

CMAJ, 90 years ago

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*I*t is easy to make value judgements about the past. In fact, it is even tempting to read historical writings with a certain degree of smugness and to identify theories that, however well-intentioned, were proven to be wildly inaccurate in later years. Similarly, we can look back with awe at the apparent wisdom of certain clinical descriptions that now seem so fresh and elegant they appear to have been lifted from one of today's pathology textbooks. The challenge in reading old medical literature, then, lies not in being able simply to classify writers of the past as either quacks or prophets, but in pondering the lessons for our own present and future medical writings.

The more than 1200 yellow and brittle 90-year-old pages that comprise CMAJ's first volume transported me to a different climate of medical priorities, ideas and opinions. The first issues of CMAJ appeared in that pre-antibiotic era, when infectious diseases brought fear to physicians and patients alike. In fact, it is hard to look at the City of Ottawa's infant mortality rate for 1908 (224 deaths per 1000 live births) and not wonder if it is a typo (CMAJ 1911;1[8]:727). It's not, and this helps explain why so many pages were devoted to epidemiologic reports and novel techniques for diagnosing and managing these conditions. Also striking was how often scientific observations were at first presented objectively, and then used as a launching pad for thinly veiled — and often prejudiced — moral, social and political platforms. For example, the very first article in CMAJ, "The Ancient Foundations of Heredity," begins with a relatively sophisticated description of the genetic process of mitosis, and even chromosome assembly. However, the author soon switches to explanations of how "degeneracy" (of moral fibre, mental faculties and physical function) may be inherited and may someday be reduced in prevalence by moving the "unfit" to celibate communities.

Thus, and after acknowledging that CMAJ readers accessing electronic archives 90 years from now will likely judge our modern medical inquiries as being scientifically infantile, naïve and replete with biased interpretations, we humbly present excerpts from CMAJ's first year, 1911.

How important is a medical journal?

"Our Association has at last a JOURNAL. ... Its possibilities are great, its promises greater. ... We have now a medium through which our young men can convey to their fellow-workers information as to their hopes, aims, and accomplishments, directly, without filtering through foreign journals. It should be, and it is, a powerful stimulant. We can now stand, through our Association JOURNAL, on our feet. The medical world will look to our JOURNAL for our

'weight of metal and size of ball.' " — Armstrong GE. Canadian Medical Association President's Address. *CMAJ* 1911;1(7):595-600.

The CMA president on degeneracy

"Modern western civilization shows two strong dispositions on the part of the people that have been long recognized and that must be accepted and arranged for by municipalities and by the state. One is the desire on the part of many to live in cities rather than in the country, and the other is the degeneration that inevitably obtains in the third and fourth generation of city dwellers. This degeneration is seen among the rich and even more among the poor. One need only walk through the poorer quarters of a large manufacturing city and see the poor, narrow-chested, ill-clad, unkempt, weak-faced people to appreciate the influence of their surroundings upon the fathers, the mothers, and their offspring. The children grow up with little education, are voluble, easily excited, and with little physical resistance to disease, or moral resistance to temptation.

"As medical men we see and appreciate these conditions more than most men. We know how impossible it is for children raised under such conditions to rise above them, and how easy it is for such children, in one way or another, to become a charge upon the state. I feel that the Canadian Medical Association, if it would fulfil the duties of a national association, should organize and enlist the services of some of our young and enthusiastic members in this matter and demonstrate to municipalities and the state that money expended in providing so-called working classes with better houses, on wider and better lighted streets, would be more than recouped in a lessened expenditure in courts, prisons, asylums, and hospitals: "the means to do ill deeds make ill deeds done" — Armstrong GE. Canadian Medical Association President's Address. *CMAJ* 1911;1(7):595-600.

Smallpox vaccination

"The policy of persistent, systematic vaccination, inaugurated twelve years ago by the American sanitary authorities, has been attended with excellent results. In the larger cities and easily accessible localities the disease has become mild, relatively infrequent, and death is rare. Severe outbreaks of variola are occasionally reported in some of the remote communities. In these instances, however, it has invariably been found that vaccination is incomplete. Either

A 90th birthday

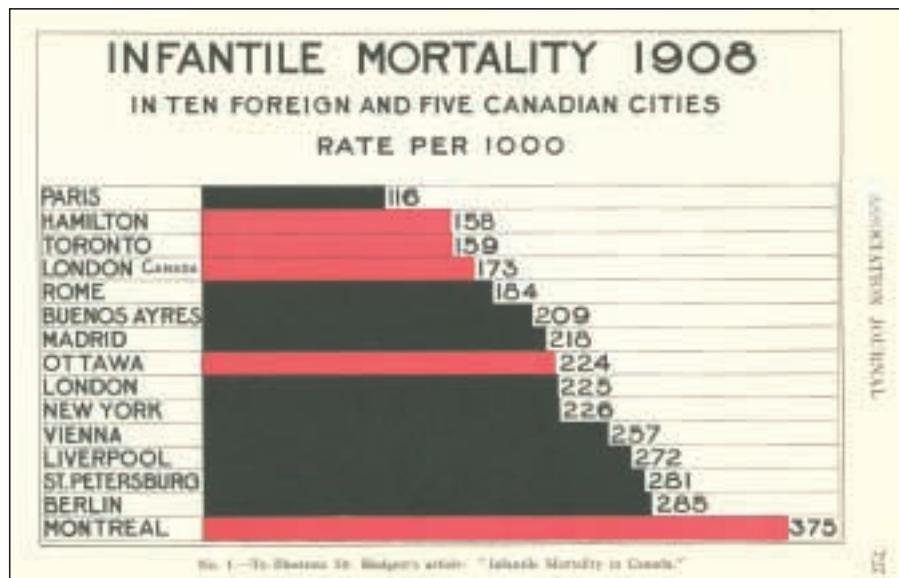
it has been impossible to place a potent virus in the field for vaccination, or the people, through ignorance, superstition, or willful neglect, have failed to avail themselves of the advantages of the measure." — Small Pox and Vaccination [editorial]. *CMAJ* 1(6):545-9.

Inherited degeneracy

"Now, there is no doubt that degeneracy is to a certain degree associated with alcoholism. It is also a fact that the nations of civilization, without an intention to that end, are making a gigantic experiment in regard to the effect of alcohol on the race, the result of which will not be determined in this or in many generations from now. There is, further, no reason to question the opinion that degeneration, formerly subject to the law of the survival of the fittest, is now on the increase in the denser centres of population, and it is disquieting to learn that the one-quarter of this nation which produces one-half of the children contains the vast majority of the degenerate class." — Macallum AB. *The Ancient Foundations of Heredity*. *CMAJ* 1911;1(1): 3-4.

Infant mortality

"A comparison of the infant mortality in some of the Canadian cities with other cities in the world is made in diagram No. 1. It will be observed that the death rates for Toronto, Hamilton, and London, are virtually the same as that of the largest city in the world; while Ottawa, the capital, with its population of seventy-five thousand, ranks ahead of Madrid, Buenos Ayres, and Rome. Ottawa is bad enough, but in Montreal the excess is out of all proportion, and I would ask, 'What is Montreal doing to stop this slaughter?'" — Hodgetts CA. *Infant Mortality in Canada*. *CMAJ* 1(8):720-30.



Today, Canada's infant mortality rate is 5.02/1000 live births.

Treating syphilis

"... Ehrlich had made 605 unsuccessful attempts to produce a remedy which would be active against the treponema pallidum. ... This new remedy, "606," is dioxy-di-amido-arseno-benzol. ...

"It is in secondary syphilis that the most remarkable results have been, and are being, obtained. Lesions of the mucous surfaces perhaps show the most striking changes: mucous patches in the mouth, on the tonsils, or soft palate, disappear completely in from twenty-four to thirty six hours after the injection, and even deep ulcerations and erosions show no trace whatever of their former presence after such a short time. ... Local secondary lesions of the genital organs, that owing to an irritating discharge have continued for some time, are usually cleared up completely in ten or, at the most, twelve days, and without using any treatment other than ordinary cleanliness. ...

"[T]here have been certain cases in which the treatment has been used, and in one instance at least, a fatal result followed. On August 25th, Fraenkel and Grouven reported the case of a young man suffering from a cerebral gumma. Forty centigrams of '606' were given intra-venously. Death followed three and a half hours after the injection. The powder was diluted in only 15 c.c. of physiological salt solution, and the patient presented signs of arsenic poisoning." — Fitzgerald JG. *Ehrlich-Hata Remedy for Syphilis*. *CMAJ* 1911;1(1):38-46.

Typhoid outbreak in Ottawa

"On January 1st ... the incidence of typhoid increased abnormally and remained elevated for eleven weeks. ... In all there were 1,196 cases, of which 901 or about 75 per cent were investigated. ... Of the 901 cases investigated, 52 died before March 18th, the date on which the investigation was closed, making a death rate of 5.7 per cent. ... According to sex the cases investigated were fairly evenly divided, 422 being males and 479 females. The ages ranged from three to seventy-five years, but the age period most susceptible to typhoid infection, namely, fifteen to thirty years, furnished 47 percent of the cases. Of these cases, 33.4 per cent were children under fifteen years of age. ... No class or occupation was exempt. Rich and poor alike suffered. Spot maps were made for each week of the epidemic and showed that the disease from the first was distributed generally throughout the city. Each case had used the water supply in some form, either for drinking or domestic

purposes. No other common factor was found. The milk supply was carefully investigated, but nothing was discovered pointing to infection along these lines. Other food supplies were likewise excluded. Again the fact that several of the cases occurring in the first two weeks were in houses without water-closets, and in some cases without even sinks, proved that the source of the epidemic was not to be looked for in sewer emanations. Lastly, the winter season excluded the possibility of infection by flies or from unsanitary conditions surrounding premises.

"The mouth of the intake pipe of the water supply is placed in the main current of the Ottawa River towards Nepean Bay. ... The city of Hull, situated across the river from Ottawa, takes its water supply from the main current of the river, yet Hull was remarkably free from typhoid this year. Also, tests made of the water at the intake showed it free from sewage pollution, while similar tests clearly showed the presence of intestinal organisms in the tap water. Therefore, the source of the pollution entering the water was to be looked for after the water had entered the intake. At No. 1 pier, an emergency valve had been placed in the main by which water could be drawn into the pipe from the surrounding Nepean Bay water whenever the occurrence of fires made the ordinary supply of water unequal to the demand. This valve had been opened at several times, for various periods, during the three weeks preceding the outbreak. Now the water in Nepean Bay is polluted and unfit for drinking purposes.

"On February 1st a plant was installed at No. 1 pier for the disinfection of the water by hypochlorite treatment.

...[In] the week ending February 24th, the eighth week of the epidemic, 94 cases occurred; in the next week, the ninth week, 99 cases; and in the next, the tenth week, 25 cases; and finally, in the last, or eleventh week, 4 cases occurred." — Drum L. Typhoid Fever At Ottawa January 1st-March 18th, 1911. *CMAJ* 1911;1(8):731-7.

Cheap cocaine

"New evils require new remedies, and the legislature of Quebec has applied a drastic one to the abuse of cocaine. This drug is extremely cheap. It is quoted at a little over two cents a grain in tablet form, and in bulk it could doubtless be procured at a much lower rate. It is so much cheaper and more readily portable than alcohol, that it should be subject to some supervision at least. Probably the use of the drug as a means of intoxication is not widespread, and the discovery that a few degenerate creatures in the lower levels

of city life employ it to alleviate their sense of misery has given to it a fictitious importance. The new regulation provides that the drug cannot be sold in any form without a physician's prescription." — Cocaine in Quebec [editorial]. *CMAJ* 1911;1(4):359-60.

Transient ischemic attacks and hypertension

"Headache, vertigo, convulsions, aphasia, paralyses, and a progressive dementia are among the cerebral manifestations of arterio-sclerosis. Death 'at the top' may be slow as in the old oak with which Dean Smith compared himself; or it may be sudden, when a vessel ruptures, or more gradual if thrombosis occurs. ... To headache and vertigo I will not refer since everyone now recognizes how common they are as early symptoms of arterio-sclerosis in the young, and more constant features in the aged. It is more particularly to the transient aphasias and paralyses, cerebral crises as they have been called, occurring in states of high blood pressure and in arterio-sclerosis, to which I wish to call attention.

"A well built, active man of forty-three, who had driven his engines at a maximum speed for twenty-five years — keenly occupied in business, using tobacco freely, and intensely devoted to Bacchus, Venus, and Vulcan — returned on the afternoon of March 1st, 1910, to his hotel, rang the bell for the servant and found that he could not speak. Perfectly conscious, he could not say a word, and was very much upset, and still more so when he found he could not

write. He was a little dazed mentally, as he could not tell the time. He became emotional, and the doctor found him crying and still unable to speak. In a few hours he could say a few words, but incoherently. The next day he could talk, but not quite freely. There was no paralysis, no disturbance of vision, and no headache. Within three or four days he was quite well, and could talk perfectly. The blood pressure was found to be 212 mm., and the attack was regarded as possibly a slight haemorrhage." — Osler W. Transient Attacks of Aphasia and Paralyses in States of High Blood Pressure and Arterio-Sclerosis. *CMAJ* 1911;1(10):919-20.

Labour induction

"For the purposes of present argument a pregnancy prolonged one month after term will be considered. ... The gravest danger is really the growth of the child in the uterus; and this we should not fail to appreciate, although



Sir William Osler: The patient was "an active man of forty-three ... intensely devoted to Bacchus, Venus, and Vulcan."

Canadian Medical Association

we cannot see it. If the induction of labour is done in an aseptic way it is practically devoid of danger. In any case, it involves much less danger than when a pregnancy has been prolonged to ten months. ...

"Many questions have been asked about methods of procedure. ... The patient is placed in the lithotomy position, "across the bed," in private practice. A 'weight' speculum is introduced, and the cervix is fixed with a tenaculum forceps. A sterilized gum elastic bougie (No. 12 English) is introduced gently within the uterus up to the fundus if possible, care being taken not to rupture the membranes. If membranes are accidentally ruptured immediate vaginal tamponade will usually prevent evil results. ... The patient is turned from the back to the Sims' position, and the Sims' speculum is introduced in such a way that the vagina is "ballooned." The gauze, medicated generally with iodiform, is introduced, and packed tightly over or round the small portion of the bougie projecting into the vagina. ..."

"In some cases ... the vaginal tamponade is sufficient to induce uterine contractions, and bring on labour. In all cases, it appears to have a good effect in dilating and softening the vagina, the pelvic floor and the perineum. ... I think, therefore, that it would be well for both mother and child to make it an ordinary matter of routine to induce labour in all cases within a few days of term." — Wright AH. Prolonged pregnancy. *CMAJ* 1911;1(10): 944-6.

Eclampsia treatment

"What treatment would you use when the actual eclampsia has appeared? ...

"1. Reduce the arterial hypertonus, by veratum viride, guaiacol, bleeding, sweating, purging, or any combination of these.

"2. Deliver as soon as possible, so as to get rid of the source of toxæmia.

"3. Get rid of the toxin in the blood by the use of salines per rectum or water by the mouth, and free purgation and sweating." — Reddy HL. Eclampsia. *CMAJ* 1911;1(11): 1067-72.

Asthma as neurosis

"In a discussion upon asthma held at the Birmingham meeting of the British Medical Association this year, the general opinion was expressed by all the speakers that the condition was essentially a neurosis, apart altogether from the question whether it was directly manifested by

bronchial spasm, vascular engorgement, or any other physical cause of obstruction or interference with respiration. The history of the cases and the idiosyncrasy noted towards various causes, all point in this direction. ...

"Regarding treatment, cold baths and douches, regular exercise, and everything which tends to raise the general health are important. Electricity, in the form of the Faradic current, applied to the neck at the angles of the jaw, has been much advocated, and, apart from the direct effect upon the vagus nerves, in a condition which is so manifestly a neurosis, the psychic influence of such treatment must be marked." — Res Judicatae Bronchial Asthma. *CMAJ* 1911;1(11):1102-6.

Railways and excreta

"A matter that has been allowed to exist because people have grown used to it, and because no one has called attention to its danger, is the unsanitary method adopted by various railroad companies for disposing of excreta from the lavatories of their trains. The arrangement is crude, offensive, and a positive menace to public health. ... The attention of all medical authorities is urgently directed to this question." — Railways and typhoid [editorial]. *CMAJ* 1911;1(3):261-2.

Canadians no longer felling trees

"When the early settlers came to Canada they were confronted by a physical task. From the Atlantic to the prairies of the west was an unbroken forest, and they occupied themselves in felling trees, building roads, bridges, and houses. But in the life of the present generation there has been a radical change in national habits, much like that which occurred in the United States somewhat earlier, so that now over sixty per cent of the whole population are town dwellers. The introduction of machinery has taken the place of muscular work for the adult; and the crowded street and the school have deprived the children of those natural occupations, and even of play, which are so necessary for their normal development.

"Medical teaching must then consider this great shifting of conditions; and they must be met in the mass, just as tuberculosis has been fought as a social condition affecting the common good, rather than an individual problem between physician and patient." — Physical Education [editorial]. *CMAJ* 1911;1(3):265-6.

Dr. Wooltorton is *CMAJ*'s Editorial Fellow for 2001/2002.