THE IMPACT OF THE SPANISH INFLUENZA PANDEMIC
IN SASKATCHEWAN, 1918-1919.

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by
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ABSTRACT

In the autumn of 1918 a deadly pandemic swept the world. The so-called "Spanish" influenza epidemic, and its most deadly side-effect, pneumonia, killed between 50 and 100 million people worldwide.

The epidemic created havoc in the medical profession because it was an apparently familiar disease run rampant. Doctors and researchers were baffled by influenza's etiology, the symptoms it displayed, and its spread. The epidemic occurred at a time when many of the important diseases of man had been conquered. The profession was fresh from their victory over typhoid, smallpox, and diphtheria on the battlefield when influenza struck.

In Canada the epidemic was a significant force behind the creation of the federal Department of Health. It compelled public health boards across the country to re-evaluate their notions of contagious disease and its causes. In urban Saskatchewan the epidemic was the catalyst for change in the way public relief was administered. With a great proportion of the population sick and dying, communities were forced to admit that volunteerism alone was inadequate. There came a realization that government must take responsibility for the sick.

Urban communities also "discovered" their poor. The
epidemic revealed that injustices and inequities in life were repeated in death. Organized workers responded to this ultimate injustice using the only means they had available. It firmed the resolve of many workers to take part in the sympathy strikes that occurred across the prairies in response to the Winnipeg general strike.

Rural Saskatchewan bore the brunt of the epidemic. Isolated and without even rudimentary medical attendance, homesteaders were easy prey for the epidemic. In its wake organized farmers demanded accessible medical attendance and rural hospitals and took the initial steps toward a universal medical care system.

The influenza epidemic was a significant force for change in Saskatchewan. No one was left untouched by the experience. Besides forcing a re-evaluation of government's role in caring for its constituents, it also caused, or added to, much of the weariness and discontent that was so characteristic of Canada after the Great War.
This work is dedicated to the memory of Professor Geoffrey Bilson (1938-1987) who led me to the topic and guided me even in his absence.

I would like to thank my supervisor, Professor Michael Hayden for his patience and gentle guidance. I would also like to thank my advisory committee. I received financial assistance, with thanks, in the form of a Graduate Teaching Fellowship and a Graduate Scholarship. I would like also to acknowledge the help received from the staff at the Saskatchewan Archives Board, the University of Saskatchewan Archives and Special Collections. Finally I wish to acknowledge the patience and support of my family, Glen, Sarah, and Molly, none of whom typed this thesis.
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ABBREVIATIONS

AUS: Archives of the University of Saskatchewan.
CMA: Canadian Medical Association.
CMAJ: Canadian Medical Association Journal.
JAMA: Journal of the American Medical Association.
MHO: Medical Health Officer.
PAC: Public Archives of Canada.
RSM: Royal Society of Medicine.
SAB: Saskatchewan Archives Board.
SBPH: Saskatchewan Bureau of Public Health.
INTRODUCTION

Like all other forms of life, humankind remains inextricably entangled in flows of matter and energy that result from eating and being eaten.¹

As the Great War staggered to its bloody close in 1918 the world was visited by the most devastating plague since the Black Death struck Europe in the fourteenth century. From September, 1918 to March, 1919 between 50 and 100 million people died as a result of the Spanish influenza pandemic.² In Canada more died from influenza than on the battlefields of Europe.

In Saskatchewan in 1918 economic and social concerns of the pre-war period were aggravated, but not fundamentally changed, by four years of war.³ Western concerns about the tariff, transportation policy, and a one-crop economy were heightened by the war. Social concerns about the assimilability of ethnic minorities, woman's place in society, and reformism in general were also brought into sharp relief during the war. Demands for collective bargaining and a fair wage were raised by workers. In rural


². "pandemic" here refers to the worldwide epidemic of influenza. When discussing the impact of the disease on a particular area "epidemic" will be used.

Saskatchewan people called for improved health services and accessibility, and took active steps to find a solution. In short there was a general dissatisfaction, a mood for change, in the west. Much of the discontent can be traced to long-standing concerns with the west's place in Confederation that were exacerbated by the Great War. It is the intent of this thesis to argue that much of the post-war dissatisfaction can also be traced to the influenza epidemic that created havoc and overshadowed all else in the winter of 1918-1919.

With few exceptions, historians have overlooked or dismissed the influenza epidemic as an insignificant force in history. Historians have made it clear that war's battlefield deaths were somehow more important than the thousands of deaths from influenza. Perhaps because of the apparent randomness of the epidemic, as opposed to the war that at least had an ideological purpose, it has been viewed as sheer historical accident. But as S.E.D. Shortt noted, "Indeed, political battles, military campaigns, or economic vicissitudes pale in importance when measured against the impact of even a single ... epidemic."^4

John Herd Thompson's The Harvests of War dealt with the prairie west as an organic whole. His excellent account of

the west during the war emphasized the perennial problems faced by prairie society and the way in which the war merely aggravated its concerns. But Thompson neglected even to mention the epidemic that took more than 5,000 lives in Saskatchewan alone. The west as a society was under seige by a disease that was impossible to ignore. Inadvertently the epidemic showed itself in Thompson's book in a photograph depicting a Victory Day parade with the revellers wearing influenza masks!5

Craig Brown and Ramsay Cook's A Nation Transformed likewise overlooked the role the epidemic played in the general unrest and unease that marked the post-war period. The epidemic received a brief mention but it was placed in the winter of 1917-18! 6 Brown and Cook credit the war with increasing government intervention. It will be argued that the epidemic helped create the conditions that saw volunteerism replaced with increased government intervention in many aspects of Canadian life.

Gerald Friesen's The Canadian Prairies mentions the epidemic briefly as adding to the "extraordinary turmoil of the winter of 1918-19."7 It is inconceivable that such a

5. Thompson, p. 134.


widespread, deadly epidemic could have so little impact. Indeed, in his discussion of prairie politics and culture Friesen concludes, "a new national reform outlook was beginning to emerge ... this outlook praised the 'worker,' reviled the 'parasite,' and promised economic justice through democratic government." The use of the parasite analogy may have been subconsciously appropriate.

Discussion of epidemic disease is usually a means of celebrating the scientific and medical triumph over ignorance and filth. But writers on the influenza epidemic could not focus on the triumph over disease by the superior forces of modern medicine. Rather, the epidemic was a humbling experience for both the profession and for those who believed in the human ability to conquer disease through knowledge and science. Neither was the influenza epidemic conducive to the same literary or scholarly treatment as other epidemics like cholera, for example. Influenza was neither seen to be carried by a particular group of people, such as immigrants, nor was it associated with a particular class of people or their peculiar behavior. In short the influenza epidemic did not fit the prescribed literary treatment of disease and epidemics.

The 1918 influenza pandemic received some popular and scholarly attention in the 1960s and 1970s. Because the prospect of a world-wide epidemic was seen as inconceivable

8. Ibid. p. 381.
given the advances in medicine and science the pandemic was treated as a curiosity of nature, like a two-headed calf. Writers emphasized the mystery and terror of influenza, confident in the knowledge that it could never happen again.\textsuperscript{9}

The inherent drama of the epidemic is detailed in Richard Collier's \textit{The Plague of the Spanish Lady}.\textsuperscript{10} This is an engaging account that concentrates on a number of individuals who faced influenza and lost. Collier relies on newspaper accounts and primary sources to highlight the horror of influenza. Rather than coming to terms with the epidemic through a discussion of the virus and disease he repeats many common misconceptions about the disease found in nineteenth century accounts of epidemics. On influenza's disappearance: "The resemblance to the disappearance of the Cheshire Cat in Alice in Wonderland is striking."\textsuperscript{11}

A.A. Hoehling in \textit{The Great Epidemic} tells the terrible story of the epidemic in the United States. His use of secondary sources, reminiscences, and war memoirs left him with the mistaken impression that the epidemic ended on

\textsuperscript{9} see Charles Graves, \textit{Invasion by Virus: Can it Happen Again?} (London: Icon Press, 1969).


\textsuperscript{11} \textit{Ibid.} p. 304.
Armistice Day, 11 November 1918. Hoehling sees some good in the epidemic and war as the ultimate victory of human tenacity over destruction, "Life, tenacious and indestructible as it was mysterious, would continue. The fury of neither man nor nature would stanch its forward surge."13

Alfred W. Crosby's *Epidemic and Peace* focuses on the pandemic as an epidemiological curiosity.14 His prime interest is why a seemingly innocuous virus such as influenza caused such a deadly pandemic. His treatment of the epidemic concentrates on the response to the epidemic in San Francisco and Philadelphia. Crosby takes his analysis further to discuss the geography of the disease and the epidemic in the isolated areas of Alaska and Samoa. He tells of the unsuccessful efforts of a team of scientists in 1951 who tried to resurrect the 1918 virus by exhuming the bodies of victims buried in the Alaskan permafrost. He recounts the eventual discovery and study of the influenza virus. In an afterword he attempts to explain the apparent public amnesia about the epidemic and decides that the epidemic had an effect only on individuals, not on society

13. Ibid. p. 192.
as a whole.  

Crosby's interpretation and analysis is sophisticated and goes a long way toward setting the epidemic in its historical context. Crosby does not emphasize the epidemic's mystery, but instead his careful analysis gives a clear picture of the disease and its spread. His analysis is a study in historical epidemiology and he has little to say about the effects of the epidemic on society. He says little except that the experience increased social cohesion. 

Dorothy Ann Petit's "A Cruel Wind: America Experiences Pandemic Influenza 1918-1920: A Social History" argues that the Paris Peace conference and much of postwar American life was influenced by the epidemic. Contemporary writers and commentators described the apathy that America was experiencing as a spiritual tiredness. Petit suggests that the apathy was as much a result of lingering sickness as it was a general spiritual depression. To support her thesis Petit maintains that the epidemic did not end in November


16. Ibid., p. 115.

1918, as suggested by Hoehling, or in January 1919, as proposed by Collier, but that it lasted 31 weeks until May, 1919. Coupled with a second outbreak that appeared in 1920, the epidemic was an enduring and debilitating experience.\(^\text{18}\)

Petit uses modern medical literature to resolve some of the long-standing misconceptions about the influenza virus and the disease. She promises that hers will be a social history, however, it remains an account of the epidemic and the ways in which it affected leading American politicians and diplomats.

Accounts of the influenza epidemic in the 1970s concentrate on the epidemic itself, and fail to consider its impact. They are generally week by week chronological accounts of the course of the disease, no doubt influenced by their chief source, the weekly reports of deaths from the epidemic published in the United States *Public Health Reports*.

In the 1980s the influenza pandemic is treated less as an epidemiological curiosity or popular fiction and more as social history with the focus on the impact on public health care. The change in the historiography of the epidemic in the present decade is accounted for by the increased popularity of the history of medicine in general, and the realization that the prospect of a world-wide viral epidemic

\(^{18}\) Ibid., p. 4.
is not as far-fetched as it once was.

An excellent account of the epidemic in New Mexico by Richard Melzer explores the impact of influenza on an isolated, sparsely populated region. Melzer focuses on the impact of the epidemic on society and the importance placed on public health care, vital statistics recording, and the perceived need for a state department of health.

The impact of the epidemic on indigenous people is studied in Terrence Ranger's "The Influenza Pandemic in Southern Rhodesia." Ranger calls the epidemic a crisis of comprehension. He emphasises that the pandemic was impossible to explain in terms of western medicine or indigenous medicine, and therefore new types of explanations were asserted and legitimised by practice. The Southern Rhodesia spirit churches arose out of the pandemic. As well the "anti-medicine" movement in Africa was powerfully assisted by the 1918 pandemic. Ranger's article is an important shift from the argument that the pandemic had little or no impact on society. He argues that it was a crisis without precedent that left concrete changes in its


There has been little study of the pandemic in Canada. This is partly explained by the lack, until recently, of interest in the study of the history of medicine. The only monograph is Eileen Pettigrew's *The Silent Enemy*. Pettigrew repeats the same themes as the popular American writers in their treatment of the epidemic. The emphasis is on the melodrama and the bravery of those who sacrificed their lives to influenza. She relies on newspaper accounts and a few printed primary sources. She also uses oral reminiscences to recount the experience of the epidemic. Most interesting in her use of oral histories is the attitude of those who survived the epidemic; they invariably remembered the positive aspects of the experience, that it was not all bad.

Three scholarly articles on the pandemic in Canada appeared in the 1970s. Janice P. Dicken McGinnis's "The Impact of Epidemic Influenza: Canada, 1918-1919" notes that the epidemic created the conditions that caused a reconsideration of health care practices in Canada. The epidemic made the creation of the federal Department of  


Health a necessity, and forced the issue of adequate hospital facilities into the open. But, she concludes, the impact of the epidemic was ephemeral and fleeting. McGinnis's short article does not allow more than a broad outline of the subject.

McGinnis's article on the epidemic in Calgary gives a better account of the topic. She concentrates on the city's public health department and how it responded to the epidemic. Particularly, she focuses on Calgary's medical health officer Dr. Cecil S. Mahood. Mahood was able to enforce, what would have been in normal times, extreme measures. She argues that Mahood's dictates were placidly accepted during the worst of the epidemic, but as the fear and uncertainty that accompanied the disease began to wane Mahood met considerable opposition. More importantly, McGinnis approaches the epidemic from the perspective of the patient rather than from an institutional or political viewpoint. She examines the response to the disease through an analysis of the fears and concerns that were uppermost in many people's minds: What should I take to prevent this awful disease? Where should I go to avoid it? and, What shall I take to cure it?

The experience in Vancouver is studied by Margaret Andrews in "Epidemic and Public Health: Influenza in

Andrews focuses on many of the same themes as McGinnis. She examines the public health system and finds that the medical health officer wielded considerable power as long as morbidity and mortality continued to rise. As soon as death rates fell so too did the health officer's influence. This theme rings true for much of the century as far as public health is concerned. As long as a crisis endures public health officers are raised out of the civil service and exalted as guiding lights, but as the crisis passed they are returned to the bureaucracy. The influenza epidemic serves as a macabre backdrop to Andrews's study of the politics of public health in Vancouver.

This thesis will argue that in Saskatchewan the influenza epidemic of 1918-19 was a crisis for every level of society. Those groups or people who were expected to understand and prevent such crises were powerless to stop it. Society reacted to the pandemic with horror and fear and in its wake demanded change. The epidemic was important in that it exacerbated already latent discontent and articulated fears that both rural and urban people in Saskatchewan had in the winter of 1918-19. In short, the epidemic has been ignored by historians.

CHAPTER ONE: UNLOCKING THE SECRETS OF INFLUENZA

In the seeming conflict between man and his microscopic competitors, there can never be a time when man is securely master of the universe....we have just passed through one of the great sicknesses of history, a plague which within a few months has destroyed more lives than were directly sacrificed in four years of a destructive war, an experience which should dispel any easy optimism.1

The 1918-19 influenza pandemic humbled researchers and doctors coming as it did at the peak of medicine's golden age of bacteriology, when the great contagious diseases seemed to have been conquered. So many features of the pandemic confused the medical profession that some doctors wondered if they were dealing with influenza at all. Although the clinical character of influenza was familiar, there was an alarming rise in sudden pneumonia deaths, and an unusual proclivity for young adults to fall victim to the disease. The epidemiology of influenza was perplexing. There was also a puzzling coincidence between influenza and other contemporary diseases such as poliomyelitis, encephalitis, and bronchitis. But the most serious problem confronting doctors and researchers was the etiology or

origin of the so-called 'Spanish' influenza pandemic.

Victims of the influenza pandemic were attacked suddenly with a fever of 101 - 104 °F, headache, coryza (inflammation of the mucous membranes of the nose), cough, chills and rigors - like cold water running down the back. In the 1918 pandemic other predominant symptoms were cyanosis, a "lilac tint", and an overwhelming stench that emanated from influenza patients and made a careful chest examination by doctors nearly impossible. There was hearing loss, loss of smell, and repeated epistaxis (nosebleeds) of up to 12 ounces of blood at a time.²

Symptoms were imprecise and varied from patient to patient. Illness rates of 20-50% of the population were not uncommon. The highest incidence of illness and death was in 25-40 year olds. In Saskatchewan more than 60% of influenza deaths were in this group.³ Over the age of 40 the incidence was lower. All too often the fatalities were


3. Saskatchewan Bureau of Public Health (hereafter SBPH) Annual Report 1917-1918, p.79 Table LI; of a total 5,040 deaths 32.7% were 20-29 years, and 27.9% were 30-39 years old. All case and fatality statistics are understated for a number of reasons: influenza was not a reportable disease in most jurisdictions until the pandemic was well underway; overworked doctors were responsible for reporting cases, and where quarantines were enforced doctors did not report milder cases to avoid placarding; and there was confusion whether cases should be reported as pneumonia or influenza.
pregnant women, soldiers and workers.

If there were no serious complications influenza patients usually recovered in about a week. But influenza is a dangerous disease because of the difficulty of diagnosis. Unless accompanied by an epidemic it is almost impossible to distinguish from a severe case of the common cold. Its progress and prognosis is also unpredictable. Sudden death is a real possibility, usually the result of pneumonia.

Captain E.A. Robertson CAMC at the Quebec garrison described a "typical case" of influenza-pneumonia,

extreme weakness, severe headaches and backaches, aching of the limbs and pain in the abdominal muscles from coughing. As time went on coughing became more productive, quantities of blood stained expectoration or nearly pure dark blood...the face and fingers cyanosed, active delirium came on,...the tongue dry and brown, the whole surface of the body blue, the temperature rapidly fell and the patient died from failure of the respiratory system.  

Pneumonia is not a disease but a disease process, an inflammation of the lungs. Pneumonia can be caused by irritants (dust or allergies), bacteria, or a virus.  

When influenza invades the lungs, viral pneumonia develops. This is a condition resistant to treatment. Bacterial pneumonia

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5. A virus is a minute parasitic microorganism much smaller than a bacterium. It may only replicate within the cell of a living plant, animal, or human host. A bacterium is a unicellular microorganism of the class Schizomycetes.
was an equally grave disease in 1918, over 25 years before the advent of antibiotics. It is possible to suffer from both viral and bacterial pneumonia simultaneously.⁶ Recovery from influenza was often dogged by prolonged illness, fatigue, and in some cases impairment of the central nervous system function quite out of proportion with the severity of the influenza attack itself.

Uncomplicated influenza is usually limited to an infection of the upper respiratory tract. When influenza viruses infect the respiratory system they invade susceptible host cells and there reproduce, a process that takes up to seven hours. If reproduction (replication) takes place the newly-synthesized virus may travel throughout the body. The virus can then spread to new victims through droplets propelled by coughing or sneezing. Depending on the weather or environment the droplet nuclei can remain suspended in the air for up to one hour. Low humidity and cool weather (winter) facilitate longevity in the droplet nuclei. Antibodies, however, may prevent the virus from entering the cells. If replication of the virus occurs a generalized infection may not result, but the attack is usually sufficient to trigger the body's defense or immune system. Anything which triggers the body's immune

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system to produce antibodies is called an antigenic agent or antigen.

Influenza viruses are unlike bacteria in that the cells of the victim are indispensable in the reproduction process; bacteria do not require the host's cells for duplication. Influenza viruses, therefore, are dependent upon susceptible host cells for survival. Most viral infections, like measles, stimulate enough antibodies to confer lifetime immunity, but influenza, because there are so many variant strains (subtypes), stimulates only limited immunity. Influenza viruses are also capable of changing their viral make-up. Therefore a virus emerging after synthesis can be different from the virus that originally invaded the respiratory tract. The new virus might then have the potential to cause widespread infection because people would lack immunity to that particular subtype.

A flood of research and experimentation followed in the wake of the 1918 pandemic; a testament to the crisis it represented for the medical profession. But it was not until the 1930s that a major breakthrough occurred. In 1933 the British research team of Smith, Laidlaw, and Andrewes were the first to isolate successfully a human influenza virus and thus began the age of virology. As a result the influenza virus has become one of the best understood viruses. It was also the first to be studied under an electron microscope.
The influenza virus is roughly spherical and 1/10,000 mm in diameter. A clump the size of a pinhead would contain a trillion viruses. The surface is covered with spikes (glucoproteins), notably hemagglutinin (H) and neuraminidase (N). These are attached to a core that consists of ribonucleic acid or RNA with eight separate genes. Influenza is classified as Type A, B, or C. It is when H or N antigens of a type A virus change or 'shift', and a new subtype is therefore produced, that worldwide epidemics (called pandemics) result. Only Type A influenza can cause pandemics. When variants are produced by antigenic 'drifts' in H or N antigens a regional or localized epidemic occurs. The lifespan of a subtype lasts only from one pandemic to the next and is completely displaced by the new subtype, a characteristic that accounts for influenza's persistence.

Influenza pandemics develop slowly. An outbreak that appears as an ordinary localized epidemic caused by antigenic drift may quite unexpectedly burst forth months later as a pandemic. This phenomenon revealed itself in the 1918-19 pandemic when three 'waves' appeared. The first wave appeared in the spring and summer of 1918 in the United States, France, and China. The second wave appeared first in Africa in the autumn and continued into 1919. The second

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wave was a pandemic, and for the most part is the subject of discussion in this thesis. The third wave did not erupt until early 1920. Canada, apparently, experienced only the second and third waves.

The first wave erupted in March, 1918 in army cantonments in the United States. The characteristic pattern was a sharp increase in the number of respiratory illnesses. By April influenza made its appearance in France among both Allied and German armies. At the same time there were reports that influenza was epidemic in China.

The second, or autumn 'wave' appeared first in Sierra Leone in Africa in September and quickly erupted in Europe. Perhaps because of Spain's neutrality during the war, news of influenza's destruction there was not censored. Because of that publicity Spain has ever since shouldered the blame for the pandemic. From Europe influenza spread worldwide following the returning armies, stowed away on transport ships.

A widely cited estimate of case fatality worldwide in 1918-19 was 20 million, or 1.1%, based on an estimated world population of 1,199,000,000. But this estimate is too low.

because it fails to consider fatalities in China and Africa. A closer estimate might be as high as 50-100 million. The pneumonia death rate in 1918-19 was 17.6 per 1000, while in a 1928-29 pandemic the rate was 5.0 per 1000. The apparent increased virulence of the 1918-19 pandemic was likely due to increased bacterial pneumonia (the result of crowded army camps), the presence of bacteria (in trenches), and the absence of anti-bacterial drugs. There is no laboratory evidence that a virus changes its virulence.

In 1918 it appeared that a deadly influenza pandemic had erupted simultaneously on three continents and had multiple foci of infection. This led some physicians to doubt whether influenza was a contagious disease at all.

At about the same time as the influenza pandemic there was a sharp increase in the number of cases of encephalitis (referred to as sleeping sickness) or 'brain fever'. As early as 1712 'sleeping sickness' was recorded as occurring after influenza epidemics. Outbreaks of encephalitis in 1918 in Austria, France, England and North America were closely associated with influenza. Encephalitis was first described by von Economo in Vienna in 1916 who named it 'encephalitis lethargica'. It was epidemic in England in the autumn of 1918, and appeared on the Canadian prairies in


In October. In Winnipeg of the 60 patients treated 23 died, a fatality rate of 38%. Also associated with the encephalitis outbreak was severe hiccoughs, in one case occurring every few minutes for five days.\textsuperscript{13} This was a frightening disease with symptoms such as paralysis of the facial muscles, episodes of excessive agitation, and then an overwhelming lethargy. But while the initial symptoms subsided over time, there were mental changes in the victim. Some even resulted in postencephalitic parkinsonism years later. But a link between the encephalitis lethargica of the 1920s and the influenza pandemic has not been proven conclusively.\textsuperscript{14}

In 1919 Sir William Hamer, M.D. attempted to resurrect the theory of an epidemic 'constitution' or a predisposition in the human constitution for influenza. He relied on the concurrent incidence of encephalitis, poliomyelitis, bronchitis and pneumonia for evidence to suggest that the population was suitably weakened and therefore predisposed to epidemic influenza.\textsuperscript{15}

Concommitant with the pandemic was a sharp rise in the incidence of influenza in swine in the United States midwest. As early as the sixteenth century, descriptions of


\textsuperscript{14} Charles Stuart-Harris and Geoffrey Schild, Influenza: The Virus and Disease, (Massachusetts: Publishing Sciences Group, 1976), p. 107.

\textsuperscript{15} "Discussion of Influenza", Proceedings of the Royal Society of Medicine, \textit{General Reports} 12, (1918-1919) p. 24
epidemic influenza included reports of influenza attacking animals as well.\textsuperscript{16} In 1918 there were reports in New York papers that a number of large game in Saskatchewan were also dying from influenza.\textsuperscript{17} Although there was no evidence of large game infected with influenza, fears were expressed in the Saskatoon \textit{Daily Star} that influenza was threatening world food supplies.\textsuperscript{18}

In 1931 Richard Shope of the Rockefeller Institute successfully isolated the 'swine flu' virus. The Type A virus in swine has remained unchanged since 1918 and is considered the viral descendent of the 1918-19 pandemic.\textsuperscript{19} But it is unlikely that the pandemic originated in the pig sty. More likely man spread the disease to animals. Man is susceptible to Type A, B, and C influenza while horses, birds and swine are only susceptible to Type A.

Influenza is as old as humanity itself. Influenza, from the Italian 'influence' referred to the common belief in the fifteenth and sixteenth centuries that epidemic disease were caused by meteorological or astrological phenomena, or the 'influence' of the stars. The first

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19. Kilbourne, \textit{Influenza Viruses}, p. 512; The 1918-19 pandemic is now referred to as Hsw1N1 ('sw' denoting a swine-like virus).
\end{flushleft}
recorded description of influenza in the British Isles was by Dr. Short in 1510. In an attempt to understand the origin and spread of epidemic sickness and death, writers recorded any unusual meteorological or natural phenomenon. So in 1510, "During this year there also occurred great Earthquakes, and a Volcanic eruption in Iceland. The air was humid. In the following year a comet appeared."20

There were at least 30 epidemics (some were undoubtedly pandemics) between 1510 and 1930.21 Influenza was and is an endemic condition of mankind.

Shortly after the 1889-1890 influenza pandemic the German bacteriologist Richard Pfeiffer identified a rod-shaped bacteria (bacillus) that he believed was the causative organism in influenza. Pfeiffer's bacillus or hemophilus *influenzae* was widely held to be the cause of epidemic influenza. Pfeiffer's work was representative of medical science in the age of bacteriology. All disease was held to have a natural cause. It was simply a matter of discovering and creating a cure or antidote. In 1918 many physicians believed Pfeiffer's bacillus was the cause of the pandemic, despite the fact that it was only present in 60% of patients.22

Major T.A. Malloch assured gathered members of the Royal Society of Medicine in November, 1918 that Pfeiffer's bacillus was undoubtedly the cause of the pandemic:

it must be regarded as causing the original infection either alone or in association with other organisms, and as such must be considered as the real causative agent of the epidemic....the fatal condition ... [is] essentially a contagious pneumonia due to a variety of pneumococci and streptococci affecting patients already infected with bacillus influenzae.²³

Major Malloch was correct when he attributed the high number of fatalities to bacterial pneumonia, but the essential nature of influenza as a virus not a bacterium was still missing.

In 1918 not everyone was as convinced as Major Malloch that Pfeiffer's bacillus was the cause of influenza. To doctors treating patients who were cyanotic and delirious it appeared to be a pneumonic plague. A Toronto doctor, George Young, ventured to say that the only resemblance between the present pandemic and earlier influenza epidemics was the name.²⁴

Colonel H.C. Parsons M.D. reported that from 19 September to 12 December 1918 there were 61,063 troops in Canada with 11,496 cases of influenza or an incidence rate of 19.1%, and 19% of all influenza cases developed broncho-

²³. "Discussion of Influenza" Proceedings of the Royal Society of Medicine, General Reports, p. 47.

pneumonia. But in swabs, sputum, and lung cultures influenza bacillus was not always present. He concluded that the disease was "an acute general infection, the respiratory tract being the main point of attack....The term influenza would appear to be incorrectly applied to the great majority of cases." The high incidence of secondary bacterial pulmonary infection and viral pulmonary infection discredited the theory that the influenza bacillus was responsible. Physicians and researchers were at a loss to explain the disease.

None of the then held or outmoded theories of disease answered the riddle of influenza. The telluric or climatic theory of the origin of influenza was discounted by the great strides made in bacteriology. Physicians also rejected the theory that a miasma, like a vapour or a bad smell, spread noxious germs throughout the atmosphere which caused disease. And, significantly, the theory of influenza as a specific disease that developed and progressed along defined lines was also rejected. The pandemic appeared to discred all pre-existing concepts of disease. As the British Chief Medical Officer admitted, "the disease simply had its way. It came like a thief in the night and stole


treasure.\textsuperscript{27} The influenza pandemic indeed had a sobering effect on the medical profession.

Doctors, however, were expected to offer some explanation for the epidemic. Captain Robertson of the Quebec garrison concluded his clinical notes with the observation that the disease was a severe infection, possibly some hybrid bacterial infection of particular virulence, "developed by the passage of the infective agent through the white, black and yellow races which have been brought together during the war."\textsuperscript{28}

Despite problems of etiology, there was little time to ponder the pandemic. Doctors, especially army doctors, were expected to treat or, better yet, prevent the disease that was undermining the Allied fighting force. Vaccination was the tried and true method of treatment for contagious disease in 1918. Successes in the treatment of typhoid, smallpox, and diphtheria had confirmed for medical researchers and doctors that the great epidemic diseases were controllable. But for vaccination to work the causative agent has to be known to produce effective antibody production, and therefore immunity. Researchers followed a false scent, attempting to create a vaccine from Pfeiffer's bacillus or pneumococci.

\textsuperscript{27} \textit{Ibid.}, p. xiv.

\textsuperscript{28} Robertson, "Clinical Notes on the Influenza Epidemic in the Quebec Garrison", p. 158.
Dr. F.T. Cadham, Major CAMC reported the results of a series of inoculations he administered to members of the CEF made from streptococcus, pneumococcus and influenza bacillus. Among 520 patients, 282 were inoculated and 238 were not; there developed 17 pneumonia cases and five deaths in the inoculated group, while the control group developed 40 cases of pneumonia and 17 deaths. But vaccination without knowledge of the causative agent was useless, if not dangerous. Results such as Cadham's were a red herring that confused and confounded the problem of etiology.

Not everyone was convinced that inoculation was effective. The nagging doubt concerning etiology compelled some to reject it as a solution. Dr. Edwin O. Jordan believed correctly that the incidence of new cases had more to do with the number of people still susceptible to infection rather than inoculation. He reported a case where a sudden outbreak caused 101 cases in a group of 234 men; vaccination of the rest of the group was proposed but never carried out. Only one additional case developed. If they had been inoculated the vaccine would have been credited with the success. Sir Arthur Newsholme K.C.B, M.D. would only go as far as to say the pandemic was an "acute


catarrhal infection" and that prophylactic vaccines were of limited efficacy.31

In November, 1918 the editor of the Canadian Medical Association Journal cautioned against the wholesale use of vaccines that were on the market. He noted that the nature of the disease was still obscure, and that it might be a mixed infection. He also warned that even if the causative agent was influenza bacillus the vaccine had "feeble protecting qualities" that were slow in developing. Further, he advised his readers that vaccination might do no good, and could cause actual harm.32

But vaccination was seen as a positive step in the control of the disease. Hundreds of physicians and medical researchers schooled in the successes of vaccination used the one method that they knew was successful in the fight against other contagious disease. Moreover, they faced a frightened and dying population that demanded a solution and vaccination became a panacea. Dr. Montizambert, the Director-General of Public Health in Canada, recognized some utility in vaccination: "There is of course a further psychological value, either greater or smaller, in the use of a harmless vaccine, in giving confidence to those who have to be exposed to infection and preventing panic on the


part of others."  

In 1918 in Canada there was considerable confidence in the medical profession and its ability to control epidemic disease. But with the appearance of pandemic influenza and the confusion it caused in the ranks of the profession that optimism was eroded. But as doctors groped for solutions to the disease people were dying. Like the medical profession, society attempted to cope with the disaster with solutions that were ineffective, and often harmful. People were tired after four long years of war, and with the armistice came the hope that the killing would end; but it would continue for many months.

33. PAC RG 29, vol.300, file 416-2-12. Director-General Public Health to Sir Joseph Pope, Department of External Affairs, 16 Nov., 1918. Dr. Frederick Montizambert was the Director-General of Public Health from 1899 to 1918.
CHAPTER TWO: "STRANGE AND AWFUL TIMES"

The Spanish Influenza which is prevalent everywhere is a very terrible disease. It is like a plague and prevalent everywhere. The City hall is surrounded by red cross cars and young VAD workers are doing splendid service in all parts of the city. The number of families without anyone to help them, persons dying and others ill and unfed beside them - is frightful, right and left men and women are being carried off suddenly to their graves. It is a frightful plague rampant all over the world. These are strange and awful times to be living in. ¹

Pandemic influenza reached Canada in July, 1918 overland from the United States and aboard transport steamers and troopships arriving from Europe. The appearance of influenza caused little concern in Canada. It was considered nothing more serious than the "three-day fever" that had pestered allied and enemy troops in Europe in May and June. But by September 1918 the influenza epidemic took on frightening new significance. It was this so-called second wave of the pandemic that caused more than 50,000 deaths in Canada and revealed with shocking clarity the inadequacies of public health care and health structures in Saskatchewan and Canada.

In the spring of 1919 the deplorable condition of recruits and the venereal disease problem were the focus of

the parliamentary debate concerning health care in Canada. But as the Senate and Commons debated the possibility of a Federal Department of Health the experience of the influenza epidemic was painfully near to all. Public health became a concern for the federal government when it was realized that Canada's vitality and future was endangered by disease.

Influenza was the disease that had taken hold of everyone's imaginations in the autumn of 1918 and the spring of 1919. Partly as a result of the influenza epidemic health care, like many aspects of social policy in the post-war years, increasingly became the purview of governments instead of individuals.

The first wave of influenza that began in spring 1918 in Europe might not have even been noticed if not for the terrible carnage that followed in the autumn. Influenza may even have seemed a welcome respite for troops living the horrors of trench warfare. Nevertheless, that first wave struck suddenly and with some violence. Both allied and enemy troops were attacked. It was thought at the time that the first wave of influenza delayed an expected German offensive that spring.²

Arthur Lapointe, a young Quebec soldier in France,

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documented the suddenness of influenza's attack in his diary:

I shoulder my pack and stump up the dugout stairs. As I reach the top my head swims with sudden nausea, everything around me whirls, I falter, then fainting, fall headlong to the ground....my head feels as though a vise were squeezing it and my heart is pounding painfully. I feel sick and think I am going to die.³

Lapointe and his sick comrades dragged themselves "limp as rags" along a mile-long trench to the nearest aid post only to find dozens of others in the same condition. Lapointe recovered only to be attacked again in November in England. Upon his return to Canada in February, 1919, Lapointe found he had lost three brothers and two sisters to the epidemic.

The first wave was classic influenza: high morbidity and low mortality with few complications. It was assumed that it was this "ordinary" influenza that was exported to Canada in July, 1918. But what arrived in Canada was something definitely more deadly.

The troop ship Aruguaya left England 26 June for Canada with 763 troops on board. There were 175 cases of influenza when they arrived. The troops were quarantined by military authorities in Canada. The first civilian cases of influenza arrived at Canadian ports on 9 July in Montreal aboard the steamer Nagoya, with 100 cases among the 160 crew. The transport ship Somali arrived shortly after with

seven cases. The civilian cases were quarantined at Grosse Isle in the St. Lawrence River. The steamers Nagoya and Somali were disinfected before embarking troops were allowed to board. 4

Wartime exigencies necessitated the constant movement of people. Sir Arthur Newsholme of the Royal Society of Medicine argued that in June and July military authorities had believed there would be a second wave of influenza in the autumn, but believed they could not make their suspicions known. Because of wartime, "it was necessary to 'carry on' and the relentless needs of warfare justified incurring this risk of spreading infection and the associated creation of a more virulent type of disease or of mixed diseases." 5

Despite the danger to health and life, both civilian and military, the constant inter-continental troop movements took precedence over the disease. Canadian troops were not only arriving home with influenza, but they were also exporting it back to Europe. On 26 September the Hunstead left Montreal with 1549 troops, thirty-nine men died at sea and 73 cases were immediately hospitalized in segregation


5. "Discussion of Influenza" RSM General Reports, 12, p.13.
camps in England. The City of Cairo sailed 28 September from Quebec with 1089 aboard and arrived at Davenport 11 October with 32 dead and nearly all the others seriously ill.6 The Victoria left Quebec 6 October with 1230 troops and buried 28 men at sea. On arrival 130 were hospitalized and the rest were quarantined in a segregation camp for 28 days.

By early November recruitment in Canada had ground to a halt because of the epidemic. Eligible recruits were not required to report for service. Such an announcement was sure to affect morale at home. The military authorities added that "this state of affairs is temporary and has no bearing on the military situation overseas."7

Canadian troops, sick and healthy alike, were quarantined in segregation camps - an ideal medium for the spread of influenza. Moreover, conditions on the troop ships facilitated the spread of contagious disease. The transports were overcrowded owing to the desire to limit traffic and therefore keep to a minimum the chances of enemy submarine attacks. The terror and stress encountered by troops as they passed through this "danger zone", as well as the stale air and unpalatable food on board was believed to have been responsible for the increased incidence of the

7. Saskatoon Daily Star, 6 November 1918, p.11.
disease.\footnote{8} Despite efforts to quarantine influenza at the seaports it invaded Canada overland as well. American border cities were experiencing serious outbreaks at the time.\footnote{9} By early August influenza was raging in Quebec.\footnote{10} Once introduced into the civilian population in Canada, nature unfortunately took its course. Influenza spread along the lines of human communication, particularly the trans-continental railways. The epidemic's spread was also facilitated by a dubious decision by Canadian military authorities to transfer soldiers from quarantined barracks in Quebec City to Vancouver. Soldiers boarded CPR cars in late September; the ill were taken off the train at points along the way as the train headed west.\footnote{11} As sick soldiers were taken from the train influenza was introduced into military camps and the civilian population was exposed as well. Winnipeg, Regina, Calgary, and Vancouver were

\footnote{8} "Discussion of Influenza" p.73.


\footnote{10} PAC, RG 29 vol.1192, file 311-J2-2 part 1, J.J. Haegerty, "Influenza Epidemic of 1918", p.3.

infected in this way. The military was the only organization that was truly aware of the problem, but it found itself both unwilling and unable to halt the epidemic's spread.

Wartime censorship, confusion as to the nature of the disease, and a desire to keep the true situation from the enemy, meant that news of the epidemic did not travel much faster than the disease itself. Furthermore, apart from wartime secrecy, Canada did not have a co-ordinated public health network that would have noticed the rise in pulmonary deaths that marked epidemic influenza's presence.

As late as August, 1918, there was confusion as to who was responsible for civilian cases of influenza entering Canada. W.W. Cory, Deputy Minister of Immigration and Colonization, informed Dr. Frederick Montizambert, Canada's Director General of Public Health, that Montizambert's Quarantine Service, and not Immigration, must keep influenza from spreading in Canada:

the quarantine authorities will be responsible for the care and treatment in all cases of infectious disease...coming into Canada on His Majesty's ships and the ships of the allies, and that the responsibility for the prevention of the introduction of infectious diseases into the Dominion of Canada shall rest with the quarantine authorities. 13


13. PAC, RG 29, vol.296, file 410-2-1 part 5, Deputy Minister of Immigration and Colonization to Dr. Montizambert, 14 August 1918.
Although several federal departments were responsible for aspects of public health, there was no co-ordination between them. The Quarantine Service had been administered by the Department of Agriculture since 1867 under Dr. Frederick Montizambert. The Marine Hospital Service was administered by the Department of the Marine. The Food and Drug Laboratory was located in the Department of Inland Revenue, and Immigration and Colonization administered the Immigration Medical Service.14 The Commission of Conservation, a non-governmental advisory group of businessmen, advised federal and provincial governments on public health issues through its National Council of Health.15

Health care in Canada devolved upon the provinces except in matters pertaining to quarantine at seaports and the maintenance of marine hospitals. The term "public health" was not even in use in 1867 and the control of disease was not considered in the BNA Act of 1867. Traditional interpretations of Articles 91 and 92 made communicable disease control a provincial responsibility as involving civil rights or as a matter of purely local nature. The residual power of the Dominion to enact public health legislation under the peace, order, and good


government clause was assiduously avoided.16

Temporary boards of health had been established in Upper and Lower Canada and the Maritimes in response to cholera epidemics in the nineteenth century but were dismantled after the epidemics had waned. There was never any consideration of preventative measures in inter-epidemic periods. Permanent provincial public health organizations in Canada were not established until after the English Public Health Act of 1875 pointed out the advantage of permanent boards of health. On the prairies Manitoba established a board in 1893, Saskatchewan in 1906 and Alberta in 1907.

In Saskatchewan in 1906 the Bureau of Public Health was established as part of the Department of Agriculture with Dr. M.M. Seymour as the Provincial Medical Health Officer (MHO).17 In 1909 the Saskatchewan Public Health Act created local health organizations under the direction of the Bureau of Public Health, to be administered by the Department of Municipal Affairs. Under the Act municipalities became health districts. The municipal council was the board of health and a medical practitioner the MHO. The Bureau acted


17. Dr. M.M. Seymour was appointed Commissioner of Public Health in Saskatchewan in 1909. In 1923 when the Saskatchewan Department of Public Health was created by Statute Dr. J.M. Ulrich was appointed Minister and Seymour Deputy Minister.
in an advisory and supervisory role, as well as a clearing house for complaints. Municipal boards of health were responsible for enforcement of the regulations of the Public Health Act.

The Act conferred wide powers on municipal boards of health for the control and notification of communicable disease and installation of public waterworks and sewage systems. The Bureau compiled vital statistics, approved plans for water and sewage systems, and advised on pure air and food regulations. As a result of the structure and administration of the Bureau, public health in Saskatchewan was predominantly a municipal responsibility.

Though legal and administrative responsibility for public health was a municipal affair, the emphasis in the Bureau was that disease control and health care were ultimately personal responsibilities. Through its administration the Bureau placed heavy reliance on people being personally responsible for their own health. According to the Bureau effective sanitation, publicity of statistics and personal precautions were the "Three Great Methods of Combatting Disease". However, education of the public as a means to effect the Three Great Methods was not considered to be the Bureau's responsibility.

Working from the premise that good citizens took

responsibility for their own health, it was easy to blame disease on those perceived as less than solid citizens. Saskatchewan's experience with trachoma was a case in point. Trachoma is a highly contagious disease of the eyes. It is never life-threatening and only 429 cases were reported in its worst year, 1915. Nevertheless, trachoma warranted the appointment of a full-time physician for three years to attempt to control it. It was a disease that was popularly associated with non-English speaking people and their perceived disregard for their own medical care.19 As the Bureau's Report explained:

The investigation and treatment of Trachoma [has] been undertaken by the Bureau of Public Health owing somewhat to the national characteristics of the people and largely to limited medical facilities."20

Other more serious contagious diseases were left in the hands of volunteers. The tubercular were treated at the Fort Qu'Appelle Sanitorium, opened in 1917 through the efforts of the volunteer Anti-TB League, and volunteer medical groups such as the St.John's Ambulance, Victorian Order of Nurses, church missions, and women's organizations. The Provincial Laboratory was established in 1905 at the request of the College of Physicians and Surgeons, but the bulk of its work, aside from examining diphtheria cultures, was devoted to germination tests on seed grains and research.

20. Ibid., p.25.
on swamp fever in horses. 

As far as communicable disease was concerned the Bureau advised inoculation as the surest way to combat it and prevent its spread. Free diphtheria anti-toxin was provided by the Bureau. Small pox, typhoid, and whooping cough were also preventable through inoculation - but inoculation for these diseases was always voluntary, never mandatory.

Of particular concern to the Bureau was the gathering and publishing of vital statistics. The birth rate, and more especially, the nationality of married persons and the number of children these marriages produced, was of great interest to the Bureau. In the Annual Report 1917-18 the Director of Vital Statistics, Stuart Muirhead, found that births to mothers from non-English speaking countries exceeded those to Canadian-born mothers. Saskatchewan was a newly-established society and natural increase was essential to its success. Muirhead noted that the caucasian birth rate must rise if "race suicide" was to be avoided.

Perhaps more important for the 'race' was the high incidence of infant mortality in the province. In 1915-1916 the death rate for children under the age of five was 209.3 per 100,000 population. In 1917, 2,524 children died before their fifth birthday, a rate of 353 per 100,000 population. And by 1918 3,302 deaths in the age group were 

recorded, a rate of 449.2 per 100,000.\textsuperscript{22} The Bureau placed the blame for the rising rate squarely on the shoulders of women who do not "avoid heavy work, especially during the later months [of pregnancy]."\textsuperscript{23} Moreover, the Bureau emphasized that childhood diseases could be greatly reduced by proper feeding and "intelligent parenthood". Clearly the Bureau saw uneducated women as the offending group responsible for the shockingly high infant mortality rate.

The Annual Report 1917–1918 concluded that:

Stockbreeders are most careful in the selection of animals for breeding purposes; yet no one ever raises a protest against the breeding of scrubs in the human kingdom.\textsuperscript{24}

The moral tone underlying the Bureau's advice was not out of keeping with what most provincial boards advocated during the stressful war years when the so-called cream of Canadian manhood was being slaughtered in France. But the emphasis the Bureau laid on individual responsibility for the prevention and cure of communicable disease and infant mortality was unmistakable.

When the influenza epidemic struck Saskatchewan in the first days of October, 1918 no one knew that it would eventually kill more than 5,000 of the people in the province, \(\frac{61}{100}\) of the population. Few foresaw that the

\begin{itemize}
\item \textsuperscript{22} SBPH Annual Report 1917–1918, Table LXXX, p.98.
\item \textsuperscript{23} SBPH Annual Report 1915–1916, p.34.
\item \textsuperscript{24} SBPH Annual Report 1917–1918, p.28.
\end{itemize}
public health administration, medical facilities and staff would be unable to cope.

The Bureau, under Dr. Seymour, saw itself as an advisor alert to dangerous trends in the rate and incidence of births, deaths and marriages. The Bureau, more importantly, also reflected the pre-epidemic role of public health boards across the country. Through its structure and administration the Bureau emphasized the prevalent view that most disease was preventable, through either proper sanitation or vaccination. Secondly the Bureau, through its concern with trachoma and its advice on infant mortality, stressed that preventable disease was overrepresented among the uneducated and foreign born. Finally, it was held that the maintenance of health and the healthy growth of the population was ultimately a personal responsibility. The formulation of policy in the Bureau was predicated on these three concepts, which reflected the notions of the dominant groups in society. The crisis in public health came when none of the premises held up in the face of the influenza epidemic.

The Bureau was unable to give advice or assistance to municipalities overwhelmed by sickness. Saskatoon's City Clerk, Andrew Leslie, sought advice and assistance from Ottawa but was astonished to learn from Dr. Montizambert that no centralized authority existed. Montizambert pointed out that the closest thing to a federal authority was the
public health branch of Immigration and Colonization with powers to quarantine on the coast and frontiers and to control and care for lepers. 25

Saskatoon's Medical Health Officer, Arthur Wilson, travelled to the American Public Health Association meeting in Chicago in mid-October 1919 to learn the latest American methods. On Wilson's advice Saskatonians were warned to keep healthy through regular work, rest, and play. They were told to avoid crowds and other people, and to sleep and work with the windows wide open. Wilson also advised that spitting should be punishable by police court proceedings. And, finally, people were warned that clean living was more effective than drugs in fighting the flu. 26

Inoculation against influenza was the only positive action the Bureau took to combat the disease. In 1918 the Bureau distributed enough "influenza vaccine" to inoculate 64,000 people or 7.7% of the population. 27 According to a questionnaire sent out to 85 physicians the results of the vaccine were "remarkable". The doctors gave 16,174 vaccine treatments and of these 1,474 or 9% developed influenza.

25. Saskatchewan Archives Board (hereafter SAB), City of Saskatoon CO5, Box 53, file 163, F. Montizambert to Andrew Leslie, 22 November 1918; Saskatoon Daily Star, 27 November 1918, p.9.


27. SBPH Annual Report 1917-1918, p.38, based on an estimated population of 826,592. SBPH Annual Reports 1919-1920, p.73.
And of the 1,474 that developed the disease 18, or 1.3%, died. 28 The report concluded that "where cases did develop, they were much milder, of shorter duration and very few other complications followed." 29 The efficacy of prophylactic vaccines was limited by the fact that the causative agent in influenza was unknown. 'Influenza vaccines' usually consisted of a mixture of streptococci, pneumococci, and staphlococci bacteria that conferred some immunity against complications caused by those bacteria, but not against influenza itself. Furthermore, vaccinated patients were those who had access to and money to pay for medical attendance.

Inoculation was the weapon of choice in the fight against communicable disease. Distribution of and administration of vaccines presumed medical attendance, but many areas of the province were without even rudimentary medical care. In Saskatchewan in 1918 there were 36 hospitals, 11 of which were located in the province's seven cities. These city hospitals accounted for 65% of the hospital beds in the province, while only 13% of the population (107,623) lived

29. Ibid., p.29.
And while the ratio of beds to population was 10.8 beds per thousand population in urban areas, rural Saskatchewan had only .8 beds per thousand population. Distribution was an effective obstacle to proper care.

The province had recently taken steps to provide facilities in rural areas through the Union Hospital Act of 1916 (the first in North America.) By 1918 there were only eight Union hospitals operating in the province.

Aside from hospital facilities, rural areas were also unable to attract qualified doctors to establish a practice.

30. HOSPITAL BEDS IN SASKATCHEWAN, 1918

<table>
<thead>
<tr>
<th>Population</th>
<th>Urban (cities)</th>
<th>Rural (towns, villages, rural municipalities)</th>
<th>Totals Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Total Population</td>
<td>13.0%</td>
<td>86.98%</td>
<td>100%</td>
</tr>
<tr>
<td>Number of Hospitals</td>
<td>11</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>Hospital Beds</td>
<td>1162</td>
<td>608</td>
<td>1770</td>
</tr>
<tr>
<td>beds per thousand population</td>
<td>10.8</td>
<td>.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

In Saskatchewan in 1987 there were 7,530 hospital beds for a population of 1,023,300, or 7.36 beds per thousand population. (List of Canadian Hospitals, 1987, Statistics Canada, April, 1988.)
in rural areas. Saskatchewan's Department of Municipal Affairs allowed councils to offer a scant $1,500 annually to lure a doctor, or a maximum $1,000 annually for a Registered Nurse. The province attempted to provide a form of medical attendance to outlying districts by issuing special permits to practice medicine to those not otherwise qualified for a license.

For example, Dr. Allen was issued a special permit to practice medicine in Turtleford during the epidemic. His attendance was greatly appreciated by the townspeople. Whether the "doctor" was recognized by the Saskatchewan College was of little concern to town residents. Those perceived to be helping ease the pain of illness or death from influenza were appreciated, regardless of their qualifications. Furthermore, the people of Turtleford were "incensed" when his permit was cancelled because a licensed doctor moved into the area. Townspeople believed Dr. Allen was dumped to "make room for one whose only recommendation to us is that he is the son of a M.L.A.".

Spanish influenza was a debilitating disease that required bed rest, fluids, and nursing care for a complete recovery. Patients who had access to medical attendance and hospital facilities, where rest and medication were

available, were not as likely to suffer severe complications such as pneumonia that accounted for most deaths. In Saskatchewan cities, where medical attendance was available, the death rate was 6.6 deaths per 1000 population. But in rural municipalities and villages, the least likely to have medical attendance the rate was nearly twice the provincial rate, or 10.5 per 1000. 33

The shortfall in medical services was made horrifyingly clear in reports received by the Bureau from rural areas. Livestock was starving, fires had gone out, and inside homes were discovered whole families that had been dead for weeks. Isolated homesteads were the rule in Saskatchewan in 1918 and the horror of whole families dying in such cruel circumstances had a great impact on people's imaginations.

The Saskatchewan government tried to allay fears by legislating neighborliness. In a Proclamation dated 5 November 1918 citizens were required to:

call upon their neighbours frequently while the epidemic lasts; To render such assistance as they may be able; To report to the proper authorities in their districts cases of illness discovered; and in general to co-operate in every way possible to combat the ravages of the epidemic which has already caused such widespread suffering and sorrow in Our Province. 34

Influenza eroded the ties that held pioneer societies together. People could not be blamed for shunning contacts

34. Saskatchewan Gazette, 15 November 1918, 21, pp.2-3.
with friends and strangers alike.

In keeping with the belief that disease was spread or left unchecked by the uneducated and foreign-born, Dr. Seymour appointed a special nurse to instruct and do missionary work in Mennonite communities. Miss Blau, an expert on trachoma, was instructed to provide nursing care and educate communities on influenza. Dr. Seymour stated that "the Mennonites were hard hit by the influenza epidemic, and sufficient care was not accorded patients while scarcely any attempt was being made to check the epidemic." 35

Throughout the epidemic there were constant calls from Dr. Seymour for volunteers to minister to the sick and dying. Women in particular were called to volunteer their services as care-givers and nurses. Even untrained women were expected to use their special womanly skills to help fight the flu. In 1919, in response to the epidemic the Saskatchewan Bureau of Public Health initiated home nursing courses for women:

The need for establishing classes in these subjects was brought home to the people of the province by the shortage of nurses as a result of the great world war and the more recent influenza epidemic. When sickness enters the home, only those living on an isolated prairie homestead far removed from medical aid, with limited transportation and communication facilities, realise their helplessness. 36

36. SBPH Annual Report 1921, p.29.
The impetus for such courses came from women's groups who were expected to bear the brunt of the fight without adequate training and knowledge. As early as November Mrs. Violet McNaughton of the Saskatchewan Grain Grower's Association (Women's Section) contacted the St. John's Ambulance Association in regard to home nursing classes, especially in country districts. 37

The Bureau relied on women's organizations such as the Red Cross Society, the IODE, women Grain Growers, and Homemakers Clubs to make local arrangements for publicity, and to secure the hall for the classes. The Bureau sent out two nurses who travelled the province conducting classes on first aid and child care.

The attention given to so-called women's work as a result of the epidemic raised some doubts about the popular perception that women were innately able to nurse and care for the ill. It did not, however, erode the notion that women were biologically determined to provide nursing care. Instead the influenza epidemic merely institutionalized that role.

The lack of hospital facilities was also addressed once the epidemic had passed. The Union Hospital Act was amended in 1919 to provide an easier formula for rural municipalities that desired a hospital. The amended Act provided for the construction of a hospital upon the co-

37. Saskatoon Daily Star, 18 November 1918, p.11.
operation of any number of municipalities and urban centers, regardless of municipal boundaries. By 1923 there were 40 hospitals in Saskatchewan, an increase of 11%. The Red Cross established 10 nursing outposts in isolated areas of the province as a result of the epidemic. The number of hospital beds increased from 1,769 in 1918 to 2,258 in 1923. While the population increased 10.7%, the increase in hospital beds was 27.4%, or one bed for every 361 people, compared to one bed for every 415 in 1918.

The provincial government's per diem grant to hospitals remained at $.50 per patient despite persistent inflation. Total provincial grants to hospitals in 1923 amounted to $300,926.50, while private donations and municipal grants exceeded provincial grants by more than $14,000 annually. Clearly funding for Saskatchewan's sick and dying remained an individual or municipal responsibility despite the experience of the influenza.

In 1919, in response to the epidemic, the Rural Municipality Act was amended to allow an increase in salaries offered to doctors from $1,500 maximum annually to $5,000 annually. It was hoped that the increase would

38. SBPH Annual Report 1923, p.56.
39. Ibid.
40. SBPH Annual Report, 1923 p58b
attract discharged army doctors to rural practices. 41

Nationally, the war, the unfavorable physical fitness of recruits, the venereal disease problem, and the influenza pandemic prompted the formation of the Federal Department of Health. The influenza epidemic, in particular, revealed the glaring inadequacies of public health policy in Canada. The complete absence of any co-ordination between local, provincial, and federal bodies was one of the major obstacles in fighting the flu effectively.

The new federal Department was formed to address the problem of co-ordination. The Department of Health Act (assented to 6 June 1919), in outlining duties and powers, listed first the need for co-operation with provincial and territorial authorities, "with a view to the co-ordination of the efforts proposed or made for preserving and improving the public health..." 42

The Act provided for the creation of the Dominion Council of Health composed of the Chief Medical Officer of each province, one scientific adviser, and four lay members representing labour, agriculture, and rural and urban women's groups. The chief objective of the Council was to obtain some uniformity in public health regulations and


42. An Act Respecting the Department of Health, (9-10 George V, ch.24), article 4(a).
policy in Canada. 43

The first meeting of the Dominion Council in October, 1919 dealt with the possibility of another influenza outbreak. The initial recommendation was that the people must be adequately warned of any recurrence of influenza. Council members advocated the registration of all nurses, whether volunteer or paid; trained or untrained. Public measures were to include the immediate expansion of hospital facilities in all provinces to provide beds for 1% of the population. At the time Saskatchewan had 1,769 beds available. According to the Council's recommendations this was more than 6,000 beds short. 44

The creation of the Department of Health was heartily endorsed by the Canadian Medical Association. The CMA had been calling for a federal body since before the turn of the century. The editor of the Canadian Medical Association Journal greeted the decision to create the new department and thought it like "a breath of cool air from the Laurentians". 45

The influenza epidemic undermined existing notions of disease and health in public health departments throughout the country. Influenza attacked the sanitarily just and

43. Defries, p.8.

44. PAC, RG 29, reel C9814, Records of the Department of National Health and Welfare, Dominion Council of Health (Minutes), 1919.

45. CMAJ, 8, no.12, December 1918, pp.1115-1118.
unjust alike; it attacked the rich and poor, rural and urban. Because of influenza's apparent random attack it forced bureaucrats across the country to begin to rethink their conceptions of disease and its control.

Influenza did not react to the usual methods of treating disease because the underlying premise, that influenza was a bacterium, was faulty. Public health policy was still firmly grounded in the age of bacteriology.

As a result of the influenza epidemic it became clear that public health was too important an issue to be left to individual discretion or responsibility. And, unlike earlier experiences with epidemic disease in Canada such as cholera in the nineteenth century, public health issues remained a priority after the crisis of the epidemic had passed.

The influenza epidemic left concrete changes in its wake such as altered public perceptions of health and disease, an increased commitment by the Saskatchewan government to provide health facilities especially in rural areas, and a realization that untrained women could not provide adequate health care. But perhaps most importantly the influenza epidemic forced the realization that government must assume greater responsibility for the provision of adequate health care for Canadians.
CHAPTER THREE: CITY OF THE DEAD

God who is seeking for our love, who is longing for us to turn to Him, is no doubt taking a violent means of detaching us from the apparent pleasures of this world and of making us think of the life to come. He is bringing trial and sorrow closer to us. Before many weeks nearly every home may have been afflicted. Are we going to resist the call of God?¹

When influenza reached Saskatchewan on October 9, 1918 there was increasing confusion because city officials were reluctant to recognize the situation as an epidemic. Epidemic disease was seen by the Saskatchewan Bureau of Public Health as a problem peculiar to the uneducated and the poor because they lived in squalor and filth. And although the poor did not cause disease they certainly aided its spread. The poor were invariably the victims of epidemic, and usually treatable, disease. Despite daily reports to the contrary, influenza was at first considered to be another one of those diseases. Not until the entire society was threatened was there concerted community action to respond to the epidemic.

Municipal boards of health struck emergency committees to organize their response. But the actual work in 'fighting the flu' was carried out by volunteers and

¹ Father Thomas Kennedy, O.M.I., St. Paul's Church. Sermon printed in the Saskatoon Daily Star, Saturday 26 October, 1918.
charitable organizations. Influenza struck hardest at those least able to afford it; inequality in death reflected inequalities in life. Influenza invaded every aspect of people's lives and captured their attention and imagination for more than four months. But, despite influenza's overwhelming presence, as soon as people realized not everyone was susceptible there was a surprising return to normalcy.

The influenza epidemic had been raging in eastern Canadian and American cities for nearly a month before it reached Saskatchewan. Following other cities' example Regina and Saskatoon attempted to prevent influenza through inoculation and individual quarantine. Initially at least the emphasis was on personal hygiene and community sanitation. But there were never enough people well enough at any one time to make any serious inroads on either account.

As the epidemic worsened, the emphasis shifted to caring for the sick. It soon became obvious that it was only possible to attempt to slow the spread of the disease, to treat the ill and convalescing, and to bury the dead. The Saskatchewan urban response to influenza differed only slightly from the response throughout North American cities, with equally disastrous results.

Provincial and private laboratories worked up batches of "influenza vaccine", but there was never enough vaccine
to inoculate more than a fraction of the population. There was public resistance to vaccines that in effect gave patients a small dose of deadly bacteria. Moreover, the medical profession itself was reluctant to endorse wholeheartedly the use of vaccine.

The other common response to influenza was quarantine. Because influenza is an endemic condition of humans it was not considered a contagious disease in 1918, nor was it necessary to report cases to public health authorities. But it became apparent to Saskatchewan public health authorities that Spanish influenza was a considerably more dangerous disease than the common 'flu. An Order-in-Council dated 10 October made Spanish influenza a disease to be reported, isolated, and placarded. The new regulation also empowered boards of health throughout the province to close any place of amusement or entertainment, such as theatres, poolrooms, bowling alleys and dance halls, in an attempt to prevent influenza's spread.

All attempts to report and control influenza were quickly overwhelmed. Despite the regulations making influenza a reportable disease, individual case incidence was never recorded. The Saskatchewan Bureau of Public Health Reports documented deaths from influenza but not the incidence of morbidity. Moreover, doctors and nurses trying

2. Saskatchewan Gazette, 1918, 14, 31 October, 1918, p. 2, "Regulations Relating to Public Health."
to cope with the sick and dying had neither the time nor the inclination to placard suspected cases.

There were good reasons why influenza had not been considered a reportable disease. Initial symptoms of influenza, such as runny nose, watery eyes, and a low-grade fever, were indistinguishable from the common cold. Suddenly those symptoms could be the cause of having a household placarded and quarantined. The family breadwinner would then be unable to work. This could mean financial ruin. The new regulations were unenforceable.

Dr. T.H. Whitelaw, Edmonton's MHO, noted that because of the regulations enforcing quarantine in Alberta only 60% of cases were reported. Further, some doctors profited handsomely from the pandemic because they refused to placard homes. People soon found out which doctors followed the regulations and which did not. Government attempts to control influenza through traditional means failed to halt its spread.

Moose Jaw and Edmonton both advocated the use of gauze masks, but that regulation was also unenforceable. Masks worn over the mouth and nose were supposed to be in place at all times while in public, but the nuisance and discomfort deterred most people. Regulations enforcing mask use were grounded in the belief that masks would stop influenza's

spread. Most public health authorities in the United States and Canada recognized that gauze masks, unless properly cared for, (changed and disinfected every four hours) would create a perfect medium for bacterial growth and spread, thereby causing respiratory infection.

The new regulations in Saskatoon concerning influenza also gave municipal boards the power to control influenza through closure of places of amusement. It was well known that influenza was a "crowd disease", and it was thought that a ban on unnecessary gatherings might help control the disease. Closure was a common response throughout North America.

Regina's MHO, Dr. Malcolm Bow, made the decision to close theatres, moving picture houses, dance halls and billiard rooms on 16 October. A meeting of the city's leading associations, including the ministerial association, agreed to abide by the decision and enforce a ban on church services, Sunday schools, and all public meetings of any kind. But it was assumed that these drastic measures would only be necessary for a week or ten days.

There was no attempt to insulate Saskatoon from influenza. Regina was struck first and it was reasonable to

4. SAB, Regina City Archives, Council Minutes, 1918, 5 November 1918, p.6.

5. Archives of the University of Saskatchewan (hereafter AUS), MG 905, file 11, Sharrard Papers, 16 October, 1918.
assume that railway employees and train travellers would carry it north to Saskatoon. In light of the extreme measures most cities resorted to in combatting influenza, it is perhaps surprising that no measures were taken to protect Saskatoon from the epidemic.

Even as Regina suffered 150 cases and 10 deaths, Saskatoon Mayor MacGillvray Young announced in the press that there was no cause for alarm in Saskatoon. Yet, the next day, 17 October, the Mayor and Council imposed a ban on all public meetings, closed all city churches, theatres and places of amusement. City schools were closed by the school board on 21 October. By Friday of that week there were 81 cases of influenza and one death. Again came the advice that there was no cause for alarm because the man that died was from the country district of Meacham.

Despite daily reports in the newspaper of the ravages of the pandemic from Toronto to Victoria, and around the world, Saskatoon's MHO Arthur Wilson assured Saskatonians that "Spanish influenza" was just the common and familiar 'flu; the only reason it caused such alarm was because it had received so much publicity.

There was widespread reluctance to admit there was an

6. Saskatoon Daily Star, Wed. 16 October, 1918, p.3.
Dr. A. MacGillvray Young arrived in Saskatoon in 1907 as a recent graduate of McGill University medical school. He sat as an Alderman for Ward Three in 1911. Young was re-elected Saskatoon's mayor five times between 1915 and 1922

7. Ibid., Saturday, 19 October, p.3.
epidemic. Health officers and other bureaucrats had followed all the regulations respecting the control and notification of contagious disease; it was just a matter of time before the disease succumbed. Unfortunately pandemic influenza circumvented all regulations intended to stop its spread.

The people of Saskatchewan were entering their fifth year of the war and were no doubt sensitized to the daily news of killing and death. Those who did not have to fight in Europe were perhaps reluctant to admit disaster at home when men and women were facing death or injury in France. It was unpatriotic to admit defeat by an ordinary disease such as influenza. Moreover there is a certain reluctance on the part of people to admit to their own physical vulnerability, and a tendency to expect others to fall ill but not oneself.

Walter Scott, former Premier of Saskatchewan, decided there was altogether too much emphasis on disease and death. A cowardly attitude was the greatest danger to good health:

Fear of any disease only invites attack by the disease, and in my view an entirely unwarranted and unnecessary alarm is being increased, is liable to add considerably to the death rate. 8

Sunday, October 20, was the first "churchless Sunday" in Saskatchewan. The ban on public gatherings forced

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8. Ibid., p.17. Walter Scott was Premier of Saskatchewan from 1905 to 1916 when he retired due to poor health. He was the Liberal member from Lumsden and later Swift Current.
residents to stay home and read sermons in the newspapers. Reverend Willie C. Clark of Knox Presbyterian Church echoed the helplessness and depression felt by Saskatonians:

During the past year large demands have been made on our courage. Our heart's strength has been tested. The end is not yet. We have had war, partial crop failure and today we are in the middle of pestilence.⁹

Over the weekend there were 100 new cases of influenza. But, according to Arthur Wilson, that number was surely an understatement because doctors were too busy to report all cases. When it was apparent that individual quarantine, placarding, and public closures were not effective, city council was forced to admit the presence of an uncontrollable epidemic. It was time to provide facilities and care for the sick and dying.

Saskatoon city council convened an emergency meeting on Monday 21 October. Emmanuel College on the University of Saskatchewan campus was converted into an emergency influenza hospital on October 23. Because of the war there were only two resident students at the College. At the peak of the epidemic it housed 130 patients and, as University of Saskatchewan president Walter Murray noted, patients were "packed in from attic to basement and for a

⁹. Ibid., 19 October 1918, p.5.
time conditions were terrific."10 Sutherland school was also fitted as an emergency hospital with a capacity for 20-25 patients. School nurses, teachers, and volunteers staffed the emergency hospitals.

Doctors were warned by MHO Wilson that influenza patients were not to be sent to the city's two hospitals; patients not critically ill were to remain at home.

Regina's City Council met on 24 October to discuss the situation. Regina's Influenza Relief Committee established a central office in city hall to receive calls for medical aid. School nurse Miss Grace Cooper organized nursing services and staff for the emergency hospital at Strathcona and St. Mary's schools. The emergency committee also resolved to appeal through the press for volunteer nurses, nurse's assistants, house help, and clerical help.11

In Saskatoon Dr. Arthur Wilson took charge of arrangements. He pointed out to the City Commissioner that Emmanuel College hospital needed nurses, medical supplies, and an engineer to run the boiler. He also advised that the streets should be cleaned, street cars should be disinfected and that police should enforce the Anti-Loafing Act and keep

10. AUS, Jean Murray Collection IV, 49, Oliver E.H., Murray to Oliver, 2 December 1918. Walter Murray was born in 1866 in New Brunswick. He was professor of philosophy at New Brunswick and Dalhousie Universities. He served as President of the University of Saskatchewan from 1907-1937.

11. SAB, Regina City Archives, "Spanish Influenza Epidemic", Influenza Relief Committee, 24 October, 1918.
crowds from forming.

The Saskatoon Board of Health did not meet for another week. When it did convene the Board consisted of Mayor Young and nine city Aldermen; Dr. Arthur Wilson was already very ill with influenza. The Board resolved to appoint a committee, establish a central office for doctors, and provide assistance in private homes. It also advocated inoculation and the wearing of gauze masks. The emergency committee, once established, consisted of Mayor Young, Alderman Lewin, and doctors Morse and Steward.

The greatest need was for volunteers willing to go into homes and care for the sick, keep fires burning, provide clean linens and prepare food. In calling for volunteers municipal emergency committees stressed that volunteers need not be professional nurses. They needed any woman who could go from home to home and see that patients were not in need. Many volunteers were school teachers and telephone operators, (forced out of work by the striking Brotherhood of Electrical Workers.) Women who could not or would not leave their homes were asked to provide food for diet kitchens established by women's organizations providing meals for patients.

The urban response to the influenza pandemic relied on

12. SAB, City of Saskatoon Archives, CO5, Box 53, File 88, Influenza meeting, 28 October 1918.

volunteers and charitable organizations, and women were expected to carry out the emergency committee's resolutions. Reverend James Sharrard, Professor of Philosophy at the University of Saskatchewan, responded to the call for volunteers. He had taken a rather bold step in leaving the quarantined safety of the University campus to volunteer to do what he could for suffering patients. When he and another professor arrived at the Saskatoon central organizing bureau they were told that they were already doing everything possible by observing the voluntary quarantine at the University, and in any case, "there is not a need for men [volunteers] but women." Sharrard remarked: "It was a decided relief to us for we were feeling pretty selfish in reference to the need."

Patient care was hampered by the refusal to allow men to volunteer in a significant way. However, businessmen who owned cars were asked to chauffeur women to homes where help was needed. Efforts to provide care were also hampered by a shortage of medical professionals and supplies, both commandeered by the Canadian Expeditionary Force in Europe.

14. Reverend James Sharrard arrived in Saskatoon in 1918 from his post as Presbyterian missionary in India. His wife, Edith Sharrard, and their five year old daughter remained in Vancouver because the Saskatchewan winters were considered too severe.

15. AUS, MG 905, Sharrard Papers, file 12, Sharrard to Edith Sharrard, 3 November 1918.

16. Ibid.
As of January 1917 there were 788 doctors in Saskatchewan of whom 74, or 9.4%, were on active military service.17 Furthermore, those who did care for patients were among the first to fall ill or die from influenza. For example, of the 15 women who volunteered to work at Emmanuel hospital 6 became ill within the first week.18

Given the confusion surrounding the epidemic in the medical profession as well as in the public, it is not surprising that people placed their faith, and their money, on tonics and "influenza cures". "Abbey's Effervescent Salt" promised to safeguard users from Spanish influenza; the mild laxative promised a healthy glow and increased vitality to combat influenza germs.19 "Cowan's Nourishing Cocoa" advertised that children would become robust and would not fall prey to epidemics.

A Daily Star reader wrote in to share his influenza cure: hot towels applied to the spine gave "instant relief and had the effect of quelling the nerves".20 By December the newspaper published "Flu Cure #876: eat a cake of compressed yeast a day." The Public Health Bureau replied that it was possible people would not get influenza if they

17. SAB, Martin Papers, M4 pp. 36067-36074, "Physicians in Saskatchewan, 1 January 1918."

18. AUS, MG 905, Sharrard Papers, Sharrard to Edith Sharrard, 9 November 1918.


20. Ibid., Thursday, 7 November 1918, p. 13.
ate a cake of yeast a day - the yeast would kill them first!21

Strong smelling medications and oils were used to overcome the awful smell that often accompanied influenza. Camphor bags were worn around the neck, and the supply of eucalyptus oil was quickly depleted in Saskatoon. Antiseptic solutions were advocated as throat washes, in atomizers and in vapour lamps, and as cough mixtures and lozenges. Solutions of creosote, carbolic acid, sulphur, lysol, and cresoline were thought to disinfect the living quarters when sprayed or burned. Inhaling burning sulphur and carbolic may have caused almost as much respiratory illness as it cured however.

The most popular drug, by far, during the influenza epidemic was alcohol. There was a widespread popular belief in the medicinal benefits of alcohol. Because of prohibition, however, alcohol was available only from a druggist upon presentation of a doctor's prescription. People used alcohol either as a preventative or as a cure. Even non-drinkers used it as a tonic and a painkiller. Some gave a tablespoon to their children before bed. Doctors responded to their patient's demands for alcohol prescriptions to the extent that demand completely outstripped supply. Only two wholesale druggists in Saskatchewan were permitted to distribute liquor. As a

21. Ibid., Wednesday, 11 December 1918, p. 3.
consequence the price for the 8-ounce daily maximum prescriptions increased as the epidemic worsened. 22

Initially at least, many retail businesses did very well because of the epidemic. Farmers came to town to buy preventatives and ended up buying many other things as well. 23 Profiteers, as usual, emerged. Lemons, widely believed to hold curative powers, cost $.38/dozen before the epidemic. They soon jumped in price to $1.50/dozen. 24 Business in general, however, dropped off significantly as the epidemic worsened.

Many businesses were completely shut down because of the epidemic. Theatre and pool hall owners, travelling salesmen, and travelling theatrical companies such as Chatauquas were all adversely affected. The railway companies were the most seriously hurt. Because of the increasing numbers of railway employees off work because of influenza, the Grand Trunk Pacific was compelled to place embargoes on all freight consigned for eastern Canada. 25 The CPR was forced to cut passenger service because so many crews were ill. The rail company argued that only its outside crews were ill and the inside men were all well,

22. Ibid., Wednesday 30 October 1918, p.3.
23. Ibid., Friday, 18 October 1918, p.3.
24. Saskatoon Daily Star, Tuesday, 5 November 1918, p.3.
therefore it could not be blamed for spreading the flu. The CPR pointed to travelling salesmen as the culprits.  

By 25 October the west to east embargo applied to all railway companies. And on 29 October it was announced in Montreal that 10,000 railway employees were off work with the flu in eastern Canada. By 1 November, before the epidemic had peaked in the west, the number increased to 14,000.

City revenues were adversely affected as well. On 27 October it was announced that receipts from Saskatoon's street railway were down by 52%. In November receipts were still 32% lower than the corresponding week in 1917. Commissioner Yorath attempted to allay public fear of crowded streetcars by announcing in the press that all cars were washed with lysol and fumigated with formalin, "The cars are a healthier place to be than on the streets of the city." Yorath may have exagerated the situation, but at the same time there was considerable concern about "careless spitters" plaguing city streets. The city suffered a

26. Ibid., Monday, 28 October 1918, p. 11.


28. SAB, CO5, Box 54, file 242, Commissioners Report, 13 November 1918.

29. Saskatoon Daily Star, Saturday, 26 October 1918, p.3. C.J. Yorath was born in Wales and was an engineer by trade. He was Saskatoon City Commissioner from 1912 to 1921
$8,730.37 deficit on the street railway after 5 weeks of influenza. The deficit was more than offset by the $10,234.10 profit on waterworks, and $3,196.01 profit on light and power. Increased usage during the epidemic accounted for the profits.

Regina's Mayor, Henry Black, appealed through the press for store-owners to close up shop at 6:00 PM. Early closures would have the double effect of keeping people at home, as well as freeing up clerks for volunteer duty. But the Retail Merchants Association petitioned council requesting that early closure be made compulsory or the request withdrawn. They argued that early closures of some stores would only increase congestion in other stores. They also pointed out to council that there was considerable confusion among the medical profession regarding the benefits of store closures.

Dr. Seymour provided the requisite authority to close all shops in the Province (except hotels, restaurants, eating houses, and drug stores) at 6:00 pm every day under authority of section 10 of the Public Health Act (chapter 16 Statutes of Saskatchewan, 1909). As reports of new cases when he resigned and moved to Edmonton where he was a city Commissioner.

30. Ibid., Saturday, 23 November 1918, p.3.

31. SAB, Regina City Archives, Influenza Relief Committee, 10:00 AM meeting, 1 November 1918, "Resolution passed at Retail Merchants Meeting", 31 October 1918.
and deaths increased, so too did public compliance with health officials' mandates.

Retailers tried to capitalize on the fear, dreariness and confusion caused by the epidemic. Nearly any product might double as an influenza cure, or preventative. McGowan and Company proclaimed "The Best and Cheapest Health Insurance is Warm Underwear". With theatres and movie houses closed the home entertainment business received a significant boost. Columbia Grafonola Company advertised their line of gramophones to "Enjoy at Home", with prices ranging from $25.00 - $300.00.

Retailers had to sell more than just their products, they were also forced to sell the safety of their stores. People were reminded every day that influenza was a "crowd disease", and retailers responded to people's fears of large gatherings. MacMillan's Department Store advertised that, "The Best Preventative Against Infection is Pure, Fresh Air - The Air in This Store Changes Completely 3 Times Each Hour." They also boasted broad aisles and high ceilings. "It is Safe to Shop at MacMillans - Absolutely Safe." J.F. Cairns Department Store countered with promises of "A Big, Bright, Airy, Wholesome Store ready with Saskatchewan's Best Showing of New Winter Merchandise - Save Your Health by

32. Ibid., Tuesday, 29 October 1918, p. 2.
33. Ibid., Monday, 28 October 1918, p. 12.
Wearing Furs." There were few businesses that went as far as one insurance salesman in exploiting people's fears. In Moose Jaw D.A. McCurdy, Sun Life Insurance agent, advertised in the city page of the Moose Jaw Daily News "Don't Let Spanish Flu Worry You". An insurance policy would safeguard against financial loss. His ads ran for a week at a time, and were placed beside announcements listing influenza cases and deaths. Two days later, as the epidemic was increasing and sixteen deaths were reported, McCurdy's ads changed to "'Flu' Epidemic is Spreading....Your turn may be next." By 4 November McCurdy placed an ad that appeared to be a wire service story with the headline: "20,000 C.P.R. Employees Ill With the "Flu"....Many of these are Moose Jaw men, a large number of whom were wise enough to have an accident and sickness policy with me." At the same time he advertised, "The Uncertainty of Life....The most frequent question asked after the death of a citizen is, "How much Life Assurance did he carry, was it sufficient to make adequate provision for the needs of his family?"

34. Ibid., Tuesday 29 October 1918, p. 5.
36. Ibid., Monday, 4 November 1918, p. 3.
37. Ibid., Tuesday 5 November 1918, p. 3.
Insurance companies in Canada paid out $14,362,481.00 in claims due to the influenza epidemic in six months beginning October 1918 to March 1919. In comparison the war claims incurred by insurance companies in Canada for four and a half years of war were $21,758,409.00.\textsuperscript{38} While insurance companies with overzealous agents lost heavily during the epidemic, the insurance business must have benefitted in the long run. "The Uncertainty of life" had been brought home to Canadians during the epidemic.

The safest place to be during the epidemic was at the University of Saskatchewan. Although quarantine is rarely successful in containing contagious disease, the voluntary quarantine at the University protected all but one of the 120 faculty and staff from influenza. University President Walter Murray quarantined the campus after all who wanted to return home had gone. With fully-equipped residences, food service, and its own farms the University remained relatively unaffected by the epidemic that raged all around.

When Emmanuel College was turned over to the city for use as an emergency hospital strict measures were taken to protect campus residents. The 16 women and four men who volunteered to staff the hospital stayed at the President's house with Mrs. Murray, while President Murray moved into residence with the faculty. Campus life proceeded as usual.

- classes were held and tennis matches played. The biggest problem for students and faculty was finding enough to keep themselves occupied. Students kept busy with dances, games, and picnics in the country. Professor Sharrard remarked:

> The students are simply admirable in the way they have quarantined themselves; and they seem to be having a splendid time. It is a good thing it is a co-educational establishment or it might be different.\(^{39}\)

Students entertained each other with limericks in the student newspaper *The Sheaf*:

> There's a dreadful disease called the Flu, 
> It fills us with fear through and through. 
> It closes the schools 
> And sends home the fools, 
> And gives us more work than "skidoo".\(^{41}\)

The History Association took advantage of the opportunity to discuss plagues and war. History professor Arthur Silver Morton discussed war strategy, and two students presented papers on ancient and modern plagues, "The last were witty, rather than profound, and left no morbid taste in the mouth."\(^{42}\)

Life at the University was boring. Sharrard called the quarantined safety at the University "the prison". However, he may have re-evaluated the quarantine after venturing

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39. AUS, Sharrard Papers, File 11, part 1, James Sharrard to Edith Sharrard, 30 October 1918.


42. AUS, Sharrard Papers, 12, Correspondence 1918 (2), Sharrard to Edith Sharrard, 5 November 1918.
downtown to meet a young man at the CPR Station whose sister
had died at Emmanuel hospital:

The town was like a city of the dead. Usually on
Saturday night the streets are just lined with
autos and people but I don't suppose I saw twenty
altogether. 43

Despite the precautions taken at the University,
tragedy struck on Saturday, 9 November. Apparently two
pharmacy students drank methyl alcohol cocktails, either
because of a belief in its preventative qualities or because
they were bored with their quarantined situation. There was
much commotion that night in the residence and Professor
Sharrard could not help eavesdropping on President Murray's
frantic call from the hall telephone. The students were
rushed to City Hospital, but one died that night while the
other was permanently blinded. 44

The following Wednesday the Daily Star proudly
announced "University Free From Influenza - Not One Case."
President Murray "hushed up" the incident wanting to avoid a
scandal. 45 Professor Sharrard explained that both the dead
student and the Coroner were Roman Catholics and the father
did not want any publicity. Together they passed the death
off as another influenza death. 46

43. Ibid., 9 November 1918.
44. Ibid.
45. Ibid., 28 November 1918.
46. Ibid., 9 November 1918.
On 16 November the University recorded the death from influenza of one of the campus residents. William Hamilton died after a brief illness contracted while working at Emmanuel Hospital. President Murray used the most comforting analogy he could find in his condolences to the man's mother:

Your son gave his life for others, and his sacrifice was as great as that of any soldier who died on the field of battle. It will ever be an inspiration for the young men and women who come to the University.47

It was not revealed until after his death that Hamilton was a widower with three young children.

By any measure the university quarantine was a success. But when the University re-opened in January, 1919 there were soon more than 150 cases and 6 deaths.48 The university population had no immunity to the disease. The year 1918 was deadly for the young and healthy; it seemed influenza would take any that the war spared.

The epidemic deeply affected the university. In the spring of 1919 President Murray was embroiled in a fight to maintain control of the University - a fight he clearly associated with the epidemic. He confided to Robert Falconer, the President of the University of Toronto, that disloyalty plagued his administration: "the disease must be

47. AUS, PP 1 A.28, Murray to Mrs. Hamilton, 16 November 1918.
48. AUS, President's Report 1918-1919, p. 3.
The war and the influenza pandemic were linked in people's minds. It was more than just the analogous link between fighting the 'flu and fighting the 'Hun'. There was an expectation that the epidemic would go away once the war was over. Armistice Day, 11 November 1918, promised finally to break influenza's grip; the end of the war meant an end to the pain and suffering. A Saskatoon doctor proclaimed in the press that, "The only effect this [peace] celebration is going to have on the influenza situation is to improve it."50

Quite the opposite was true of course. Victory parades throughout the province began in the middle of the night when the news of peace was announced. Previously careful people, not yet exposed, poured into the streets for a night-long party that re-invigorated the epidemic.

November 1918 was the worst month of the epidemic with more than 2,500 influenza deaths in Saskatchewan. Using the absenteeism of City of Saskatoon employees as a gauge the epidemic peaked in the first week of November. There were 1,000 cases in Saskatoon on 4 November.51

More than 1,000 more people died in Saskatchewan in

49. AUS, Jean Murray Collection 4, IV, 26, Murray to Falconer, 11 April 1919.

50. Saskatoon Daily Star, Monday, 11 November 1918.

51. SAB, CO5 Box 54, file 242, Report of the City Commissioner, 9 November 1918.
1919 from influenza and another 100 in 1920. Numbers alone do not tell the story though. The press appealed for volunteers to take in 50 children orphaned by the epidemic. The most pathetic case must have been the woman whose husband, recently returned from the war, died days before their seventh child was born. She was left destitute and dependent. Her misery was made public by well-meaning citizens who established a relief fund in her name in the newspaper.

Dead bodies were literally stacked up awaiting burial.

52. Deaths From Epidemic Influenza 1918-1920 in Saskatchewan By Age Period, Rate per 100,000, and Percentage of Total Influenza Deaths.

<table>
<thead>
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<th>AGE PERIOD</th>
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TOTAL ..................5,018 ............607.1


54. Ibid., Monday 28 October 1918.
The city bylaw requiring either embalming or burial within 24 hours was unrealistic. There was no city morgue to store bodies awaiting burial, and the local registrar of Vital Statistics, J.M. Lloyd, was overwhelmed by the demand for death certificates and burial permits. Saskatoon's cemetery caretaker was charged in early November with allowing burials without a permit, in violation of section 48 of the Vital Statistics Act. The situation had become impossible by early November and a number of burials took place at the Catholic cemetery without permits.

There was enough public fear and discussion of the issue for J.M. Lloyd to state unashamedly:

There is an impression among some of the citizens that many bodies are being buried without a certificate of registration. The local registrar wishes it distinctly understood that this is not so, as it is impossible for an internment to take place without the certificate being signed.

Local police rounded up loafers and unemployed men and pressed them into service as grave-diggers. At least one man in Moose Jaw refused and was fined $20.00 and costs.

The miserable situation was compounded by a Provincial Order-in-Council forbidding the transportation of bodies

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55. SAB, CO5 box 53, file 188, City Commissioner to A.G. Wright, 8 November 1918.

56. SAB, CO5 box 51, file 60, Cemetery, City Clerk to Father Jan, St. Pauls Church, 27 December 1918.

57. Saskatoon Daily Star, Monday 2 December, p. 3.

within the province and out of the province. Bodies were to be buried in the nearest cemetery as early as possible. Many grieving families lost track of their loved ones forever.

As the number of cases and deaths eased in the third week of November there were demands that the ban on public meetings be lifted. In both Regina and Saskatoon the ministerial associations led the protest. As early as 5 November the Saskatoon association resolved to follow the urgings of the Emergency Committee, but they argued that there was little difference between large gatherings in shops and regular church services.

The Regina association made a compelling argument to Council that people needed regular church services more than they needed protection from the possibility of infection. The solace and comfort to the grieving that services provided far outweighed any danger to the public health, especially when people were not prevented from crowding into stores and auction sales.

The representative from Regina's First Baptist Church, G.D. Raymond, argued that churches be re-opened. He condemned city authorities for inaction and negligence in allowing people to congregate in crowds, and failing to

59. Saskatchewan Gazette, 21 Regina, 14 November 1918, pp. 4-5.

60. SAB, Regina City Archives, Regina Ministerial Association Resolution, 21 November 1918.
educate the public in personal hygiene. He pointed out that
the classification of schools, churches and theaters as
equal sources of infection was unscientific. Theaters were
dangerous because they were "ill-lighted, ill-ventilated and
occupied continuously for several hours daily by constantly
changing audiences." 61 In Saskatoon some citizens wondered
what the difference was between attending a crowded funeral
service and regular Sunday services. 62

On Sunday 24 November both cities lifted the ban on
public gatherings. Schools remained closed for another week
to give teachers who had volunteered their services a much
needed rest. Mayor Young explained that he felt it was safe
to lift the ban because so many people had had the disease
and were therefore immune. Others had been exposed to the
disease and were liable to become ill regardless of the ban.

There was considerable opposition to lifting the ban in
Saskatoon, however. Alderman Wilson was opposed to lifting
it and when Council overruled his opposition he observed, "I
notice the hearses are still going up and down the
streets." 63 Mayor Young conceded there was more opposition
to lifting the ban than there was to imposing it in the

61. Ibid., G.D. Raymond to Influenza Relief Committee,
    22 November 1918.

    3.

63. Ibid., Saturday 23 November 1918, p. 19.
first place.\textsuperscript{64}

A familiar observation was that the influenza pandemic was democratic in its attack; the rich and poor alike were victims. The death rate from influenza, however, was higher among the group of people least able to afford it. A United States Public Health Service survey, conducted between December 1918 and February 1919, revealed a significant correlation between the incidence of morbidity and mortality and economic status.\textsuperscript{65} The death rate from influenza in the group classed as "poor" was 33\% greater than in the "well to do" and "moderate" groups, while the death rate in the "very poor" group was nearly 3 times as high. The ratio of the morbidity rate for the "very poor" to that for the "well to do" class was nearly 3 to 1.

\begin{center}
\begin{tabular}{l|c}
\textbf{Economic Status} & \textbf{Rate per 1,000 persons} \\
"well to do" & 3.8 \\
"moderate" & 3.8 \\
"poor" & 5.2 \\
"very poor" & 10.0 \\
\end{tabular}
\end{center}

\textsuperscript{64} Ibid., Friday 22 November 1918, p. 3.

\textsuperscript{65} The survey was conducted in nine urban localities in the United States with a population of 25,000 and over. The information was collected by enumerators in a house-to-house canvas. Enumerators recorded the number of residents per household, the number of rooms, and the economic status of the family based on the impression of the enumerator. Households were classed as "well to do", "moderate", "poor" and "very poor".

The survey is crude but the results are used here in the absence of any corresponding figures for Canada or Saskatchewan.

do" was 1.3 to 1.0. 66

Interestingly, the survey also found that economic status was an unimportant factor in the spread of the disease:

economic status, or more precisely, some condition or conditions of which economic status is an index, was a relatively unimportant determinant of the extent to which the disease spread in a community but was of considerable importance as a determinant of the morbidity rate within the households attacked... 67

The American survey belied the assumption by the Saskatchewan Bureau of Public Health that the poor spread disease.

A definite association was also made between household congestion and influenza. In poorer households either resistance to attack on the part of children and the elderly was lower, or opportunity for infection was greater, or both. 68 Moreover, the poor had less access to medical and nursing care or medication.

Compounding the misery in most cities were the piles of uncollected garbage and night soil fouling the streets. The unseasonally warm autumn weather in Saskatoon made the situation even worse. Saskatoon's cleaning department's teamsters were unable to collect beyond the downtown

66. Ibid., p. 159.
67. Ibid., p. 163.
68. Ibid., p. 167.
district because so many were home with the flu.\textsuperscript{69} City Council proposed compulsory installation of water and sewers in all buildings situated on the mains regardless of cost:

\begin{quote}
The risk of not being able to supply water and remove night soil during such an epidemic as is now raging should be reduced to a minimum.\textsuperscript{70}
\end{quote}

Council's proposal was never acted upon though. After the crisis of the epidemic had passed the need for city-wide services was not seen as urgent.

Arthur Wilson was still grappling with the problem of outdoor toilets in 1927. He warned Council that in 1918 many people with influenza contracted pneumonia and died "trying to reach this cold dilapidated structure at the rear of their lots."\textsuperscript{71}

Saskatoon's poor were re-discovered during the epidemic. Travelling salesmen, prevented from working during the epidemic, offered their services in a house-to-house canvass to ascertain which households were in need. On 4 November they revealed that in 820 homes in the city people were ill, and usually more than one case in each home. They also discovered 117 cases where care was urgently needed and not received.\textsuperscript{72}

\textsuperscript{69} SAB, CO5 Box 54, file 242, Commissioners Report, 9 November 1918.

\textsuperscript{70} SAB, CO5 Box 55, file 339, 13 November 1918.

\textsuperscript{71} SAB, CO5 Box 238, "Privies 1927,1929" MHO Report, 28 March 1927.

\textsuperscript{72} Saskatoon \textit{Daily Star}, 4 November 1918.
As the canvass proceeded the participants discovered people living in apartments "not fit for human habitation". The buildings had been constructed as office blocks during Saskatoon's boom years and later converted into apartments. There was an inadequate number of toilets for the number of people, and a great many rooms had no windows to the outside. The travelling salesmen recommended the apartments be remodelled "in the best interests of public health and the people of the city".73

"Saskatoon Has A Slum" ran the headline in the Saskatoon Daily Star on 28 November. City Commissioner C.J.Yorath had found a slum in Saskatoon in the "foreign section" of town. To prove the charge he gave a slide presentation in conjunction with his annual report at a local theatre. He also outlined his plans for reconstruction and the building of adequate homes for the workingman. Late in 1918 the federal government offered a $25 million housing fund to be lent at 5% to workingmen and returned soldiers for house construction. The Saskatchewan government would not assume the debt and insisted that municipalities do so. Saskatoon was unable to assume the debt and consequently not one house was built in Saskatoon. In Winnipeg 712 houses were built under the plan in the next

73. Ibid., Thursday 14 November 1918.
Labourers and wage-earners were hardest hit by the epidemic. Wage earners employed by the city received no sick benefits. Thus, workers who were ill or forced to stay home to nurse family members were left with no income. The hardships experienced by many workers was impressed upon City Council. By 30 January 1919 the epidemic had waned but it was still creating havoc. The City resolved that hourly and daily employees absent through illness who were in the city's employ continuously for one year and who produced a doctor's certificate be paid at their usual rate for a period not exceeding two weeks.

Salaried employees, however, received full pay for the duration of their illness. The City paymaster received his usual pay for his one year stay in hospital as a result of the flu. In thanking Council for its consideration he added:

I feel every employee of the City of Saskatoon gets a fair and square deal in all matters pertaining to their welfare at the hands of the City Commissioner.

A motorman for the Street Railway who worked for the city for three weeks prior to his illness applied for sick

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75. SAB, CO5, Box 62, file 338 Sick Pay, 30 January 1919.
76. Ibid., L.J. Walshe, paymaster to Mayor and Council, 30 December 1919.
pay for the two weeks, 4-17 February. Council refused his request despite a letter from a local doctor verifying the illness as influenza and despite a special plea that the man had four children. 77

Organized labour petitioned Council on behalf of sick employees who lost work because of the epidemic:

There is a great deal of dissatisfaction amongst the junior men owing to this one year period, and a number of whom have already lost time through sickness, and they feel the hardships it imposes on them. They have been struggling along through 1918 with the hopes of obtaining better conditions in the new year, and be able to get on their feet again, they find their present wages [sic] is not sufficient to meet the expenses of sickness. 78

The City Clerk, Andrew Leslie, replied that the city had no intention of changing the regulations concerning sick pay. In May, under increasing pressure from labour groups in the city, Council agreed to pay sick benefits to employees who were in the city's employ as of January 1919 and had six months service, the two week maximum benefit period remained in force. 79 The city had included in their new offer only those employees who were hired in December 1918, after the epidemic was on the wane.

77. Ibid., City Clerk to Street Railway, 4 March 1919.

78. Ibid., F.H. Chapman, Secretary Amalgamated Association of Street and Electrical Railway Employees of America Division 615, to G.D. Archibald, Supt. Saskatoon Municipal Railway, 14 March 1919.

79. Ibid., City Clerk to F.H. Chapman, 1 May 1919.
The President of the International Association of Machinists Local in Saskatoon, Hugh Baillie, cited labour dissatisfaction with the city's handling of the influenza epidemic. In his bid for election to City Council in the December municipal elections, Baillie argued that the city should have instituted relief measures instead of depending upon private organizations, such as the St. John's Ambulance Association, to do the work. 80

As the crisis of the epidemic faded there were increased criticisms of the city's response to the disease. Later in the election campaign Baillie was more specific in his criticisms. He advocated the establishment of municipal hospitals where men and women in poor circumstances could obtain good medical attention. He charged that the poor "were at the mercy of local doctors whose slaves they became for years after until extortionate bills had been paid in full." 81

Robinson Moore, Secretary of the Typographers Union in Saskatoon, in his bid for a seat on Council, noted that the most urgent need affecting Saskatoon was adequate hospital accomodation. He added that good sanitary housing, strict obedience to health regulations, attractive parks and riverside, and the encouragement of recreation, "are well recognized aids in the contentment and settlement of the

80. Saskatoon Daily Star, Thursday 21 November 1918.
81. Ibid., Saturday, 7 December 1918, p. 21.
workers of the community. 82

Moore, a printer at the Daily Star, won a seat on City Council; Baillie did not. Dr. MacGillvray Young, the incumbent Mayor, lost to F.R. MacMillan, a local department store owner. MacMillan's campaign focussed on Dr. Young's record and promised a business-like administration for the city. How much the election results reflected public dissatisfaction with the handling of the influenza epidemic, or doctors in general, is hard to ascertain.

By March, 1919 the City Teamsters had translated their dissatisfaction with Council's policy on sick pay and volunteer relief into concrete demands for pay increases. In a compelling letter to Council, the Teamsters pointed out that "ordinary teamsters" were asking for $4.50 a day. The City Teamsters (cleansing department and garbage collection) should warrant a $.05 an hour raise, or $4.75 a day, "owing to the class of work". They stated plainly that they were unable to live on the money they earned:

If sickness or any other unforeseen thing overtakes us, we either have to borrow or fall on charity, which does not seem fair after the long hours of toil we put in for just our daily bread. 83

As if to drive the point home to Council, the Teamsters appealed to patriotism by pointing out that their group sent

82. Saskatoon Daily Star, Monday, 2 December 1918, p. 2, Editorial "Labour Representation."

83. SAB, CO5, Box 63, file 380, City Teamsters to Council, 17 March 1919.
more men to France than all other city departments, "and the least those that have returned are expecting is a living wage after fighting for their country."  

One of the main issues in the 1919 labour unrest on the prairies was the high cost of living. Between 1908 and 1918 the cost of food in Saskatchewan increased 84%, clothing 38%, fuel 73% and rent 61%.  

In April 1919 the federal government appointed Chief Justice Mathers to head a Royal Commission to investigate labour unrest. The Report of the Royal Commission listed what it found to be the chief causes of industrial unrest. The first two causes listed were unemployment and the fear of unemployment, and the high cost of living. The Mathers Commission noted that unemployment could arise from causes other than the loss of a job; workers might be incapacitated through sickness or injury. The Commission recommended the establishment of a system of State Social Insurance, "for those who through no fault of their own are unable to work....Such insurance would remove the spectre of fear which now haunts the wage

84. Ibid.

85. Glen Makahonuk, "Class Conflict in a Prairie City" Labour/Le Travail 19, (Spring 1987), pp. 98-99.

earner and make him a more contented and better citizen." 87

The Commission also pointed out the need for adequate housing. The chief complaints made to the Commission were poor sanitary conditions and insufficient rooms. 88 Workers, even temporarily laid up during the epidemic, had little reserve to provide the necessities for their families.

The Commission failed to resolve the serious concerns of the workers and on Tuesday, 27 May 1919, Saskatoon's City Teamsters walked out on strike along with 1,200-1,400 other wage-earners in Saskatoon in sympathy with the Winnipeg General Strike.

The most pressing need in urban Saskatchewan highlighted by the epidemic was adequate hospital accommodation. In the wake of the influenza pandemic there was a proposal for more hospital beds in the form of a Union hospital for Saskatoon since half of City hospital's patients were from out of town. A money by-law was approved in the fall of 1919 for an expansion of City hospital. 89 Because of increasing costs for building materials, however, the extension was not built until 1927. 90

As soon as possible, after the crisis of the epidemic

87. Ibid., p. 7.
88. Ibid., p. 12.
89. SAB, C05 box 58, file 87, Council Meetings, 24 October 1919.
90. Kerr and Hanson, Saskatoon, p. 239.
had passed, people attempted to return to normal. There were no victories and few heroes in the influenza epidemic; people wanted to forget. The major concerns of Saskatchewan people, the tariff and transportation policies remained. The unfair treatment of the west by the 'eastern interests' remained. Despite the glaring need, highlighted by the epidemic, for an integrated national public health service an editorial in the Saskatoon Daily Star in late November echoed the distrust of the central government felt by many in the west:

On the whole the public health policies practised in the different provinces are well aligned and the creation of a ministry of public health for Canada is not imperative.91

Some of the immediate needs of the community, such as hospital accommodation were addressed as a result of the epidemic. The need for a publicly-funded and government-administered system of charity was also addressed. But the slow-burning issues of adequate housing and medical care for workers, sparked by the epidemic, were left unresolved. Although the influenza epidemic was not the cause of the industrial unrest that manifested itself in the Winnipeg General Strike, it was surely the midwife.

91. Saskatoon Daily Star, Thursday, 28 November 1918, p. 4.
It was upon them. No power on heaven or earth could keep the plague from coming those twenty miles within a few hours. Closing the roads, stopping the mails, shuttling off all but the most necessary rail communication, couldn't stop it. It rode on the wind, blowing across the continent at a terrible speed. It might be - probably was - among them now. And with the certainty that it would come ... panic subsided into tight-lipped endurance.¹

Rural Saskatchewan was virtually unarmed in the fight against influenza. In 1918 the prairies were an unforgiving place where neighbours might be miles away, and the nearest town a long day's journey by horse and buggy. Medical help, usually in the form of a town doctor, was often beyond reach. Hospital accommodation was unevenly distributed throughout the province. Doctors who had let their qualifications lapse, or who were unqualified, were pressed into service to fight influenza.² Medical and pharmaceutical supplies were scarce. The volunteer and charitable organizations, so prominent in urban areas during the epidemic, were nonexistent. As a result of the experience of the epidemic, rural Saskatchewan was in the

². SAB, A320 Neatby Family, Kate Neatby Nicoll manuscript "Paths They Have Not Known", p 102. Ada Neatby, Hilda Neatby's mother, was the local midwife near Watrous, Saskatchewan. Her skills were pressed into service nursing neighbours during the epidemic. She subsequently contracted influenza and it spread to the whole family.
forefront in calls for home nursing courses in country districts, proper hospital accommodation, and the provision of municipal doctors, the forerunner of medicare.

In the face of the epidemic rural people crowded together. The prospect of dying from influenza isolated and alone forced many to flee into villages and towns, into the arms of the epidemic. By early November the epidemic was reaching its peak in Saskatchewan. These were the darkest days of the epidemic. The provincial Proclamation of 5 November 1918 exhorting people to call on their neighbours during the epidemic frightened more than it reassured. It was published in most rural weeklies and its wording only confirmed people's worst fears:

Instances have been reported from many points in Saskatchewan of homes where the inmates have been

3. NUMBER OF DEATHS FROM INFLUENZA REPORTED BY MONTHS 1918, 1919, 1920

<table>
<thead>
<tr>
<th>MONTH</th>
<th>1918</th>
<th>1919</th>
<th>1920</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>....</td>
<td>405</td>
<td>3</td>
</tr>
<tr>
<td>February</td>
<td>....</td>
<td>135</td>
<td>50</td>
</tr>
<tr>
<td>March</td>
<td>....</td>
<td>270</td>
<td>31</td>
</tr>
<tr>
<td>April</td>
<td>....</td>
<td>108</td>
<td>12</td>
</tr>
<tr>
<td>May</td>
<td>....</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>June</td>
<td>....</td>
<td>10</td>
<td>....</td>
</tr>
<tr>
<td>July</td>
<td>....</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>August</td>
<td>....</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>September</td>
<td>3</td>
<td>12</td>
<td>....</td>
</tr>
<tr>
<td>October</td>
<td>702</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>November</td>
<td>2,498</td>
<td>3</td>
<td>....</td>
</tr>
<tr>
<td>December</td>
<td>703</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,906</td>
<td>1,010</td>
<td>102</td>
</tr>
</tbody>
</table>

source: Saskatchewan Bureau of Public Health Reports 1919-1920 (Regina, 1921), Table LIII, p. 126.
down with influenza for days before their neighbours called, and in some cases death has taken place days before the fact became known. 4

Since families fled into towns and villages to be near neighbours and any available medical help, villages recorded the highest death rate from influenza in the province. The death rate in villages was 12.6 per 1,000 population, or double the provincial rate of 6.4 per 1,000.5 Ironically, an isolated homestead was probably the safest refuge from influenza, providing the disease was not introduced by well-meaning neighbours.

This aspect of the influenza epidemic in rural Saskatchewan had a remarkable impact on the memory and imagination of the survivors. Novelist Wallace Stegner, a child in Eastend, in south west Saskatchewan during the epidemic, re-created the drama and fear in his novels. Stegner's On a Darkling Plain described the terror felt by homesteaders caught in the path of the approaching epidemic. The flight into villages was "not so much a fear of the disease and death as it was fear of dying alone, of finding [themselves] helpless and isolated, with no one to lean on."6

Stegner recalled being shut up in the local school

---

house which served as an emergency hospital, with the whole town. Only about ten people were on their feet, all the rest were sick or dying. The experience left a scar on his imagination. In his autobiographical novel Big Rock Candy Mountain he again described the predicament of frightened homesteaders:

Suppose a whole family got sick with this flu, and no help around, and winter setting in solid and cold three weeks early?

It was supposing things like this that drove in the homesteaders in wagons piled with goods, to settle down on some relative or friend or in vacant rooms. Three families had gone together and cobbled up a shack, half house and half tent, in the curve of the willows east of the elevator. Even a tent in town was better, in these times, than a house out on the bitter flats.

The tendency on the part of rural people to crowd together left them exposed to the disease but they had few resources to combat it. School teachers, with time to spare when the schools closed, volunteered at local emergency hospitals. Most teachers helped where they could, and there are many touching stories of teachers sacrificing their lives helping flu victims. But there were also rural teachers who took the first train out of town when the


epidemic broke out. 9

Small, isolated villages were the last to be struck by influenza. After urban areas were returning to normal, country districts suffered the worst effects of the epidemic. In Battleford the flu ban had been lifted and the emergency hospital closed by the 28 November. But reports from surrounding communities kept the epidemic uppermost in people's minds. At Paradise Hill the local store was closed when both the proprietor and his wife were found dead. Nearby three Indians were found dead in a tent. A young boy was found digging graves for his dead mother, father, brother and sister. 10

Isolated country districts in the pre-epidemic period were relatively disease-free compared to urban populations. The death rate in cities in Saskatchewan in 1917 was 11.8 per 1,000, while the rate in rural municipalities for the same period was 5.5 per 1,000. 11 In 1917 the death rate from pneumonia and communicable disease in Saskatchewan cities was 2 - 3 times higher than in rural


11. SBPH, Annual Report, 1919-1920, Table XXXIII, p. 102.
municipalities. 12

Low disease and death rates in rural areas, often attributed to the wholesome lifestyle and pure country air, were instead a function of rural Saskatchewan's isolation. Because of this rural people had fewer opportunities to build up immunities to respiratory disease. Therefore disease-inexperienced rural people were more prone (or less immunologically experienced) to the secondary infections that were the principal cause of death during the influenza epidemic. Consequently there was a higher death rate during the epidemic in isolated rural areas.

The predisposition for rural people to suffer more heavily from influenza-related pneumonia was not peculiar to Saskatchewan. American army recruits placed in army camps were far more likely to contract pneumonia if they hailed

12. OVERALL DEATH RATE (per 100,000 population); DEATH RATE FROM PNEUMONIA; DEATH RATE FROM COMMUNICABLE DISEASE; IN SASKATCHEWAN, 1917

<table>
<thead>
<tr>
<th>Disease</th>
<th>Cities</th>
<th>R.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>123.6</td>
<td>45.5</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>76.2</td>
<td>41.0</td>
</tr>
<tr>
<td>Communicable Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>3.9</td>
<td>9.9</td>
</tr>
<tr>
<td>Diptheria and Croup</td>
<td>36.6</td>
<td>9.9</td>
</tr>
<tr>
<td>Influenza</td>
<td>7.9</td>
<td>5.3</td>
</tr>
<tr>
<td>TB Lungs</td>
<td>72.2</td>
<td>25.0</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>15.8</td>
<td>11.5</td>
</tr>
</tbody>
</table>

from country districts.\(^{13}\) Pale, emaciated city recruits fared much better during the epidemic.

Given the higher death rates in the country and the tendency for people to crowd together (and therefore spread the disease), it is not surprising that many towns and villages felt under seige. A common response across the prairies, and elsewhere, was to quarantine the town against the world.\(^{14}\) Town councils gave notice to the railway companies that the town was quarantined; no passengers would be allowed to stop. On 31 October the CPR reported that 40-45 towns on its line were "closed", including Markinch, Dafoe, Cumar, Macklin, Lanigan, Sheho, Wynyard, and Langenburg. Towns on the CNR line in Saskatchewan and Alberta also imposed local quarantines.\(^{15}\)

Dr. M.M. Seymour immediately declared the practice of isolating towns and villages both illegal and "contrary to the approved methods of combating the disease."\(^{16}\) Seymour instructed railway officials that they were to pick up and drop off all passengers, and that Provincial Police were to


\(^{14}\) Dawson City imposed a strict quarantine that effectively protected the town from the epidemic until the spring of 1919 when the town re-opened.

\(^{15}\) Saskatoon *Daily Star*, Friday, 1 November 1918, p. 3. Quarantined towns on the CNR line included Kipling, Maryfield, and Mazenod.

\(^{16}\) *Ibid.*, Tuesday, 5 November 1918, p. 3.
pay no attention to local regulations.

Seymour, however, could not stop the local quarantines, given the determined resolve on the part of local authorities. The Provincial Police were understaffed and their numbers were further depleted by serious outbreaks of influenza within their own ranks. Furthermore, during the epidemic the force was too busy attending severe cases of influenza in country areas to aid the Bureau of Public Health.

Towns and villages continued to isolate themselves despite Seymour's pronouncements. Seymour advised health boards that sick patients should be isolated and homes placarded. Saskatchewan communities took that advice and extended it to cover the whole community, sick and healthy alike.

Seymour's advice had inspired little confidence. By 8 November Amish, Elstow, Luseland, Churchbridge, Killam, Colonsay, and Unity had quarantined themselves. Citizens patrolled station platforms to enforce the quarantine. At Lloydminster and North Battleford the roads were patrolled

17. SAB, Department of the Attorney-General, Saskatchewan Provincial Police, B. Annual Reports, 1919 (2). In 1918 there were only 129 members on the force, or one officer for 5513 population.

18. Ibid., C. Divisional Reports, 1918 (2), January 28, 1919.
to prevent travel.\textsuperscript{19} In Tisdale the village council passed a resolution at the emergency influenza meeting asking all country residents to leave town as soon as possible after transacting their business.\textsuperscript{20}

Quarantine was a drastic measure that curtailed movement, and caused inconveniences and business losses. It was only moderately successful even in closed communities such as boarding schools and university campuses. It was not successful in Saskatchewan towns where it was imposed, if deaths from influenza are used as a measure.\textsuperscript{21}

That towns and villages resorted to quarantine and isolation is indicative of the horror and panic that accompanied the epidemic in rural Saskatchewan. Rural residents of Saskatchewan accepted isolation as a fact of life on the prairies. Quarantine seemed a logical response to the epidemic since the railways, and the strangers it brought, seemed to bring the disease.

Although Dr. Seymour anticipated that local quarantines might exacerbate the fear and panic associated with the epidemic, and paralyse the province, there was little he

\textsuperscript{19} Saskatoon \textit{Daily Star}, Friday, 8 November 1918, p. 3.

\textsuperscript{20} Tisdale, Saskatchewan, Village Council Minutes, 29 October 1918.

\textsuperscript{21} Quarantined towns and villages that reported deaths from influenza: Markinch, Lanigan, Sheho, Theodore, Kandahar, Springdale, Bredenbury, Saltcoats, Wynyard, Elstow, Luseland, Colonsay, and Unity.
could do. He faced a much greater challenge to his authority when, for example, the city of Weyburn, in southern Saskatchewan, requested the power to enforce a local quarantine.

A public meeting in Weyburn on 5 November attended by 30 representatives of business, the hospital board, the board of health, and three local doctors declared the city quarantined. No rail passengers would be allowed to land and no one was allowed to leave the city. The citizen's committee declared that quarantine was a local affair and that citizens should have the authority to decide their own fate. Furthermore, the opinions expressed at the meeting regarding Seymour's handling of the influenza epidemic were "decided and not flattering."22

The citizen's committee was indignant with Cabinet's refusal to give them authority to enforce the quarantine. They resented Cabinet's tendency to say that regardless of the situation, "the government evidently expects us to bow down to the will of Dr. Seymour."23

Premier Martin hoped to forestall any more challenges to the government's handling of the epidemic by replying that, "doctors in Regina do not think quarantine is

22. SAB, M4 Martin Papers, Influenza I.134, Murphy and Miller, Barristers and Solicitors, Weyburn to Martin, 6 November 1918.

23. Ibid.
necessary, but isolation is essential."\textsuperscript{24} Quarantine was not favored by the majority of medical opinion and, continued Martin, quarantine had not been imposed in other parts of Canada.

The high-handed treatment of the Weyburn citizen's committee only inflamed the situation. The committee argued that if quarantine was a mistake it erred on the side of safety.\textsuperscript{25} The committee had a strong case since communicable disease control was a municipal responsibility.

The opinion in Weyburn was that not only had Seymour lost all credibility, but he was actually preventing the effective control of the disease. An editorial in the *Weyburn Review* entitled "Time for a Change" censured Seymour's administration:

\begin{quote}
So far as is known, Dr. Seymour has had nothing to do in a practical way with the disease. He is not in practice and yet he puts his judgement as to the best method of dealing with the matter up against that of dozens of physicians who have a thousand times more opportunity of seeing how the disease spreads, and who are satisfied that quarantine is absolutely necessary if the disease is to be stamped out.\textsuperscript{26}
\end{quote}

The administration of public health in the province did not escape criticism either:

\begin{itemize}
\item \textsuperscript{24} SAB, M4 Martin Papers, Martin to Miller, 8 November 1918.
\item \textsuperscript{25} \textit{Ibid.}, Miller to Martin, 13 November 1918.
\item \textsuperscript{26} *Weyburn Review*, 9 November 1918.
\end{itemize}
It is poor encouragement to local physicians who are doing all within their power to stay the progress of the disease, to find their work largely ineffectual because a department assumes the powers of an autocracy. 27

Dr. Seymour and the Bureau of Public Health had never before faced such concentrated criticism. The epidemic revealed an administration that placed financial and legal responsibility for health care with municipalities, but left them with little autonomy to make decisions. Regardless, Weyburn's death rate from epidemic influenza was 8.7 per 1,000 population compared to 6.4 per 1,000 for the province as a whole. 28

The quarantine debate also brought to the fore the confusion and divisions in society and the medical profession as to the best method of controlling a common disease that was shrouded in mystery. Seymour would have been wise to heed the advice of Dr. T.H. Whitelaw, Edmonton's MHO, when he said that the subject of influenza should be approached "with modesty and diffidence." 29

A commonly held notion was that alcohol was one of the best treatments to combat influenza. Especially in rural areas where medical attendance was poor, liquor became a panacea. Because of war time prohibition liquor was only

27. Ibid.
available from a druggist, and only with a doctor's prescription. Prescriptions usually cost two dollars for the eight ounce maximum daily dose. Patients who lived more than five miles from the drug store were allowed 16 ounces at a time. Alcohol had a soothing effect on both patient and caregiver, it eased the pain, and, if nothing else, it created the impression that something was being done.

The popular belief in the value of alcohol was shared by many doctors as well. Doctors were well aware of the value of alcohol as a disinfectant and a pain killer. Moreover, the utter dearth of any other effective tonic made alcohol a commonly-prescribed drug in the treatment of influenza.

In country districts during the epidemic, doctors had little time or opportunity to discuss with colleagues the advantages or disadvantages of a particular course of treatment. Doctors had to rely on their wits and skill in patient care. Desperate patients were the unwitting subjects in the terrible experiment.

Doctors had favorite remedies for influenza, and because not all patients died, recovery reinforced the belief in that particular treatment. Dr. Murrough O'Brien of Qu'Appelle swore by his mixture of quinine and whiskey and he boasted that his formula helped him keep the mortality rate at a "low" 2%. He was unaware that the

30. SAB, A.473, Valens Family Papers.
death rate for the worst-hit areas, the villages, was 1.5%, and the rate in the province as a whole was only .5%.  

Aspirin, according to O'Brien, only helped patients "to a speedier demise." Dr. T.A. Patrick of Yorkton prescribed more brandy and scotch whiskey during the epidemic than in all the other years of his practice. 

Premier Martin received many compelling letters from terrified people who were without a doctor or druggist, and saw alcohol as the only cure for influenza. William Wolmoer of the Prince Albert district cabled the premier in late October,

Life is getting miserable it's hard to find a doctor and everybody needs some liquor and can not get any unless advised from the government and not everybody has the two dollars to pay.

Martin could hardly ignore their pleas for help. But he was also under pressure from church groups opposed to any amendment to the Temperance Act, regardless of the epidemic. T. Albert Moore of the Methodist General Conference advised Martin that, in the opinion of the Provincial Health Officer of Ontario, liquor should not be used to prevent the spread of influenza. He warned that Martin would risk the public health as well as "opening the door to general use of

31. SBPH, Annual Reports 1919-1920, p. 73; population of Saskatchewan 826,592, SBPH Annual Report 1919-1920, Table LVIII, p. 132.

32. SAB, A.51 (2), Patrick Manuscript, "Influenza."

33. SAB, M4 I.114, W.Wolmoer to Martin, 30 October 1918.
intoxicants as a beverage."³⁴

Despite Moore's warning the government passed an Order-in-Council on Tuesday 29 October amending the regulations governing the sale of liquor. It was now possible to buy the eight ounce daily dose without a prescription, provided the druggist was satisfied the liquor was "urgently and necessarily required for medicinal purposes."³⁵

The new regulations went some way to help those who were without medical attendance, but in areas without a qualified druggist the problem remained. Hazenmore residents hoped to influence the premier by having the local president of the Liberal Association request a sufficient supply of liquor to be sent to the town council.³⁶

The amended regulations did not last a week. There was such a run on medicinal alcohol that by the following Saturday, 2 November, the government cancelled the Order-in-Council. Martin explained that the new regulations defeated the purpose of providing liquor to influenza patients; patients with doctor's prescriptions found there was no liquor available.

The influenza epidemic brought to the fore the liquor

³⁴. SAB, M4 I.114, T. Albert Moore to Martin, 11 October 1918.
³⁵. Saskatchewan Gazette, 1918, 14, 31 October, 1918, p. 4.
³⁶. SAB, M4, I.114 (2), Petition Hazenmore School District to Martin, 31 October 1918.
question once more. But the debate did not focus on the wastefulness of liquor as it had in the past. Rather, liquor was seen by many as an absolute necessity during the epidemic. Frightened and desperate people, not drunks and loafers, were demanding an adequate liquor supply. And the new villains were not the bootleggers but doctors and druggists who took advantage of their position and engaged in what the CMAJ called "the wholesale trafficking in liquor prescriptions."37

The Saskatchewan Pharmaceutical Association was likewise concerned about the influence of liquor sales in drug stores. A petition drawn up by a special meeting of the Association in 1919 asked that liquor be removed from drug stores. They pointed to the "degrading and demoralizing affect [sic] on the individual members of the retail association" and that the practice was "open to grave and serious abuse."38

The epidemic was also cause for some to re-think prohibition. An editorial in the CMAJ maintained that liquor had therapeutic value, especially in pneumonia cases. It asked if in 50 years will alcohol "be regarded as always, everywhere, and in all circumstances, the unmitigated poison


38. SAB, 4, I.114 (3), Petition from the Saskatchewan Pharmaceutical Association, special meeting, 15 October 1919.
that many at present would have us believe it to be." 39

There were some immediate negative effects of the epidemic in rural Saskatchewan. Apart from the grisly task of burying the dead there were the immediate impact of farm losses; livestock perished when no one was well enough to do the chores, and the harvest was incomplete. Because influenza was more likely to kill parents than their children, there was a sharp rise in the number of orphans in the province. For example, the Superintendent of Neglected and Dependent Children reported a 57% increase in the number of children admitted to the Children's Aid Society in Moose Jaw in 1919. 40 A new building was constructed in 1919 to accommodate an extra 50 children.

The epidemic brought into sharp relief the appalling condition of medical services in rural areas. Because of the relatively young population on the prairies the greatest demand for medical attendance in the pre-epidemic period was from women in childbirth. Women and their children suffered from this lack of medical care. For years country women and their organizations had demanded proper medical attendance. The epidemic made their plight an issue for all country people.


Farm women's associations focused on the high maternal and infant mortality rates on prairie homesteads. The annual meeting of the United Farm Women of Alberta in 1918 was told:

in sunny Alberta, with no big cities and their hideous, festering slums, their reeking tenements as an excuse, we have a death rate, one-half of which consists of children under five years of age, one-third of children under one year. 41

In early November 1918, as the epidemic was gathering steam in rural areas, the popular newspaper, The Grain Grower's Guide "Countrywoman's Page", noted that the epidemic revealed the need for better medical and hospital facilities in the country. But, the article continued, the responsibility for improved medical attendance rested with farm people themselves. Farm families must organize and co-operate to establish much-needed local facilities. 42 This was, by 1918, a traditional prairie response.

By December, as the full effects of the epidemic were being felt, the tone of farm women's demands changed considerably. It was no longer enough to recognize the need for improved hospital accommodation. What was needed was "a full recognition of the principle that the state must be responsible for the health of the people which is the


cornerstone of a successful democracy." Farm women had begun to demand a national health care program.

By January 1919 farmers were told, through the Grain Grower's Guide, that the country districts must hold the federal government responsible for their plight during the influenza epidemic. Irene Parlby, in her address to United Farm Women of Alberta, placed the blame squarely on the government:

The government...is responsible for the fact that the people on the homesteads have been induced to open up the wild places of this province by often highly, rose-colored literature and propaganda, or the wiles of immigration agents, and therefore it is the duty of the government to safeguard the lives of these people and their families." Organized farmers (men) were uncharacteristically silent on the issue of medical attendance in their farm journals and at their annual meetings. This is not surprising, however, because the health of the family and the care of the sick was almost entirely a woman's responsibility. The establishment of the Saskatchewan Grain Grower's Association (Womans Section) at least allowed health care issues to be raised, if not discussed, by all members, male and female.

The epidemic revealed with horrifying clarity the need for trained physicians and hospitals. The emergency


44. "Mrs. Parlby's Address", Grain Grower's Guide, 29 January 1919, p. 188.
hospitals that were established in country school houses showed the value of municipal hospitals. The Mayor of Strasburg, a community 200 kilometers south west of Saskatoon, assured the premier of the desire for hospitals in country districts.

The question of a hospital is a very live one with the people of this district, and now that they have seen the good results from the temporary hospital established, they are most enthusiastic concerning the building of a permanent one.45

The Prince Albert town council circulated a petition to cities and towns to be presented to the Legislature which asked that "the local Legislature at once put in force a system of community nursing and doctoring, as the present epidemic of Spanish Influenza proves the utmost necessity for same."46

The most significant impact of the epidemic on rural Saskatchewan was to re-invigorate the municipal doctor program. The Rural Municipality Act was amended in 1919 to allow an increase in salaries for doctors from $1,500 maximum annually to $5,000 annually.47 The municipal doctor scheme allowed a rural municipality to hire a physician who provided medical services free to all ratepayers and his or

45. SAB, M4 I.133, Mayor of Strassburg to Martin, 29 November 1918.

46. SAB, CO5, box 53, file 188, City of Saskatoon, City Clerk Prince Albert to Mayor and Council Saskatoon, 10 December 1918.

her family and hired help. No special tax was levied to cover the expense, but allowance was made when setting the municipal rate, which was governed by the assessed value of the municipality. A person who owned a quarter section of land in 1918, assessed at $1,800, paid $2.34 yearly for medical care. The scheme provided a secure and steady practice for doctors who all too often left rural practices because of the difficulty of collecting fees in poor crop years. The advantage to the municipality was obvious. The scheme was funded on the same principal as school taxes, and it ensured health care for all. According to one Hillsburg resident, where a municipal doctor was practicing, the program was a boon to mothers:

Half the worry of illness is removed when a mother knows she can call the doctor should one of her children be taken ill. She does not then lie awake torn between anxiety for the sick one and the fear of adding additional expense.

The municipal doctor program as the forerunner of medicare was grounded in the practical need for proper health care by people who faced tragic and unnecessary losses to disease.

Another group of isolates that fared poorly during the epidemic were Saskatchewan's native peoples. Responsibility for Indian health care (if it existed at all) rested with

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49. Ibid.
the federal Department of Indian Affairs through its agents on reserves, and therefore provincial statistics and policies do not apply. However, just as in Saskatchewan rural populations, inadequate medical attendance and a disease-inexperienced population resulted in a high incidence of sickness and death from influenza.

Native peoples were also subject to simultaneous waves of smallpox, tuberculosis, and typhoid that added significantly to the already high death rate. The coming of white settlement to the prairies and a government that starved Indians into submission and coerced them onto reserves had a massive impact on native economy, culture, and politics.50 White settlement also meant, for natives, sustained contact with a disease pool that was unfamiliar and therefore deadly. Also involved was a federal department that left Indian health care to the discretion of Indian agents, or in the hands of well-meaning missionaries who wanted to "christianize and civilize."

The same notions of health care and disease that informed health departments across the country applied to Indian Affairs. Health care was seen as a personal responsibility, and disease, if not caused by the poor, was at least spread by them. Emphasis was placed on sanitation and personal hygiene in Agent's and Field Matron's advice to

Indian women. But while provincial departments decried the slow progress on issues such as infant mortality and the spread of disease, Indian Affairs continued to state in their printed reports that Indian health was good and improving.

   The Department of Indian Affairs, under Duncan Campbell Scott, stressed the need for financial restraint and accountability. Indians were expected to pay for their own medical expenses. 51

   By 1918 it seemed apparent that native people and their culture would eventually die out - either directly through disease, or if Indian Affairs was successful, indirectly through assimilation. Theories of racial superiority that Europeans brought with them to the prairies were sufficient to explain the sudden decrease in native population. Duncan Campbell Scott thought the Indians were a "weird and waning race" destined to disappear. 52 The pre-eminent Canadian archaeologist and anthropologist, Diamond Jeness, writing in 1932, pictured the eventual decline of native people:

   So civilization, as it flows past their doors seems to be entrapping them in a backwash that leaves only one issue, the absorption of a few families into the aggressive white race and the


High rates of disease and death only confirmed their suspicions.

Dr. P.H. Bryce, Chief Medical Inspector of the Indian Department from 1904-1921, wrote a scathing attack on the administration and direction of the department. He outlined incidents where Indian health care was systematically ignored in the interests of bureaucratic double-dealing that showed a callous disregard for the fate of Indian people.

Although native people were disease-inexperienced they were not disease-free. Homesteaders and farmers were of Canadian, American, British or European origin. They had had the benefit of many generations' exposure and immune reactions to contagious disease such as small pox, measles, whooping cough, and tuberculosis, if not direct immunity themselves. Native people were experiencing these diseases as well as epidemic influenza in 1918. Compounding the problem was inadequate medical attendance, and unhealthy living conditions. Furthermore, native children in residential and day schools were exposed to the contagious


54. P.H. Bryce, M.A., M.D., "The Story of A National Crime" (Ottawa: James Hope and Sons, Ltd., 1922). I would like to thank Professor J.R. Miller, University of Saskatchewan, and James Dempsey, Indian Federated College, Saskatoon, for bringing this publication to my attention.
disease pool of twentieth century Canada without immunological protection from their forebears. The experience at some schools was horrendous. Principal J.F. Woodsworth at the Industrial School at Red Deer, Alberta, after 5 students had died from influenza in a 2-day period, explained:

For sickness, conditions at this school are nothing less than criminal. We have no isolation ward and no hospital equipment of any kind. The dead, the dying, the sick and the convalescent were all together. I think that as soon as possible the Department should put this school in shape to fulfill its function as an educational institution. At present it is a disgrace.\(^\text{55}\)

Dr. Bryce had reported as early as 1907 that the conditions of schools were terrible and the incidence of disease was exceedingly high. His report stated that in one school on the File Hills Reserve 75% of the pupils who attended the school had died.\(^\text{56}\)

It was not inevitable that native people would die from contagious disease even though they had no inherited immunity to small pox and tuberculosis. Proper medical care, of the kind found in Saskatchewan cities at the time, proper nourishment and adequate housing for the sick and healthy would have mollified the worst effects. But native health was never a high priority for Indian Affairs.

\(^{55}\) PAC, RG 10, Black Collection, v 3921, file 116,818-1B, reel C-10162, Woodsworth to Secretary, Department of Indian Affairs, 25 November 1918.

\(^{56}\) Bryce, p. 4.
In 1918 J.D. MacLean, Assistant Deputy of the Department admitted that there were no vital statistics kept on Indians under their charge. In 1917 only the total number of births and deaths were reported from each agency, and those were not printed. The cause of death had never been noted.

During the influenza epidemic the Royal North West Mounted Police (RNWMP) were dispatched to reserves to enforce strict quarantines. They found themselves engaged in relief work for Indians. In a letter marked confidential to Newton Rowell, the Comptroller for the RNWMP pointed out that Indian agents had little sympathy for their charges, "and the work of looking after these unfortunate people who contracted influenza has been left almost entirely with our force and a few outside volunteers."57

The greatest need on the reserves, as in any community during the epidemic, was rudimentary nursing care and food for the sick. This alone was usually enough to keep deaths at a minimum. Frank G. Fish, a student of medicine at University of Alberta, spent one week on the Hobbema Reserve in Alberta. He treated cases of smallpox and influenza, and cases of smallpox complicated by influenza. The conditions on the reserve were conducive to disease: eight

57. PAC, RG 18 RCMP, v 568, file 15-1919, Influenza - Indians Saskatchewan and Alberta, 1919 Comptroller RNWMP to N.W. Rowell, M.P. President of the Privy Council, 14 January 1919.
or nine adults in a one-room shack with no ventilation. Families were without food and influenza patients were moved from home to home where food was available, "and hence practically every case develops pneumonia and death ensues." Fish recommended that the government take control of the situation and provide medical services to organize an emergency hospital for influenza patients.

On the Saddle Lake Reserve in Alberta, RNWMP Corporal J.H. Birks reported that patient care was carried out by Sister Nantel of the Sacred Heart Mission. The Indian Agent would not aid in relief efforts, or provide his car, forcing the Sister to make rounds in a horse and buggy. The greatest need was again food for whole families that were stricken at the same time. The Agent finally provided a supply of flour, bacon and rice.

He and his family are very much afraid of the influenza and want nothing to do with those coming in contact with it. Recently the sister stopped at the Agency and asked for lunch. They would not invite her into the house but brought food and tea to her outside. She had to stay on the sidewalk outside the Agency Office and owing to the wind blowing manure and dirt into her food was unable to eat it.

In Saskatchewan on the Red Pheasant and Stoney Reserves, in the Battleford Agency, Field Matron Mrs. Weaver

58. PAC, RG 18, v 568, file 12-1919, F. Fish, University of Alberta, 1 December 1918.

59. PAC, RG 18, v 568, file 15-1919, Influenza Indians, J.H. Birks to Officer Commanding RNWMP, Edmonton 20 November 1918.
provided patient care. She gave salts, cough mixture, aspirin, chest rubs, and castor oil. Influenza was in nearly every house and 18 deaths occurred on Red Pheasant and 3 on Stoney Reserve by the end of November.\footnote{Glenbow Archives, Battleford Indian Agency, "Report of the Field Matron on Red Pheasant and Stoney Reservations for October, 1918."} She cooked and served 225 meals, gave medicine to 52 people and made 77 calls in the month of January alone.

The Agent, J.A. Rowland, in his monthly report for November, stated that influenza struck every reserve in the Agency and was responsible for the largest number of deaths reported for many years.\footnote{Glenbow Archives, Battleford Agency, "Agent's Monthly Report, 14 January 1919."} No farm work was done during the month because few able-bodied men escaped the sickness. After the epidemic had passed the Agent began reporting deaths and births in his reports. For the one year period April, 1919 to March, 1920 the death rate in the Battleford Agency was 31.4 per 1000 population, based on a population of 954.\footnote{PAC, RG 10, v 4069, file 427,063, reel c-10183 "Indians in the Prairie Provinces, 1918."} The death rate was nearly \textit{four times} the 1919 provincial rate of 7.9 per 1000 population.\footnote{SBPH, \textit{Annual Reports, 1919-1920}, p. 102.}

It was decided in early November, at the height of the epidemic, that the position of Medical Inspector for Indian Agencies, created by Order in Council on 20 December 1913,
be abolished. The inspector Dr. O.I. Grain had been given a salary of $3,500.00 a year to control the costs of medical services to the Indians of the western provinces. Grain was unable to cut costs significantly, and his salary was seen to be unjustified. The position was abolished by Order-in-Council 12 February 1919.

It is not surprising, given the state of care native people received from government and Indian Agents, that they took great stock in traditional native rites to ameliorate their condition. As late as 1926 G.H. Gooderham, Indian Agent at Gleichen, Alberta, complained to Duncan Scott of the "baneful influence of medicine men and [their] interference with sanitary hygiene."65

The Sun Dance, a plains Indian rite of prayer, fasting, and celebration was held in summer to placate the Sun and other Spirits. It was a vowed ceremony. The vow to sponsor a Sun Dance was made in a time of crisis and was performed in June or July. The Sun Dance, or more properly, the practices of gift-giving and mutilation were made illegal in 1895 by an amendment to the Indian Act. The Sun Dance, like many forms of native spirituality, were seen by Indian Affairs as the epitome of cultural backwardness.

64. PAC, RG 10, v 4076, file 451,868, reel C-10184, Deputy Superintendent General of Indian Affairs, Duncan Scott to Arthur Meighen, Superintendent General of Indian Affairs, 5 November 1918.

65. PAC, RG 10, v 4093, file 600,178, reel C-10187, Gooderham to Scott, 30 March 1926.
Departmental policy was aimed at discouraging such displays,

Our aim is to civilize them and not to perpetuate weird performances characteristic of savage life.... They are a waste of time and means and tend to retard [native] education and progress in all that is best in civilized life. 66

Fines and jail terms had been used since at least 1902 to discourage the Sun Dance and other ceremonial dances. Dances were held regularly despite the threat of imprisonment.

Expressions of native spirituality through the Sun Dance were common in the summer of 1919. The Chief and Councillors of the Onion Lake Indian Band in Saskatchewan petitioned Duncan Scott for permission to hold a Sun Dance.

We are writing you to ask permission to let us have a Sundance on our Indian Reserve at Onion Lake this coming summer. We have been in very poor circumstances this last few years on account of the Great War and also on account of the Great Epidemic that has swept over our country. 67

Permission was refused but planning for the Dance went ahead. Agent Sibbald of the Onion Lake Reserve wired for the Battleford RNWMP to prevent the ceremony. There were a few tense moments when Chief Robert defied the police. According to Sibbald, the Chief "went as far as to say that the Sergeant might put a bullet through his brains if he

66. Ibid., v 3826, file 60,511, part 1, reel C-10145, J.D. McLean, Assistant Deputy Indian Affairs to Glen Campbell, Chief Inspector Indian Agencies, Winnipeg, 8 August 1913.

67. Ibid., v 3826, file 60,511-4a, reel C-10145, Onion Lake Petition to Duncan Scott, 6 March 1919.
liked that was the only thing that would stop him."  
Outgunned, the Indians dispersed.  

Similar incidents occurred throughout the province in the summer of 1919 at Piapot Reserve near Regina, and at Big River Reserve near Prince Albert. At Big River Prince Albert RNWMP were sent to suppress the ceremony; they were told that "owing to the Indians having had a great deal of sickness last winter and the fact that the war was over, they thought they would have a dance with music to celebrate their rejoicing that the sickness and war were over."  

A Sun Dance at the Blackfoot Reserve at Gleichen, Alberta was allowed to proceed with police corporal E.E. Harper in attendance. Through an interpreter the dance and its significance was described to him. During the year if any Indian was seriously ill a woman relative made a vow that if the sick person recovered she would put on a Sun Dance the following summer. The woman was the leader of the ceremony and she fasted beginning as soon as the camp was settled and lasting four or five days. During every day of the fast there were four to five hours of prayer. Corporal Harper admitted there was nothing inherently illegal in the dance. Gift-giving was limited to used clothing being  

68. Ibid., W. Sibbald, Onion Lake Agency, to Secretary Department of Indian Affairs, 27 June 1919. 

69. Ibid., W.S. Loggin, Staff Sargeant, F Division RNWMP, Prince Albert, 12 June 1919.
distributed to the old and destitute. Other traditional medical and spiritual practices were no doubt brought to bear in the native response to the disease.

Other groups of indigenous people reacted to the influenza epidemic in a similar way. In Rhodesia's Victoria Lake region natives responded to the passing of the epidemic with widespread thanksgiving ceremonies. Established indigenous notions and practices were capable of framing a response to the epidemic.

Rural Saskatchewan bore the brunt of the influenza epidemic. Out of that experience grew a greater awareness of the vulnerability to contagious disease of communities isolated by time and space. Both native and white communities were virgin soil for the epidemic, but they reacted differently. To a certain extent natives turned away from white medicine that had failed them, while homesteaders came to demand medical care that was accessible to all.

A final casualty in the influenza epidemic was the erosion of the belief in the rural myth, or country ideology. Rural life was touted by the agrarian press, and

70. Ibid., Corp. E.E. Harper, "Report - Sun Dance, Blackfoot Reserve, 1921."

71. Terrence Ranger, "The Influenza Pandemic in Southern Rhodesia" Society for the History of Medicine (Bulletin 39, December 1986), p. 15; Ranger's article goes on to argue that the epidemic in Rhodesia gave rise to new explanations for the epidemic in the emergence of African anti-medicine movements.
others, as much superior to the degrading and diseased cities. Country life nurtured families and was the guardian of moral, mental, and physical well-being. It kept alive the spirit of industriousness and productivity. This rural myth, born in the optimism of the boom years, 1900-1913, had begun to fade by 1916. The shockingly high death rate in the country during the epidemic, and the lack of medical facilities meant the countryside and farm were not the wholesome and life-giving places they were supposed to be. Nellie McClung's prairie, "with its honest, wholesome ways learned in the open; its habits of meditation, which have grown on the people as they have gone about their work in the quiet places," was shown to be chimerical. The kindly ties, forged in the extremes of prairie life, that bound people in small communities together were somewhat loosened. Neighbourliness and co-operation that was seen as the hallmark of rural Saskatchewan was likewise dealt a blow during the epidemic. Neighbours were not seen as friends and helpers but as carriers of disease. The growing tide of farmer


73. Ibid., p.104.

74. Nellie McClung In Times Like These (Toronto: University of Toronto Press, 1972), p. 118. McClung was a writer who championed the cause of rights for women, western grievances, and social reform in general.
dissatisfaction with their place in society was given fresh impetus by the epidemic.
CONCLUSION

The Spanish influenza epidemic, 1918-1919, was a war within a war. The Great War and the epidemic together aggravated traditional western Canadian concerns over the tariff, transportation policy, and the economy. The epidemic also exacerbated tensions and concerns within society. Attitudes toward ethnic minorities, not favourable to begin with, were reinforced by nativist assumptions concerning disease and its spread held by the Bureau of Public Health and society in general.

The epidemic also reinforced the belief that government, not individuals, must take charge of health care delivery and institutionalized charity. Increased government intervention characteristic of wartime was continued and increased in the post-war era. The federal Department of Public Health was seen as a necessity in the post-epidemic period.

The epidemic had destroyed the unchallenged assumption that rural life was synonymous with healthy, wholesome living. During the epidemic the countryside became a frightful place to live and die. The shocking loss of life in farm communities certainly did nothing to quell the rising tide of agrarian unrest. The post-war, post-epidemic
period was a time when farmers entered politics and created change following their own agenda.

The issue of unemployment and the rising cost of living, a long-standing concern for working people, was brought to a head during the epidemic. Sudden death or a prolonged illness in the family spelled pauperism for many workers. The post-epidemic period saw workers forcing the issue of collective bargaining and a more secure future that culminated in the Winnipeg general strike.

The west's high expectations of Union government to resolve finally the perplexing issues of the tariff and transportation policy were unrealistic and left many disillusioned. Despite the disappointment with Union government, however, it was still preferable to the partyism of an earlier time. As University of Saskatchewan President Walter Murray explained, "after the influenza [comes] the political plague. Laurier and the Liberals are trying to kill the Union government."¹ The epidemic created an uneasiness and a mood for change that gave western concerns a greater sense of urgency. It was an ugly mood.

Disease and war have been called the upper and nether millstones that grind away at human existence.² The two

1. AUS, Jean Murray Collection, file IV, 49, Murray to E.H. Oliver, 2 December 1918.

came perilously close together in 1918. While the armies of the world preyed on each other and society, the viral parasite, influenza, preyed on humankind. During the period, as historians such as Thompson, Brown, Cook, and Friesen have shown, both farmers and labour saw themselves under attack from the parasites of big business, partyism, the railways, tariff policies, and 'eastern interests' in general. In this thesis it has been argued that the influenza epidemic reinforced their convictions. The Great War has been seen as responsible for many of these changes, but to recognize only the upper millstone and ignore the nether is to tell only part of the story.
BIBLIOGRAPHY

Unpublished Sources

Public Archives of Canada, (hereafter PAC), Records of the Department of Indian Affairs, RG 10, Black Collection.

PAC, RG 18, Records of the RCMP, v 565.

PAC, RG 24, National Defense Papers, v 1847, 4270.

PAC, RG 29, Department of Health and Welfare, v 19, 300, 1192.


Saskatchewan Archives Board (hereafter SAB) M4. Martin Papers.

SAB, CO5, City of Saskatoon Archives.

SAB, City of Regina Archives.

SAB, A 141, Scott Papers.

SAB, A 1, Violet McNaughton Papers.

SAB, A 320, Neatby Family.

Glenbow Archives, Battleford Indian Agency.

Archives of the University of Saskatchewan (hereafter AUS) Jean Murray Collection.

AUS, Presidential Papers Series I.

AUS, Sharrard Papers.


Published Documents

Canada, House of Commons Debates 1919, 1:94-95, 97, 301.
Canada, Senate Debates 1919, 288-289.


Canada, Report of the Royal Commission to Enquire into Industrial Relations in Canada Ottawa, June 1919


City of Winnipeg, Report of the Department of Health 31 December 1918.

City of Ottawa, Annual Report of the Medical Officer of Health, 1919.


Saskatchewan Gazette, xiv, no. 22, 30 November 1918; xv, no. 3, 10 February 1919.

Saskatchewan, Journals of the Legislative Assembly xv, 2nd session, 4th Legislature.

Primary Sources - Articles


Bryce, P.H. "The Story of a National Crime" Ottawa: James Hope and Sons, 1922.

Cadham, F. Major "The Use of Vaccine in the Recent Epidemic of Influenza" CMAJ 9, June 1919 pp. 519-527.


Goldwin, Howland "The Nervous Conditions Associated with Influenza" CMAJ 9, August 1919, pp. 727-731.

"Influenza Among American Indians" Public Health Reports 34, 9 May 1919, pp. 1008-1009.


---------- "The Control of Influenza in Ontario" CMAJ 8, 1918, pp. 1084-5.


Young, George "The Recent Epidemic of Pneumonia: Bedside Findings and Some Inferences" CMAJ 9, May 1919, pp. 421-426.

Primary Sources - Books


**Newspapers**

Battleford *Press*

Grain Grower's *Guide*

Moose Jaw *Daily News*

Saskatoon *Daily Star*

Regina *Leader*

Weyburn *Review*

**Secondary Sources - Articles**


Tobias, John L., "Canada's Subjugation of the Plains Cree, 1879-1885", Canadian Historical Review. 64, (1983)

Secondary Sources - Books


Defries, R.D. The Development of Public Health in Canada. Toronto: University of Toronto Press, 1940.


