifax, having on board passengers taken off the wrecked ship "*Omega*", about eighty or ninety of those persons were landed at Dartmouth and placed in a building there where, many of them had contracted immigrant fever in its most malignant form and the necessity for a hospital was again realized. On April 10th a fever was reported as also spreading in the poor asylum at Halifax and at the same time a petition of the inhabitants of Dartmouth was read at the House complaining of the erection in that village of a hospital for immigrants, in which were a large number of sick from whom fever was spreading throughout the community, the said hospital having been established by the city council of Halifax acting as a Central Board of Health; the petitioners thereupon praying for a remedy of the evil by the appointment of a local board of health at Dartmouth, by means of legislative enactments for that purpose.

In February 1850 Dr. Matthias Hoffman, Health Officer for Halifax, petitioned the House of Assembly for payment stating that he had been appointed by Mr. Stairs, then Mayor of Halifax, to take charge of the temporary immigrant hospital at Dartmouth—that two days after his appointment the Mayor appointed Dr. Desbrisay as his assistant, that he attended from thirty to sixty patients daily until the hospital was closed and had provided for them as principal, but it was asserted that he was under Dr. Desbrisay and was not entitled to payment as principal, that in connection with this hospital was a convalescent hospital more than a mile from Dartmouth and the combined duties took up the greater part of the day.

A petition was also received from Dr. Desbrisay stating that he was asked to attend the hospital and had given up his extensive practice in Dartmouth and had attended this hospital for sixty days and forty nights from the 20th March to the 18th May, that owing to the sickness and death of many nurses he was obliged to work in their place in many instances and for this he had forwarded his account of £90 but it was cut in half; formerly the House had allowed £2 to £2.10s a day. £12:10:0 were paid out of the treasury for coffins supplied to the hospital at Dartmouth.

In 1879 typhus fever again visited Halifax and the sanitary committee held a meeting to advertise for a suitable building as a "*temporary hospital*" for typhus patients.

On April 7th., 1848 a memorial was read at the House of Assembly from the Board of Health and the Mayor, who was chairman of the commissioners of the poor for the city of Halifax, representing the necessity of a hospital for immigrants. A communication on the same subject dated April 8th was received from the city clerk to the secretary of the province, the matter was referred to a select committee and a report was received from them on the immigrant hospital for Halifax. They stated that there was no suitable place to be hired in the neighborhood of Halifax for shelter and medical attention to sick immigrants and seamen—that it would be necessary to erect a hospital at a cost not to exceed £1500, two-fifths to be paid out of the Provincial

Treasury and the remainder to be assessed from the city and county of Halifax—that the funds for the relief of the immigrants should be supplied out of funds accruing from the Passenger Act and grants from the Treasury—to provide funds to assist seamen sent to hospital, the committee suggested a tonnage duty be imposed on all vessels entering port and on seamen entering Halifax or the Province.

On April 10th., 1848 a bill was passed to authorize the grand juries of Halifax and Pictou to assess said counties for the erection of hospitals therein. A report was read from the select committee on motion of the Honourable, the Provincial Secretary, it was resolved that His Excellency The Lieutenant Governor be respectfully requested to take measures for the erection of hospitals in Halifax and Pictou for the relief of sick and destitute seamen—and the House would at its next session grant two-fifths of the cost thereof respectively not to exceed £600 for Halifax and £200 for Pictou; provided the other three-fifths be assessed respectively off the city and county of Halifax and county of Pictou and should any further amount be required, they shall not be a charge under any form on the Legislature. In 1854 Drs. Jennings and Slayter sent a petition to the House recommending the establishment of a marine hospital. In 1859 a report on the same stated the committee appointed to look into the matter agreed with Drs. Jennings and Slayter “on the utility and desirableness of a Marine Hospital in this city and hope their exertions will stimulate the inhabitants of Halifax to cooperate with them in so patriotic and praiseworthy an undertaking”.

Other diseases which have played havoc have been recorded in early days. In 1780 malignant measles visited Halifax with 300 deaths and in 1795 black scurvy was reported in Cape Breton. In 1855 a severe form of scarlet fever prevailed. In the *Acadian Recorder* of June, 1858, it was stated that scarlet fever was prevalent in the city, also that species of epidemic sore throat which proved so fatal in various parts of the province.

In the *Acadian Recorder* of Dec., 1858, it is stated that “The disease which has prevailed of late both in Halifax and other parts of the province and has often been attended with such fatal results, is raging with equal virulence in many other parts of the continent especially at Albany...” Both children and adults were attacked and in the *Troy Times* the symptoms of this new malady were described. “The patient is attacked with what at first resembles an ordinary influenza accompanied by those general symptoms of physical weakness and lassitude that follow a severe cold. This feature of the case soon disappears and is followed by a glandular swelling, acute inflammation and excessive soreness—in some cases the final appearances are strikingly identical with those of ‘black tongue’ of ‘putrid sore throat’. Suppuration takes place and the gathering becomes very extensive before the fatal result supervenes. On consultation with a prominent physician of the city, since writing above, we obtain the opinion for which he gives conclusive scientific reasons—that the disease is a type of the malignant erysipelas, which prevailed extensively in Western New York some years ago, and proved exceedingly fatal in its results until physicians had familiarized themselves with it.”

In 1864 diphtheria was prevalent in Halifax and the province and proved fatal to many.

The question has frequently been asked whether Halifax had been visited by yellow fever. The following accounts seems to show the disease has

been present but whether any cases were contracted here or all brought on boats, it is difficult to decide. As a rule when cases were reported on boats leaving infected ports most of the victims died or recovered before arrival. Yellow fever was common in Bermuda, the West Indies and the United States, especially at Baltimore, Philadelphia and New York between the years 1782 and 1803, also 1846 and as late as 1858, 1861 and 1873. In 1782 a malignant putrid fever said to be yellow fever was reported among the prisoner on the ship "*Stanilaus*" in Halifax Harbour and that it had spread among the King's troops, whereby inhabitants of the town were much exposed to the infection. Mr. John Philipps and Mr. Edward Wyer, practitioners in physic and surgery were requested to attend a meeting. They declared no person ill of any disorder and they agreed that the distemper which had prevailed in town for the two months past was an inflammatory pleurisy with one death only.

In 1796 disease broke out among the maroons then being brought from Jamaica on the ship "*Dover*". The disease was supposed to have been yellow fever. Mr. Oxley was surgeon to the maroons and on August 1st., 1796, there were four sick in hospital.

The following letter refers to this:

Halifax, Nova Scotia,
13th August, 1796.

"My Lord Duke:

I beg leave to most respectfully acknowledge the honour of your Grace's Letters, No. 16 and 17, received by the Halifax packet on the 6th instant.—The disembarkation of the maroons has probably preserved them from infection that has since appeared with virulence on board the *Dover* transport, but is now checked by landing the seamen among the bushes on the opposite side of the harbour, entirely cleansing and purifying the ship, which is now preparing to be sent for the accommodation of Lord Dorchester and his family, who were shipwrecked on the Island of Anticosti in the mouth of the St. Lawrence about the middle of last month. The Active frigate is lost, the officers and men saved. His Lordship and family are safely landed at Piercee near Gaspee in the Gulph."

Signed,
J. Wentworth.

Again in 1796 yellow fever was reported; "John Parry Jones, surgeon's mate on board *H.M.S. Assistance* of 50 guns died here of Yellow Fever Sept. 19th, 1796". His remains were probably buried at the naval hospital cemetery as no record of it could be found at the old Dutch Church or at St. Paul's where the army and navy then worshipped.

On Sept. 22nd in a local paper the following appears: "Several persons coming to town with cattle have been turned back by exaggerated stories of yellow fever being rife in the town, on inquiry no inhabitant was found ill with the symptoms of the disease."

In February 1843 yellow fever was reported when an account of £23:1:8 was forwarded to the House by Dr. Matthias Hoffman, Health Officer of the Port of Halifax, for services rendered and expenses incurred in relation to seamen sick with yellow fever on board *H.M.S. Volage*. Dr. Hoffman also stated the want of a boat and crew in order to efficiently perform the duties required of him concerning vessels with passengers.

In Digby, Dr. William L. Bent forwarded a bill of £2:12:0 for services performed in clearing and purifying a vessel which arrived in October 1843 with the body of a man who died of yellow fever en passage from Bermuda.

The following account was rendered to the province of Nova Scotia by Dr. Matthias Hoffman in 1846.

"To visiting H.M.S. Steamship Hermes in quarantine.....	£1:10:0
To visiting H.M.S. Steamship Vesuvius, having on board 24 cases yellow fever coming from Vera Cruz, and during their passage to Halifax lost the surgeon and eight men—the ship was ordered in quarantine four miles from the town.....	£1:10:0
To seven subsequent visits to Vesuvius at Melville Island.....	£7:0:0'

"On Sept. 29th., 1857, *H.M.S. Grenada* arrived off Halifax having had on board yellow fever. Up to the time of arrival there were 100 cases including relapses with 29 deaths. The captain brought the ship north to save the passengers and crew and no new cases developed on board for six days previous to her anchoring here. The ship was fortunate in having on board Dr. Wells whose treatment of yellow fever was surpassed by few surgeons in Her Majesty's Navy."

On Feb. 20th., 1858, a petition was presented to the House of Assembly from Dr. Slayter, Health Officer, for remuneration for his services on visiting Her Majesty's ship "*Brilliant*" which arrived at this port, the crew being ill with yellow fever.

Yellow fever again appeared in 1861. At a medical society meeting held on Nov. 5th, 1861, a paper was read by Dr. Lewis, surgeon of *H.M.S. "Nile"*. The first part dealt with the outbreak of yellow fever on board the following ships of the West Indian Squadron that summer and its importation into Halifax Harbour.

The "*Fire Bandit*" on board of which ship 167 of crew were attacked by yellow fever and 49 died, on the "*Spitiful*", 88 were attacked and 36 died, on the "*Jason*", 79 were attacked and 17 died, on the "*Racer*" 61 were attacked and 20 died, the whole compliment of officers and men was 750, of these 396 were attacked and 122 died. Dr. Lewis then proceeded to make some remarks on the symptoms as observed in above cases and the treatment adopted. He then gave some particulars of cases that occurred on board the "*Pinatoo*" while in Halifax Harbour and during the voyage to New York—a new ship that had arrived from England and which had never been in the West Indies—"These cases occurring on board the '*Pinatoo*' afforded very strong evidence of the contagiousness of yellow fever." A discussion then took place on the subject and Dr. Forbes of *H.M.S. "Jason"* stated that of all cases that had come under his observation, he had never seen anything to lead him to the belief that yellow fever was contagious.

At the Medical Society meeting of Jan., 1862, it was stated that positive information had been received that several cases of yellow fever resulting in black vomit and death originated in the harbour on board infected ships arriving from the West Indies and in the hospital hulk "*Pyramus*", anchored off the Dockyard and that in several instances those who have mingled with convalescents from yellow fever temporarily housed in Her Majesty's Dockyard, have taken the disease in its worst form and have died.

It was resolved that as Halifax might be attacked when the temperature was high and under certain conditions of atmosphere, the society deemed it their duty to call the attention of the civic and provincial authorities to these facts and request them to take such measures to prevent occurrences which might prove a grave public calamity. Dr. Slayter stated that he had already brought the question of yellow fever before the Government and

had urged the necessity for strict quarantine laws and a quarantine hospital. The Medical Society then expressed the hope that a hospital would be erected properly isolated and that a copy of the resolutions be sent to the provincial secretary and to the Mayor. The Lieutenant Governor and the Admiral were both anxious that precautions be taken against yellow fever and urged the necessity of a quarantine hospital for which application for funds had already been made to the authorities in England. The society had been holding the meetings at Dalhousie College but the college having been handed over as a hospital to the military, it was necessary to find another place for this annual meeting. On June 16th. 1862, a special meeting of the society was held to consider the resolutions passed re the danger of yellow fever. The Lieutenant Governor asked whether it would be wise to erect the hospital on the high grounds of the victualling yard for persons of Her Majesty's Ships suffering from yellow fever. Dr. Cowie felt that the lower end of the Dockyard was unfit for confining cases of yellow fever, the grounds being made artificially and a large supply of coal being always stored there—the northern end was considered more isolated but the majority were in favor of a site further away from the city. A new naval hospital was erected in 1863 to be ready May 1st., 1865, near the site of the old one which was burned in 1819.

In August, 1864, yellow fever was still making its ravages. A number of prominent medical men left Montreal en route to Bermuda to render assistance during the fatal disease then raging there. They were conveyed on *H.M.S. "Jason"* and several fell victims to the plague. In the *Acadian Recorder* of Monday, Oct. 3rd, 1864, the following is noted; "We regret to learn that there are several fresh cases of yellow fever in the naval hospital—patients being seamen of the '*Galatea*', one of whom was buried yesterday. Five deaths have occurred since Saturday. It is also reported that some of the women and children brought by the latter vessel from Bermuda are stricken down with the disease. They are all quartered at the naval hospital, where every attention in the way of comfort and medical skill has been provided them. As the sickness appears to be on the increase much uneasiness is felt in consequence. We think and hope that the cool weather of the last few days will soon stop the career of 'Yellow Jack'."

In 1869 *H.M.S. "Eclipse"* anchored off the Dockyard with 52 cases of yellow fever. The question was asked, why was the boat not stopped at the quarantine grounds?

In July, 1873, eight cases of yellow fever were reported on the brig "*Annie Barker*", from Havana, anchored at the quarantine grounds.

On January 12th., 1874, "*H.M.S. Sphynx*" arrived from Port Royal Ja. with two cases of yellow fever—"all officers and crew having been transferred to her from the '*Aboukir*' who were infected with yellow fever—two were taken ill and died at sea and since the arrival one man died of the fever in hospital, there are still a number of other cases in hospital but all are doing well."

The following cutting from New Orleans, Oct. 23rd, 1936, stated that "YELLOW FEVER IS NOT YET SUBDUED"—"Complete evidence from an international study showing that yellow fever has not been conquered as the medical profession had believed for 25 years, was presented to the American Public Health Association here to-day.

Jungle yellow fever a disease apparently the same as the once-dreaded

yellow jack, is the new guise, the association was told, of this supposedly extinct plague. It is widespread in South America. It also threatens North America."

As after 1832 when a report of the Poor House Hospital had been made and conditions found to be intolerable, petitions and reports were frequent for a general or for separate hospitals for the sick and insane, resulting in the establishment of the Victoria General Hospital, 1859, so now in the sixties similar requests were numerous for quarantine and for infectious hospitals. Meetings were held by the Medical Society, the Sanitary Committee, the Board of Health and Council to consider the matter. In the meantime "fever" cases were taken to Steven's, George's and McNab's Islands, to Dartmouth, where a house owned by Mr. Power was used for smallpox and to the old City Hospital at Halifax, where in 1862 out of 51 patients admitted 6 died of fever which in 1863 was of a milder type as of 32 cases only 2 died—one case of smallpox was reported. On March 14th., 1866, at a meeting of the Board of Health, Dr. Jenning stated that the Medical Society would like to suggest that a quarantine station be established at Mauger's Beach (McNab's) and on April 25th the Board of Health approved of the suggestion of the city medical officer to purchase Lawlor's Island as a station and that a committee be appointed to confer with the government on the matter. The property at McNab's was valued at £3000.

On the 27th a meeting was held to consider the City Hospital and to draft a bill to be presented suggesting that two-thirds of the expenditure be borne by the Government and one-third by the city, the latter to have a share in the management of the hospital. It will be remembered that in 1867 the old City Hospital was reopened on May 1st for reception of patients from the city and any part of the Province, the name being changed to the City and Provincial Hospital, now the Victoria General. At this time there were four physicians and four surgeons appointed to the staff—R. Black, W. H. Davies, Forman and A. G. Cowie were the physicians. W. B. Slayter, E. Jenning, W. J. Almon and C. Tupper, the surgeons—in addition there was a consulting physician, Dr. D. McN. Parker. These formed a medical board, anyone of whom on examination could admit patients—in urgent cases the House Surgeon had power to do so (Dr. J. Venables, Jr.). There was a dispensary attached where advice and medicine were furnished gratuitously to poor outpatients from 12 to 1 o'clock. Medical men of both services and those of the city with their students were invited to attend daily.

In the Minutes of Council 1867 a hospital for inebriates is referred to when complaints were made that the City and Provincial Hospital was taking these patients and so interfered with the hospital especially established for them. This hospital called the Inebriate Asylum was established in 1875, when a sum of \$2,500 was provided for the home—\$1,000 grant from the Legislature, \$100 from the Grand Division Sons of Temperance and \$1,400 subscribed by a few benevolent gentlemen in Halifax. Dartmouth had been spoken of as a likely place for the home, where finally the beautiful property of the late Col. Sinclair, on the Preston Road was leased for the temporary home which was ready for occupancy on August 1st., of that year.

To go back to the quarantine hospital at McNab's we read that on June 8th, 1866, the Lieutenant Governor General Doyle, accompanied by members of the provincial government and city council, visited the island on the "Neptune", for the purpose of selecting a site for the quarantine station and

it was decided that no better place could be provided. On July 22nd it was announced; "that the authorities had decided on the south of McNab's Island, the position having met with the approval of all the medical profession". On August 1st; "Sheds are being erected on the site selected as a quarantine station on the south end of McNab's".

However the matter was apparently dropped until 1871 when the cholera ship "*Franklin*" arrived with a severe form of the disease on board—the epidemic of 1834 was recalled and a meeting of the Board of Health summoned on November 27th to prevent a repetition. "The question arose as to whether Lawlor's Island was a suitable place for a quarantine station and was debated, there seemed to be a strong impression it was not so suitable. First, because the surrounding water was too shallow to permit large vessels to float there; second, because the island is separated from the mainland by a very narrow channel; and third, because there are no quarantine buildings erected or other arrangements made on the island to meet a sudden appearance of any contagious or infectious disease". Mr. Joseph Mott proposed that the Board might suggest to the Dominion Government the propriety of erecting on Lawlor's Island a temporary building capable of accommodating 500 persons.

On Monday, December 18th., 1871, is reported—"Mr. Bowser who has accepted the contract to erect quarantine buildings on Lawlor's Island went down there Saturday with a party of workmen to survey the situation and fix the exact location of the hospitals. He intends to commence the work at the earliest practicable moment, and to push the work to completion with energy."

The Central Board met on the 19th when Dr. Wickwire, on request, detailed the efforts that had been made by him to procure a building to be used as a quarantine hospital in the event of importation of any infectious diseases from abroad—Mr. Hill, architect, explained obstacles that had arisen in Mr. Bowser's way in the matter of erecting hospitals on Lawlor's Island and stated that Mr. Bowser required a thousand dollars more than the amount of his original tender if he should be obliged to proceed with the work at that season of the year.

On February 19th., 1872, it was reported that; "The quarantine buildings on Lawlor's Island are rapidly approaching completion. Two buildings intended for sick wards, each 40 feet by 20, will be ready for occupancy should the necessity arise in about a fortnight. The frame of a third—a convalescent ward—to be a 120 by 20 feet wide, is on the ground, and will be put up immediately. All these buildings are putting up without the foundations having been dug, the work having been postponed until next summer. The small-pox patient who was landed on the island from the Brig. '*Little Fury*', has been pronounced well by the physicians and will be brought up in a tug tomorrow."

The following items show the first cases treated at the new hospital—on April 25th another case of smallpox was reported on "*S. S. Peruvian*" at Cunard's wharf; "The patient—a young woman, one of the steerage passengers—was removed to the quarantine station, all communication with the ship was strictly prohibited—the ship not being in a state to be removed from the wharf."

On the 26th another of the steerage passengers, Mr. Auld of about 40 years of age, was moved to the hospital on Lawlor's Island with smallpox—he died and was buried there.

A carpenter who had done some work on the "S. S. *Peruvian*" died of smallpox on May 21st. at the new Rockhead Hospital, also the infant daughter of Mr. and Mrs. Jenny, who had charge of this fever hospital at Rockhead, on June 13th., having contracted smallpox from the carpenter.

The *Acadian Recorder* of June 9th., 1873, reports—"A young man named Bowser, a son of the contractor, who recently erected the hospital on Lawlor's Island, contracted the smallpox some days since from some effects of patients that had been treated there, and lies so low that his life is nearly despaired of. . ."

It was in the meantime that a hospital for infectious diseases in the city had also been considered and on August 6th., 1866, a meeting of the sanitary committee had been held to procure a temporary building in the city for hospital purposes at Rockhead. In April 1869 it was stated, "that a hospital was being erected in connection with Rockhead for the smallpox". On August 7th., "A number of patients ill with typhoid fever were removed from the City and Provincial Hospital this morning and placed in the unfinished building intended for a Fever Hospital in the course of erection near Rock-Head Prison—we learn on the arrival of the sick the carpenters at work on the premises put on their coats and left without much ceremony. The building in its present condition is entirely unfitted for people in health to reside in, let alone fever patients." "Slow" or typhoid fever was prevalent in Halifax from about 1867 to 1870.

In October 1871, the Board of Health met to consider the situation of keeper and matron for the temporary fever hospital—Mr. and Mrs. William Jenny were appointed.

In January 1873, the Mayor submitted a resolution of the Board of Health recommending the erection of a new city hospital and in April an act was passed to enable the city to build a hospital for infectious and contagious diseases and a loan to be made not to exceed ten thousand dollars at a rate of interest of six per centum per annum.

Tenders for the same were to be called for in the local papers, while in the *Acadian Recorder* of June 11th., 1873, the following was published; "The City of Halifax wants to borrow \$10,000 to build an hospital for infectious diseases, to be situated about 600 yards in the rear of the Fever Hospital at Rockhead."

The plans of Mr. Gould, C.E., were accepted for the hospital which was to be constructed of wood.

In 1874 the tenders were called for.

Office of City Clerk,
Halifax, Aug. 26th, 1874.

"To Contractors:—

Tenders addressed to 'The Chairman of Sanitary Committee' will be received at this office until noon on Monday, 7th., December next.

For the Construction of an Hospital for Contagious Diseases, to be erected on the Rockhead Farm, Halifax.

Plans and specifications may be seen at the City Engineer's Office, on and after Friday next, the 28th inst., where also any further information may be obtained.

The lowest or any tender will not of necessity be accepted.

By Order of Chairman Sanitary Committee,
Thomas Rhind, City Clerk."

As the offers were beyond the \$10,000 authorized by Act of Parliament, they could not be accepted.

It was then decided to employ prison labour on the grading and otherwise preparing the site for building, then to lay the foundation by the same means under competent supervision.

When the work was sufficiently advanced, tenders were again to be invited for the framework.

In the meantime, the old temporary building, or Fever Hospital later known as the pest house, was to be fitted up for the winter and to be used until the completion of the new building which was expected to be ready early the next summer.

In June 1875, the following tenders were published:

Thomas Haliwell, \$16,462;
Johnson, Caldwell and McGrath, \$10,738;
John Wilson, \$9,966;
McIntosh and McInnis, \$9,691;
Graham and Newland, \$9,374;
Patrick Fahey, \$9,275;
Charles Houseman, \$8,483;
M. E. Keefe, \$8,400.

It was stated that Mr. M. E. Keefe's tender of \$8,400 would probably be accepted.

The construction, however, was unavoidably delayed, and it was not until March 1876, that the tenders were again considered when the Committee met on the 31st. to decide on the matter. Mr. Keefe's tender was accepted, but as he failed to find the necessary guarantee, the contract was then awarded to C. Houseman for \$8,483.

On April 4th. an indignation meeting was held at St. Mark's School house against the hospital being erected at Rockhead Farm, the property at Chain Lakes being preferred. Finally, the much talked of and debated hospital was finished in October 1876, when it was handed over by Mr. C. H. Houseman, the builder, to the Sanitary Committee of the City Council. (It will be recalled that Sanitary Laws were considered preferable to Quarantine in 1852).

The hospital was situated on the slope of a hill to the northward of Rockhead prison, at a point where a new road, leading to the hospital, intersects Gottingen Street. The hospital, which was designed by the City Engineer, consisted of a main building and two wings, the main building having a frontage of 40 feet and depth of 35 feet. On the first floor there were four rooms, a ward for delirious male patients, a doctor's room, male nurse's room, with a window commanding a view of the male ward, and a female nurse's room, commanding a view of the female ward. Upstairs there were rooms for the matron, a convalescent ward and a ward for delirious female patients. The convalescent ward was 30 feet long by 14 feet wide, and if necessary could be made into two wards for male and female convalescents. On this floor there were also six spacious closets for various hospital purposes.

The basement contained a kitchen and dining-room, with two large frost-proof cellars. An improved range was put up for cooking and in one of the cellars a furnace for heating the building and main wards for male and female patients, which were situated at the west and east ends respectively of the main building.

Each ward was 58 feet in length by 25 feet wide with a segment ceiling 14 feet high, and connected with the main building by a wide hallway. Each

ward had eight large windows, a cold air inlet through the floor with box conductor from each side; two inlets at each side and two floor and two ceiling outlets; this method of ventilation was used in all the other rooms connected with the hospital.

The building was solidly built and warmth was guaranteed. It was double boarded with layers of tarred paper between and triangle battens on the outside and the exterior was painted and sanded.

"Notwithstanding the close proximity of Rockhead and its sombre surroundings the situation of the hospital is a pleasant one; and this is no small consideration with convalescing patients who will have a splendid view of our matchless Basin and the surrounding country."

After the completion of the hospital it was found necessary to raise the sum of \$2,000 for the outhouses, fences and furnishings. At a meeting of the Sanitary Committee in November Alderman Forsyth moved that for the present the sum of \$1,400 be placed at the credit of the Committee. The motion was seconded by Alderman M. J. Power and passed.

The quarantine station at Lawlor's Island is now no longer used. The old buildings at Rockhead have been recently renovated and a new quarantine station or immigration hospital just completed, while infectious diseases are taken care of at the City Hospital on Morris Street, which was erected in 1928.

The troubles of the past were recalled this spring when smallpox was brought to the port from the East and the cases moved to Lawlor's Island, which had to be reopened for the time being.

Before closing it is interesting to note, that "*State Medicine* was first mentioned in 1871 when Dr. Farrell's address at the Dalhousie College Convocation on Tuesday afternoon, November 1st. was highly spoken of. Dr. Farrell gave the opening address for the Medical Department. His subject was one of the most interesting that can engage the attention of the profession, of the public at large, and especially legislators who have charge of the public interests of the community, that namely, which is being appropriately termed, '*State Medicine*', or the consideration of public measures necessary to be taken for protection from disease."

"Public Health" was referred to much earlier in 1832 when cholera threatened the world and measures for protecting the health of the city were commenced in 1750, when at a Council held on July 2nd at the Governor's, Edward Cornwallis, with the following present:—John Horseman, John Gorham, Benjamin Green, John Salisbury and William Street.

The Council took into consideration the proper methods to oblige people to clear the streets opposite their lots.

"That every person proprietor of a lot within the town of Halifax or in any street in Callendar's Division without the town be obliged to clear opposite to his lot to the middle of the street the whole length of the front. That overseers be appointed for each division.

Edward Cornwallis."

And at a Council held on October 25th., 1752, a proclamation was to be issued that no persons lay dead carcasses of beasts in the streets and etc., a penalty of 20/ to be imposed, while in 1750 a proclamation was issued to regulate the market, which was an open one until the present building was erected on Brunswick Street. At the old market the tide flowed up nearly to where the City Court House stood, forming a cove, the outlet of a brook which flowed down from north of George Street.

The Nova Scotia Medical Bulletin

Official Organ of The Medical Society of Nova Scotia.

Published on the 20th of each month and mailed to all physicians and hospitals in Nova Scotia. Advertising forms close on the last day of the preceding month. Manuscripts, preferably typed and double-spaced, should be in the hands of the editors on or before the 1st of the month. Subscription Price:—\$3.00 per year.

Editorial Board, Medical Society of Nova Scotia.

DR. H. W. SCHWARTZ, Halifax, N. S.

Editor-in-Chief

DR. J. W. REID, Halifax, N. S.

DR. A. L. MURPHY, Halifax, N. S.

and the Secretaries of Local Societies.

It is to be distinctly understood that the Editors of this Journal do not necessarily subscribe to the views of its contributors, except those which may be expressed in this section.

VOL. XVI.

AUGUST 1938

No. 8

A Richer Dust

TWO months ago our co-editor wrote a truly delightful little essay on cerebral gardening—a plea to the doctor that he cultivate the wealth of thoughts growing from his wide experience and record them for the greater benefit of himself, and the BULLETIN. This latter mundane addendum lowered the tone of what was otherwise a purely altruistic endeavour.

In turning the pages of a book review, recently, we felt urged to introduce this subject again, without the selfish element. No reviewer, we find, considers his week's work complete without announcing the publication of a new medical biography, usually autogenous. Let us consider, for a moment, the entire range of medical, literary effort. At the lowest end of the scale is the case history, which from the literary point of view, permits of nothing more than lucid, concise English. Next comes the formal paper and after that the medical text, both of which may be embellished by the philosophic and philological muses of the author. It is in this group that most of the worth while scientific efforts are found; but we are not dealing with science. So we place at the peak of our range those presentations which, by virtue of their general interest, appeal to the whole public and make for circulation—the little god of every enterprising literature.

Why should the medical man make up such an increasingly large group of those who write for all mankind, and profit? Somerset Maugham, distinguished writer of English prose, states that the writer must devote all his time, all his life to his craft, if he is to succeed. Sinclair Lewis, equally famous, on this side of the water, thinks differently, that the most successful author is he who lives in and of the world, through his profession or job, and makes his writings a by-product of his experience. Here is good reason for the proficiency of our brethren. The general practitioner, in particular, is constantly rubbing shoulders with human nature at its barest. As he delves into the personalities of those to whom he ministers, as they unburden their deepest thoughts, often denied to legal or even ministerial ears, it is little wonder that the cerebral garden becomes fertile soil, rich to be tilled.

And why should the public appreciate this acquisition of our profession? Probably they do not, directly. It is a common experience of circus folk to

find that in many localities the big tent with its sterling athletes, its finely trained animals, must take third place in popularity to fakers' row and the hootchie-kootchie, because here people find two things human nature most demands,—that which it does not understand and that which it is denied.

The medical profession has always been the world's fakers' row. In the eyes of the press its every movement lends itself to sensationalism. The wonder is, with this example before them, that the profession did not long ago realize the potentialities hidden in their minds. Dr. Axel Munthe's *San Michele*, published some years ago, promptly became a best seller and so has remained. Had we the trained Hollywood ear, this would have been enough. The avalanche would have followed. But we are poor business men; too slow, perhaps too thorough in our movements. Only recently has the obvious truth dawned. Medical books tumble over one another, falling from the presses. The man who is too modest, or lacking in imagination to work autobiographically turns the illuminating glory of his pen on some more illustrious, deceased associate. Putting aside its detective story craze for this new type of voyage into the unknown, the public buys avidly.

To borrow, for the last time, Dr. Reid's happy simile—Cultivate the garden of your mind, doctor! Yes, by all means, and remember, in the hidden depths of your bony vault are vast areas, unexplored, areas of soil so precious that every cell may be an acre. A garden, doctor? You are too modest. Might it not well be a farm?

There is money in farming.

A. L. M.

Minutes of the First General Business Meeting of the Medical Society of Nova Scotia, 1938

THE first general business meeting of the 85th annual meeting of the Medical Society of Nova Scotia was held at the Nova Scotian Hotel, Halifax, N. S., on Tuesday, June 21st, 1938, at 8 p.m., with about sixty present.

The meeting was called to order by the President, Dr. A. Calder.

It was moved by Dr. H. K. MacDonald and seconded by Dr. G. H. Murphy that the minutes of last year's meeting as published in the *MEDICAL BULLETIN* in August and September, 1937, be accepted as read. Carried.

The only communication was one from the Canadian Red Cross which was read by Dr. Grant, and which is published in the minutes of the Executive.

The President advised that at the executive meeting in the morning, most of the committee reports had been read and approved, and the executive suggested that the following reports be accepted by the general meeting as they contained nothing controversial and would be published in the *BULLETIN*:

Council C. M. A.	Report of the Legislative Committee.
Public Health Committee.	Historical Committee.
Insurance Committee.	Medical Museum Committee.
Cogswell Library Committee.	Committee on Medical Economics.
Victorian Order of Nurses Report.	Report of the Provincial Medical Board.

It was moved by Dr. G. H. Murphy and seconded by Dr. H. K. MacDonald that these reports be adopted. Carried.

The report of the Workmen's Compensation Board Committee was read by Dr. H. K. MacDonald. Dr. MacDonald moved the adoption of this report which was seconded by Dr. Almon, but after considerable discussion, Dr. MacDonald moved that his report be received and placed on file.

The report of the Cancer Committee was read by Dr. N. H. Gosse. Dr. Gosse moved the adoption of this report, which was seconded by Dr. Corston, and carried.

The report of the Committee on Relations with the C. M. A. was read by Dr. Corston. Dr. J. R. Corston moved the adoption of this report, which was seconded by Dr. W. A. Curry.

Dr. Calder advised that at the Council meeting of the C. M. A. held the 20th he had made verbal application for the Medical Society of Nova Scotia to enter federation, otherwise, if the general meeting decided tonight they wished to enter federation, their application would have been delayed for another year, and at the executive meeting in the morning, the executive had approved this action. He also pointed out that the adoption of Dr. Corston's report, with the information just given, would make the Medical Society of Nova Scotia a division of the Canadian Medical Association. Dr. Corston's report was adopted.

The report of the Editorial Board Committee was read by Dr. Schwartz. It was moved, seconded, and carried that this report be adopted.

The report of the Executive was read by Dr. Grant. It was moved by Dr. H. K. MacDonald and seconded by Dr. Mader that this report be adopted: it was moved by Dr. Corston and seconded by Dr. K. A. MacKenzie that the new members as listed in the Executive's report be accepted as members in the Society. Both motions carried.

The report of the Treasurer was read by Dr. Muir, who stated that the report looked rather disappointing, but that it was for eleven months instead of a year. Dr. Muir stated that he thought that the offices of secretary and treasurer should be combined as he felt the office of treasurer was superfluous.

Dr. Calder advised that the report of the financial condition of the Society was not as bad as the figures would indicate. He agreed with the statement made by Dr. Grant at the executive meeting that as a matter of policy the offices of treasurer and secretary should be separate, and he thought it would be a splendid thing to induce Dr. Muir to continue as treasurer of the Society.

Dr. Grant said he would like to repeat what he had said at the executive meeting in the morning that he thought it was a very wise thing for the Society as a matter of policy to have a separate individual as treasurer and he would be very glad to forego part of his salary towards a salary for Dr. Muir.

It was moved by Dr. Muir, and seconded by Dr. Thomas that the financial report be adopted.

The report of the committee of three appointed at the executive meeting to look into the question of an honorarium for the treasurer was brought in as follows:

The special committee of the executive appointed to deal with the amount of an honorarium for the treasurer, Dr. Muir, wish to recommend that the treasurer be given an honorarium of \$100 for the past years services and that this amount be increased as soon as the funds of the society permit.

(Sgd.) C. E. Kinley, D. M. Cochrane, H. G. Grant.

This motion was moved by Dr. Kinley, seconded by Dr. Campbell, and carried.

Dr. Eagar moved that the honorarium of \$250.00 to the Editorial Board be continued, seconded by Dr. Mader, and carried.

The report of the Secretary was read by Dr. Grant. It was moved by Dr. Burns, seconded by Dr. Cochrane that this report be adopted. Carried.

The President stated that the next item was the appointment of the Nominating Committee, and named the following slate: Dr. H. E. Kelley, Middleton, Chairman; Dr. W. F. MacKinnon, Antigonish; Dr. W. A. Curry, Halifax; Dr. R. M. Benvie, Stellarton and Dr. H. A. Creighton, Lunenburg. The President stated that the report of the Nominating Committee should be in the hands of the Secretary not later than Thursday afternoon, as it would have to be brought up at the second business meeting during the dinner Thursday evening.

Dr. Corston advised that in view of our new status the Nominating Committee would have to nominate members to the Council of the Canadian Medical Association for the ensuing year, the names to be forwarded to the Canadian Medical Association before March 31st of next year; and also representatives on the Nominating and Executive Committees of the Canadian Medical Association. The President stated that these representatives would be appointed by the Executive Committee.

Dr. Gosse moved that the Cancer Committee have power to add to its members. This was seconded by Dr. Mader, and carried.

Dr. MacKenzie spoke regarding the Medical Museum; that according to instructions the committee looked into the question of cabinets and secured a price and finally decided they could get a very nice cabinet from Piercey's, which is at present in the Pathological Building, where it will be placed permanently. He asked the members of the Society to make every effort to secure old things of interest, in the way of instruments and documents, to add to the museum, and stated that if this were done in a very short time there would be a very interesting collection. He suggested that a little monthly item be put in the MEDICAL BULLETIN to keep it before the minds of the doctors in the province, and as articles came in they would be acknowledged in the BULLETIN, and advised they had just received a very nice parcel from Dr. Webster of Yarmouth. Articles could be either donated to the Museum, or sent in as a loan, and cards would be attached, stating whether the article were a donation or a loan.

Dr. Almon stated he thought he could find a few articles of interest which had belonged to his grandfather which he would donate to the Museum.

Dr. Burris asked if copies of old interesting documents would be accepted, and it was suggested that photographs of such things might be made.

The meeting adjourned at 10.15 p.m.

The second business meeting of the Medical Society of Nova Scotia was held during the annual dinner at the Nova Scotian Hotel, Halifax, N. S., Thursday evening, June 23rd, 1938.

The only item of business was the report of the Nominating Committee. Dr. H. E. Kelley of Middleton, the Chairman, made the following report.

The Nominating Committee submit the following for officers of the Medical Society of Nova Scotia for 1938-39.

President - - - - -	Dr. J. H. L. Simpson, Springhill.
1st Vice-President - - - -	Dr. H. K. MacDonald, Halifax.
2nd Vice-President - - - -	Dr. A. B. Campbell, Bear River.
Secretary - - - - -	Dr. H. G. Grant, Halifax.
Treasurer - - - - -	Dr. W. L. Muir, Halifax.
Place of Meeting - - - - -	Digby, N. S.
Legislative Committee - - - -	Dr. J. G. MacDougall, Halifax; Dr. J. L. Me- Isaac, Antigonish.
Editorial Committee - - - -	Dr. H. W. Schwartz, Dr. A. L. Murphy, Dr. J. W. Reid, all of Halifax.
Cancer Committee - - - - -	Dr. N. H. Gosse, Dr. S. R. Johnston, Dr. V. O. Mader, all of Halifax.
Public Health Committee - - - -	Dr. P. S. Campbell, Halifax, and the executive of the Nova Scotia Health Officers Association.
Insurance Committee - - - - -	Dr. T. A. Lebbetter, Yarmouth, Dr. C. A. Webster, Yarmouth, and Dr. A. B. Campbell, Bear River.
Historical Committee - - - - -	Dr. M. R. Elliott, Dr. P. S. Cochrane, Wolfville, and Dr. G. R. Forbes, Kentville.
Workmen's Compensation Board	Dr. J. B. Reid, Truro, Dr. Eric Macdonald, Re- serve Mines, Dr. D. F. MacLellan, New Glasgow, Dr. H. B. Whitman, Stellarton.
Medical Museum Committee -	Dr. K. A. MacKenzie, Dr. H. L. Seammell, Dr. R. P. Smith, all of Halifax.

Cogswell Library - - - - Dr. G. H. Murphy, Dr. J. R. Corston, Dr. W. L. Muir, Dr. Clyde W. Holland, Dr. H. L. Scammell, all of Halifax.

Medical Economics - - - - Dr. H. B. Atlee, Dr. N. H. Gosse, Dr. K. A. MacKenzie, all of Halifax.

Signed H. E. Kelley,
W. F. MacKinnon,
H. A. Creighton,
W. Alan Curry,
R. M. Benvie.

There were no other nominations from the floor. Dr. Kelley moved the adoption of his report, which was seconded and carried unanimously.

H. G. GRANT, Secretary.

Correspondence

184 College Street,
Toronto 2, June 30, 1938.

Dear Doctor:

The Authorship Committee appointed by the Department of Cancer Control of the Canadian Medical Association has undertaken as its initial effort the production of a handbook on cancer, for the Medical Profession.

The manuscripts for this handbook were submitted for criticism, through the Deans of the nine Medical Schools in Canada, to the leaders in our profession interested in cancer, as well as to the Cancer Committee of each of the nine provinces. The final text is an attempt to express the combined opinion of these collaborators.

Cancer of the various anatomical sites is discussed from the standpoint of pathology, diagnosis, treatment and prognosis. The book will be off the press this summer.

If you feel that such a book would be of value to you in your work, the Canadian Medical Association will be glad to mail you a copy with its compliments, if you will write your request (using your professional stationery) to the Department of Cancer Control of the Canadian Medical Association, 184 College Street, Toronto.

Yours faithfully,

T. C. ROUTLEY,
General Secretary.

The above letter is published at the request of the Cancer Committee Canadian Medical Association.

Suggestion for Sunburn

One of the most common ailments of the summer season is sunburn. Usually not serious, it is, however, extremely uncomfortable and often quite painful.

To soothe the skin, reduce the inflammation and withdraw the fluid from the blisters and blebs of sunburn, an Antiphlogistine dressing applied cold, is markedly efficient. Put on before retiring and left until morning, it will frequently make the patient quite comfortable.

Department of the Public Health

PROVINCE OF NOVA SCOTIA

Office—Metropole Building, Hollis Street, Halifax, N. S.

MINISTER OF HEALTH - - - - HON. F. R. DAVIS, M.D., F.A.C.S., Halifax.

Chief Health Officer - - - - DR. P. S. CAMPBELL, Halifax.
 Divisional Medical Health Officer - - - DR. C. J. W. BECKWITH, D.P.H., Sydney.
 Divisional Medical Health Officer - - - DR. J. J. MACRITCHIE, Halifax.
 Director of Public Health Laboratory - - DR. D. J. MACKENZIE, Halifax.
 Pathologist - - - - DR. R. P. SMITH, Halifax.
 Psychiatrist - - - - DR. ELIZA P. BRISON, Halifax.
 Superintendent Nursing Service - - - MISS M. E. MACKENZIE, Reg. N., Halifax.

OFFICERS OF THE PROVINCIAL HEALTH OFFICERS' ASSOCIATION

President - - - - DR. R. A. MACLELLAN - - - Rawdon Gold Mines
 1st Vice-President - - - DR. H. E. KELLEY - - - Middleton
 2nd Vice-President - - - DR. R. C. ZINCK - - - Lunenburg
 Secretary - - - - DR. P. S. CAMPBELL - - - Halifax

COUNCIL

DR. HARVEY F. SUTHERLAND - - - - Glace Bay
 DR. L. B. W. BRAINE - - - - Annapolis Royal
 DR. H. E. WALSH - - - - Springhill

MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

Hall, E. B., Bridgetown.
 Braine, L. B. W., Annapolis Royal.
 Kelley, H. E., Middleton (Mepy. & Town).

Murray, R. L., North Sydney.
 Baird, R. P., Louisburg.
 Gouthro, A. C., Little Bras d'Or Bridge,
 (Co. North Side).

ANTIGONISH COUNTY

Cameron, J. J., Antigonish (Mepy).
 MacKinnon, W. F., Antigonish.

COLCHESTER COUNTY

Eaton, F. F., Truro.
 Havey, H. B., Stewiacke.
 Johnston, T. R., Great Village (Mepy).

CAPE BRETON COUNTY

Tompkins, M. G., Dominion.
 Fraser, R. H., New Waterford.
 Francis, Bernard, Sydney Mines.
 Sutherland, Harvey, Glace Bay.
 McLeod, J. K., Sydney.
 O'Neil, F., Sydney (County, South Side).

CUMBERLAND COUNTY

Bliss, G. C. W., Amherst.
 Gilroy, J. R., Oxford.
 Hill, F. L., Parrsboro, (Mepy. and Town).
 Cochrane, D. M., River Hebert (Joggins).
 Walsh, F. E., Springhill.

DIGBY COUNTY

Doiron, L. F., Little Brook, (Clare Mepy).
McCleave, J. R., Digby.
Harris, W. C., Barton, (Mepy).

GUYSBORO COUNTY

Chisholm, D. N., Port Hawkesbury,
(M.H.O. for Mulgrave).
Sodero, T. C. C., Guysboro (Mepy).
Moore, E. F., Canso.
Monaghan, T. T., Sherbrooke (St. Mary's
Mepy).

HALIFAX COUNTY

Almon, W. B., Halifax.
Forrest, W. D., Halifax (Mepy).
Payzant, W. A., Dartmouth.

HANTS COUNTY

Bissett, E. E., Windsor.
MacLellan, R. A., Rawdon Gold Mines
(East Hants Mepy).
Reid, A. R., Windsor, (West Hants Mepy).
Shankel, F. R., Windsor, (Hantsport).

INVERNESS COUNTY

Muir, J. A., Port Hawkesbury.
Grant, T. E., Port Hood.
Proudfoot, J. A., Inverness.
McNeil, A. J., Mabou, (Mepy).

KINGS COUNTY

Bishop, B. S., Kentville.
Bethune, R. O., Berwick, (Mepy & Town).
de Witt, C. E. A., Wolfville.

LUNENBURG COUNTY

Marcus, S., Bridgewater (Mepy).
Rehfuss, W. N., Bridgewater.
Donaldson, G. D., Mahone Bay.
Zinek, R. C., Lunenburg.
Zwieker, D. W. N., Chester, (Chester
Mepy).

PICTOU COUNTY

Blackett, A. E., New Glasgow.
Chisholm, H. D., Springville, (Mepy).
MacMillan, J. L., Westville.
Crummey, C. B., Trenton.
Sutherland, R. H., Pictou.
Whitman, G. W., Stellarton.

QUEENS COUNTY

Murray, D. K., Liverpool.
Smith, Harry, Mill Village, (Mepy).

RICHMOND COUNTY

Digout, J. H., St. Peters, (Mepy).

SHELburne COUNTY

Corbett, J. R., Clark's Harbour.
Fuller, L. O., Shelburne.
Banks, H. H., Barrington Passage, (Bar-
rington Mepy).
Lockwood, T. C., Lockeport.
Churchill, L. P., Shelburne, (Mepy).

VICTORIA COUNTY

MacMillan, C. L., Baddeck, (Mepy).

YARMOUTH COUNTY

Hawkins, Z., South Ohio, (Yarmouth
Mepy).
Caldwell, R. M., Yarmouth.
Lebbetter, T. A., Yarmouth, (Wedgeport).
Siddall, A. M., Pubnico Head, (Argyle
Mepy).

Those physicians wishing to make use of the free diagnostic services offered by the Public Health Laboratory, will please address material to Dr. D. J. MacKenzie, Public Health Laboratory, Pathological Institute, Morris Street, Halifax. This free service has reference to the examination of such specimens as will assist in the diagnosis and control of communicable diseases: including Kahn test, Widal test, blood culture, cerebro spinal fluid, gonococci and sputa smears, bacteriological examination of pleural fluid, urine and faeces for tubercle or typhoid, water and milk analysis.

In connection with Cancer Control, tumor tissues are examined free. These should be addressed to Dr. R. P. Smith, Pathological Institute, Morris Street, Halifax.

All orders for Vaccines and sera are to be sent to the Department of the Public Health, Metropole Building, Halifax.

Report on Tissues sectioned and examined at the Provincial Pathological Laboratory, from July 1st., to August 1st., 1938.

During the month, 268 tissues were sectioned and examined, which with 21 tissues from 6 autopsies, makes a total of 289 tissues for the month.

Tumours, simple.....	26
Tumours, malignant.....	57
Tumours, suspicious of malignancy.....	1
Other conditions.....	184
Tissues from 6 autopsies.....	21
	—289

**Communicable Diseases Reported by the Medical Health Officers
for the month of JULY, 1938.**

County	Epid.	Jaundice	Infantile Paralysis	Chickenpox	Diphtheria	Influenza	Measles	Mumps	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	V. D. G.	V. D. S.	Whooping Cough	Septic Throat	Diarrhoea	TOTAL
	Annapolis.....	2	1	1
Antigonish.....
Cape Breton.....	20	15	10	..	26	2	23	..	..	1	2	..	..	2	106
Colchester.....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Cumberland.....	..	1	..	..	3	..	..	..	1	..	..	..	..	..	..	..	..	5
Digby.....	3	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	6
Guysboro.....	52	..	..	..	..	..	..	..	..	..	..	52
Halifax City.....	1	1	..	11	..	..	2	..	..	..	..	..	..	..	..	15
Halifax.....	1	2	..	..	..	..	1	..	4	..	..	..	..	..	..	8
Hants.....
Inverness.....	14	1	..	..	..	..	..	..	..	1	16
Kings.....	7	..	..	..	..	..	..	3	..	..	1	..	11
Lunenburg.....
Pictou.....
Queens.....
Richmond.....	5	..	..	..	..	..	2	1	..	..	..	8
Shelburne.....
Victoria.....
Yarmouth.....	2	..	..	..	..	5	..	..	..	..	..	..	..	7
TOTAL.....	3	1	25	20	20	70	41	3	37	2	6	6	3	42	1	3	283	

Positive cases Tbc. reported by D.M.H.O.'s. 58.

RETURNS VITAL STATISTICS FOR JUNE, 1938

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis.....	13	11	21	8	4	1
Antigonish.....	17	14	2	10	11	2
Cape Breton.....	140	143	91	30	29	4
Colchester.....	23	29	24	13	14	0
Cumberland.....	35	40	38	14	15	4
Digby.....	17	19	16	22	20	0
Guysboro.....	27	20	7	16	10	1
Halifax.....	127	91	81	51	49	9
Hants.....	29	30	18	20	7	3
Inverness.....	17	20	12	17	14	0
Kings.....	18	17	23	14	14	0
Lunenburg.....	31	30	19	20	12	1
Pictou.....	29	42	25	35	24	3
Queens.....	13	11	10	3	0	0
Richmond.....	15	5	4	2	2	0
Shelburne.....	10	10	5	4	1	0
Victoria.....	2	4	5	4	4	1
Yarmouth.....	35	31	20	19	9	2
	598	567	421	302	239	31

THEELIN

(ketoxyestratriene)

The introduction of Theelin to the medical profession by Parke, Davis & Company marked a new phase in endocrine therapy. Theelin was the first estrogen to be isolated in pure crystalline form, the first pure estrogen to be used clinically, the first to be reported in medical literature.

Theelin has been available, either experimentally or commercially, for nearly eight years. During that time it has made endocrine history with thousands of discriminating practitioners who have relied on it for supplementing or replacing deficient ovarian secretion in the control of menopausal symptoms.

THEELIN (AQUEOUS) • THEELIN IN OIL • THEELIN SUPPOSITORIES

KAPSEALS THEELOL

(trihydroxyestratriene)

Theelol is likewise a chemically pure, naturally occurring estrogen, carefully standardized by physiological and chemical methods. It is closely related to Theelin, but more soluble in water.

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Personal Interest Notes

DR. T. T. MONAGHAN, Dalhousie graduate of 1933, who has practised at Sherbrooke for a number of years, has moved to Antigonish. Dr. Monaghan recently spent a year's post-graduate study in Europe, where he visited the clinics at Vienna, London and Dublin. Dr. Monaghan also paid short visits to Paris, Berlin, Budapest and Heidelberg.

Congratulations to Dr. and Mrs. W. J. Keating on the birth of a daughter on July 12th; to Dr. and Mrs. J. A. Noble on the birth of a son on July 26th; and to Dr. and Mrs. C. E. Kinley on the birth of a son on August 3rd, all residents of Halifax.

Dr. George Cox of New Glasgow and his two daughters left recently for an extended visit to England and Scotland.

We regret to hear that Dr. A. B. Campbell of Bear River has recently been a patient at the Digby General Hospital.

Dr. R. W. Maclellan, Dalhousie graduate of last year, has established a practice at Mill Village, Queens County.

Dr. Donald McRae, son of Dr. and Mrs. McRae of Sydney Mines, has just completed three years of post-graduate work on diseases of the eye, ear, nose and throat at the Royal Victoria Hospital in Montreal. Dr. McRae, a Dalhousie graduate of 1934, intends to set up practice shortly in Halifax.

Dr. Alfred Thompson, well known physician of Vancouver and former member of Parliament for the Yukon, visited Truro during the latter part of July, where he was the guest of Mr. and Mrs. Harry McKay. Dr. Thompson was a graduate of Dalhousie Medical School in 1899, and is a native of Nine Mile River, Hants County.

Fishbein is Critical of Health Plan.

Dr. Morris Fishbein of the American Medical Association, questioning the soundness of the United States administration's proposed \$850,000,000 health program, likened it to-day to an attempt to fly to Ireland without proper equipment.

Asserting "medicine is a different business than flying to Ireland", the editor of the Association's *Journal* suggested in an address to the National Health Conference it needed to determine whether the program was a "safe map" for charting a future course.

He made it abundantly clear, in restrained language, he himself did not regard the program as the answer to the problem of attaining adequate medical care for all and thought it had been prepared without regard for many factors which could not be excluded.—*Halifax Mail*.

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Doctors Open War on 850 Million Plan.

Officials of the American Medical Association heaped criticism today on a recommendation for an \$850,000,000 government health program in the United States.

The far-reaching venture, proposed to the National Health Conference yesterday by a committee appointed by President Roosevelt, would have two general aims:

1. It would expand general public health facilities, try to eradicate tuberculosis, venereal diseases and malaria and to control pneumonia and cancer deaths, and develop maternal and child health centres.

2. It would use some state, local and federal funds to build hospitals, maintain free beds, and give grants-in-aid for research.

Presentation of the proposal by a committee on medical care appointed by the President started an immediate dispute.

Dr. Irvin Abell, of Louisville, Ky., President of the American Medical Association, termed the program unworkable. Dr. Hugh Cabot, of the Mayo Clinic, Rochester, Minn., a leader of the "rebel" group in the Medical Association, replied:

"Maintenance of the standards of medical practice by the medical profession as at present organized has been grossly unsatisfactory."

Dr. Cabot said he did not feel much confidence in the results of the A. M. A. survey of medical needs. He asserted thousands of persons lacked medical care while thousands of young physicians "are starving to death".

—*Halifax Mail.*

OBITUARY

DR. BYARD WILLIAM MOSHER, of Halifax, was drowned while swimming in the North West Arm on the afternoon of July 25th. Dr. Mosher was seen to be in difficulty immediately after entering the water and although assistance and first aid were given by several Halifax physicians who were close at hand, their efforts were useless. Dr. Mosher was fifty-nine years of age, was a graduate of Dalhousie University Medical School in 1908, and has been attached to the cable service for many years. He is survived by his wife, a son, B. W. Mosher, Jr., and a daughter, Ruth Margaret.

There passed away in Shiskine, Isle of Arran, Scotland, Dr. Thomas Rutherford, on July 25th. Dr. Rutherford was educated at King's University, Windsor, and received his medical education at Dalhousie Medical School and Glasgow University. He was a son of the late John Rutherford who came to Nova Scotia in 1866 as inspector of mines for the province. For the last fifty years Dr. Rutherford has practised his profession at the Isle of Arran, Scotland.

The BULLETIN extends its sympathy to Dr. M. D. Morrison of Halifax in the death of his wife, who passed away after a short illness on August 3rd.

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Medicine . . Art or Science?

Medical schools have emphasized the scientific to the exclusion of related subjects of vital importance to the physician.

By A. P. HANNUFF, M.D.

Is medicine an art or is it a science? In which category does it belong? We hear it spoken of some times as an inexact science, but oftener it is called "the healing art." Is it definitely one or the other? Or is it a combination of both?

These questions cannot be answered in monosyllables, for their implication too broad.

We usually associate the term *science* with exact and systematic knowledge of a given subject. To most of us that which is scientific is hard and fast, permitting of little if any liberty in its application. *Art*, on the other hand, is the skilful exhibition of an ability which is more or less natural. That which is repeated over and over until perfection or near perfection is attained becomes an art, no matter how humble its position as an accomplishment.

Science is concrete; art is abstract. Science is hard; art is soft. Science says "yes" or "no"; art says "probably" and "perhaps". Science has definite form; art is amorphous and malleable.

If we consider medicine as the sum total of the knowledge gained during attendance at a medical college, we surely shall be convinced that medicine is a science. If, however, we have the postgraduate application of these principles in mind, we shall be just as positive that medicine is an art. Briefly, didactic medicine is science; medical practice is art. Here and there we may have fine, almost invisible tentacles doing their best to combine such science and art, but the two, to external appearances, remain entities.

All too often, the medical school shuns change; whether it be from fear of alumni charges, of faculty incompetence, or a conviction that only second and third rate schools should condone empiricism, we do not know. The fact remains, however, that "scientific" continues to be the watch word, the *sine qua non*, the very essence of each school's existence. From the time the neophyte peruses the school bulletin until he is graduated, and even into his alumni years, he is constantly reminded that *his* school is nothing if not scientific. And we do not propose to attempt discouragement of this custom; for who shall say that it is not fitting and proper? Our quarrel is not with commission, but with its opposite. Consequently we arise to ask bluntly: Why turn out combination chemists, anatomists, physiologists, and pharmacologists, instead of physicians? Why stress the scientific side of medicine to such a degree that the abstract (but highly essential) side of medicine is disregarded entirely or packed into a few hours' seminar with the hope (we trust!) that the graduate will, by the routine of hard knocks, fit the resulting facets into the mosaic of the general scheme? Surely your graduates should be something better than automata, their heads overflowing with scientific data and nothing else.

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From a long list of subjects which are, to a great extent, passed lightly over or are altogether disregarded in our medical curricula, we choose the following as most important:

Medical Economics: This subject through dire necessity has become a daily topic of conversation wherever medical men come together. Its ramifications are so numerous and its reach so wide that no doctor can afford to be without a knowledge of its fundamentals.

Medical Ethics: This is the term which we unconsciously define as a moral code to guide our patients and our colleagues—but never ourselves! Surely we could not count it as wasted if time were taken from the Simon pure scientific subjects to discuss more freely this vital one. For it is indeed vital. It is the very rock upon which organized medicine stands. What will medicine profit, if it gain the whole world, and lose its own soul? True success, in our calling, does not come through unfair conquest.

Medico-Legal Practices: The increasing number of baseless malpractice suits alone should be sufficient incentive to place this subject high in any medical curriculum. Failing that, a consideration of the abject picture of the doctor as a witness should bring tears to the eyes and determination to the hearts of our faculties.

Applied Psychology: This is an inclusive term comprising therapeutic suggestion and the handling of patients as individuals instead of "cases", as well as the psychological understanding of medical practice as a whole. It aids and abets personality, an attribute which, while not indispensable in medical practice, is a distinct advantage. We should be heartily in favor of culling from a medical class those students who obviously lack personality and giving them special help along the lines of applied psychology. This subject is, or should be, one of the outstanding topics in our prescribed courses, and the fact that its importance is so universally disregarded is a distinct blot on the discernment of our medical educators.

To those of you who can "point with pride" to their Alma Maters with these very jewels gleaming in their curricular diadems, permit us to say, "We know it, and congratulations! But you are so far in the minority as to make your number almost negligible. Together, perhaps, we can,—by dint of tracts like this: the spoken word and other available media of expression,—bring to pass a new conception of medical education. At least, by perseverance we may arouse the purely *scientific* medical schools to a realization of their *unscientific* view of medicine's other side. Surely it is worth the effort."—*Bulletin of the Medical Society of the County of Kings.*

At the last annual meeting held in Quebec City in June Dr. Frank G. Mack and Dr. Gordon A. Winfield of Halifax were elected to active membership in the American Urological Association. Dr. Mack and Dr. Winfield are the only members of this Association from the Maritime Province.

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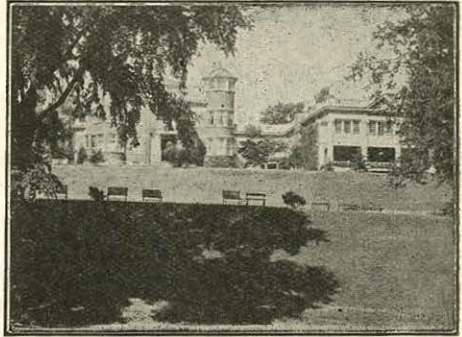
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