

Entry for the Gerry Lynch Memorial Scholarship

*An analysis on how the 1942 St. John's Knights of Columbus Fire impacted the field of
medicine*

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Introduction- Knights of Columbus Fire

On December 12th, 1942, over 500 servicemen as well as local men and women gathered for a relaxing night of music and dance at the Knights of Columbus Hut (The Hut) in St. John's, Newfoundland. Soldiers from the United States, Canada and Newfoundland were stationed in St. John's in preparation for a German military invasion should the war cross the Atlantic. In the spirit of camaraderie, the dance at The Hut was an attempt to make foreigners feel welcome and to provide an escape from the war effort. The evening's main event featured a local band called "Uncle Tim's Barn Dance", who provided live entertainment for both the guests and those listening over the radio. Around 11:00 pm, radio listeners heard the music stop abruptly, interrupted with the voice of a woman shouting "Fire, Fire". A short time earlier, a small fire was discovered in an upstairs cupboard, which by 11:00 pm had grown into a raging inferno. It was estimated by 11:15 pm – less than half an hour from the discovery of the small fire – anyone still inside The Hut had departed from the land of the living. In all, ninety-nine people lost their lives (1).

Much has been written on the events surrounding the Knights of Columbus Fire (The Fire) and those who died. Although not as widely recognized, the history on those survived and the medical treatment they received is also noteworthy. This essay aims to bring to light how victims of The Fire were instrumental to advancements in the fields of burn medicine and plastic surgery as well as the understanding of carbon monoxide poisoning.

Treatment of survivors

Hundreds of people were able to escape The Fire, many of which required medical attention. Patients were first treated at the nearest hospital until stabilized, after which they were transferred to their respective facility (2). Eight hospitals existed in St. John's in 1942, each which exclusively cared for Americans, Canadians, Newfoundland soldiers or Newfoundland civilians. The number of facilities that treated the survivors highlighted an important issue in the field of burn medicine. Although the majority patients had sustained similar injuries – small area burns limited to the hands and face – the treatment patients received greatly varied (3). This variability would have gone unnoticed by a single physician working at the one hospital; but, for someone who visited the patients at the seven different hospitals may have took note of the discrepancies which existed within this microcosm of burn medicine.

Dr. A.W. Farmer

On December 16th, 1942, Dr. A.W. Farmer arrived in Newfoundland to assist with the treatment of the Royal Canadian Air Force (RCAF) personnel. Prior to the war, he had acquired a special interest in the treatment of burn victims and had brought attention to the blood and fluid requirements of these patients. At the outset of the WWII, he was appointed the chief surgeon for the RCAF. Hailing from the University of Toronto, Farmer was certified by the Royal College of Physicians and Surgeons in three specialties: plastic surgery, orthopedic surgery and general surgery(4).

Although Dr. Farmer's official duty in Newfoundland was the care of the RCAF men, he stated had personally seen "each of the 107 hospitalized personnel"(2). This would indicate that he had visited most or all of St. John's seven hospitals, exposing him to the variety of treatments that were used for burn victims. In his article entitled "Medical Report on the St. John's Conflagration", he reported that he had observed no less than fourteen different therapies for burns. He lamented that burns had not been debrided or cleaned, that dressings were changed too frequently, and that "no one had learned to wrap burns up and leave them alone"(3). Furthermore, the idea of early administration of fluids as well as using diuresis as an index of resuscitation was a fairly new concept in 1942, and its practice in St. John's was underutilized (5). "Measured fluid outputs and fluid intakes, vomiting, temperature reaction (sometimes interpreted wrongly) were much neglected", Farmer reported, "...There was a tendency to over treat in some cases and undertreat in others (usually undertreat) with serum and intravenous solution"(3). The problems associated the treatment of victims from The Fire were, in Farmer's opinion, caused by an incomplete understanding of how to treat burns, inadequate therapy and a scarcity of correct materials (3). Farmer clearly had his work cut out for him.

The Knights of Columbus Fire and the Impact of Medicine

(1) Area of treatment of burns

Famer was known as an "ideas man" and worked tirelessly to advance the area of burn treatment and research(4). One year after the fire, he co-authored a

paper in the Canadian Medical Association Journal (CMAJ) entitled “Medical Report on the St. John’s Conflagration”. In addition to outlining the problems he encountered with treatment of burn victims, he made recommendations for improvement: increased education amongst health care workers, adequate hospitalization for those who suffered from serious burns, and the creation of Canadian facilities for the late treatment of burns(3).

Many other medical professionals would be satisfied with having their experiences and ideas published, with the hope that someone else would follow-through with their recommendations. However, Farmer was one of the rare individuals who was able to “become part of the process by which science moves forward”(4). In 1943, in conjunction with the Department of Veterans Affairs and the RCAF, he formed a Plastic Surgery Unit at the Christie Street Hospital in Toronto, large enough to respond to mass-scale casualties. In addition, he became a member of the advisory board for Shriners of America, a group largely responsible for centralizing burn centers in North America and are still known today for their work with burn victims(6).

Ten years later, Farmer continued his enthusiasm to standardize the treatment of burns and published an article in the Civil Defense Issue of the CMAJ. His rationale for this paper, simply entitled “Treatment of Burns”, was to have a reference for health professionals for the treatment of mass burn victims. The article focused on how to properly estimate of fluid loss and resuscitation based on percent of body burned, how to debride and clean burns and how and when to dress the bandages. He also referenced the necessary supplies hospitals should have on

hand which included blood and plasma (7). All these insights echoed the issues he encountered through his experience with the victims of The Fire.

(2) Area of plastic surgery

In addition to his advancements in the area of burn care, Farmer was a pioneer in the field of plastic surgery, and was considered “the father of Canadian hand surgery”(6). It is likely that his reputation was built in part from the treatment of the patients The Fire. In his article entitled “Resurfacing of the Dorsum of Hand Following Burns”, Farmer describes a new surgical technique based the experience on the 37 dorsi of casualties of the Knights of Columbus Fire in St. John’s (8) (see Figure 1). In essence, it was recommended that in place of pedicle grafts, which required a transfer of blood supply, split-thickness grafting could be performed in the case of dorsum of the hand. This technique removed skin in large single sheets, preferably from the back, which had a better chance for graft survival. It allowed for full restoration of usefulness of the hand and a mobile, elastic and durable surface(8). His concept of free skin grafts greatly improved the reconstruction of burned and severely traumatized hands(6).

(3) Area of carbon monoxide poisoning

One of the most baffling facts surrounding the Knights of Columbus Fire was why so many people were unable to escape a building of two stories high. The Newfoundland government called a Commission of Inquiry to determine the high rate of mortality. Dr. Farmer again played a significant role, this time through conveying of his medical expertise to the public. In his testimony, he explained to the court that the fire likely produced large amounts of carbon monoxide, causing a

sedating effect on those who inhaled the gas, leading to an obtunded state and eventually death. His insight into this issue seemed to explain the mystery of why so many were unable to escape. At the conclusion of the Inquiry it was stated “everyone inside was dead by 11:15pm. Many fortunately had fallen insensible from gases so they did not suffer”(2). Perhaps through his expertise, Dr. Farmer was able to bring relief to the grieving families to know that their loved ones did not suffer in death.

Conclusion

The Knights of Columbus Fire and the medical response that ensued highlighted the problems with the treatment of burn victims. The expertise of Dr. A.W. Farmer in conjunction with the hundreds of patients from The Fire provided the framework for the advancements in the field of burn medicine. In addition, the group of patients who required hand reconstruction provided the basis for the development of new techniques in plastic surgery. The mystery of the high rate of mortality from The Fire brought to light the effects of carbon monoxide poisoning, providing relief to the families of those mourning their loved ones.

Although the Knights of Columbus Fire will always be remembered as tragedy, it was said that the insights Farmers and others gained during the war improved the quality of care for burn survivors in the years to come.

Figure 1: Woolhouse and Farmer operating on individual burned in Newfoundland fire (from personal fond of A.W. Farmer)



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