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War and Medicine at the Canadian War Museum

26 May – 13 November 2011

Andrew Burtch and Tim Cook

War and medicine appear to be in conflict. The destructive power of war challenges the medical profession's ability to reduce human suffering and save lives. And yet medicine and the military have worked side by side throughout much of human history. This summer, the Canadian War Museum is hosting a major temporary exhibition that examines critical points in the interaction between war and medicine from the early 19th century to the present day.

The exhibition was originally developed by two medical museums, Wellcome Collection in London, United Kingdom and the Deutsches Hygiene Museum Dresden, in Germany. Spanning from the Crimean War to the present, the exhibition presents a diverse collection of artifacts, photographs, artworks,

documents, and films. The material is organized into three large thematic sections, which explore the military medical system, the traumatic effects of weapons on the body, and the lingering impact of war on the mind.

Beginning in early 2010, the CWM exhibition team reviewed the original exhibition's structure and refined it for a North American audience. Most of the artifacts used in the original show were of British or German provenance from the two World Wars, with some material representing more recent missions in Afghanistan and Iraq. The exhibition team added more than 100 artifacts from the CWM's National Collection, including official war art, archival documents, and other medical-related objects that either enhanced the existing storyline, or allowed for the exploration of Canadian medical and military history.

The exhibition team also contacted institutions such as the Museum of Health Care at Kingston, which holds medical equipment related to the War of 1812. The McGill Pathology Museum at McGill University in Montreal opened its doors to provide access to bone samples extracted from Union and Confederate soldiers injured or killed during the American Civil War. Severed hands, arms, and a skull, all linked to American

soldiers, provide a stark reminder of individuals touched by war and medicine. The Osler Library of the History of Medicine, also at McGill University, supplied unique artifacts related to famous Canadian military practitioners, including a signed copy of Lieutenant-Colonel John McCrae's poem *In Flanders Fields* and Chinese propaganda depictions of Canadian medical innovator Henry Norman Bethune, who died assisting Chinese Communist forces before the Second World War. The National Museum of Health and Medicine in Washington, DC supplied an array of material from its extensive collection, including Minié balls pulled from injured soldiers during the American Civil War, a boot punctured by a Viet Cong punji stick during the Vietnam War, and a resin model skull (created as a medical model for an American

Abstract: War and Medicine is the Canadian War Museum's major summer exhibition. War and Medicine provides an unflinching look at the relationship between medical practice and military operations over the past 150 years. It comprises more than 300 artifacts, images, and works of art from the Museum's National Collection and 50 lenders in Europe and North America. The exhibition is open until 13 November 2011.

Résumé : Guerre et Médecine est la principale exposition estivale du Musée canadien de la guerre. On y jette un regard cru sur la relation entre pratique médicale et opérations militaires au cours des 150 dernières années. Plus de 300 artefacts, images et œuvres d'art de la collection nationale du Musée y sont exposés, en plus de pièces venues d'une cinquantaine d'institutions en Europe et en Amérique du Nord. L'exposition prendra fin le 13 novembre 2011.

soldier injured in a 2003 IED blast in Iraq and later operated on at Walter Reed Army Medical Centre).

The exhibition is divided into three sections. "The System" explores the development of the military medical system as it has emerged over the past 150 years. Military forces have required medical support for as long as there have been wars. Yet for much of history, soldiers had little access to effective medical care. Until the 19th century, medical practitioners understood relatively little, in modern terms, about human anatomy, or the transmission of infection or disease. Amputation was often the only solution for wounds, and generally without pain-controlling drugs. At the same time, military personnel were far more likely to die from disease than from combat. Soldiers and sailors on long campaigns lived under deplorable conditions that encouraged the spread of infectious disease.

By the mid-19th century the Crimean (1854-1856) and the American Civil (1861-1865) wars revealed military medical disasters, with disease and inadequate care killing thousands in Crimea, while American medical systems were often overwhelmed by the tides of wounded. Reforms in civilian medical science and outrage by the public over

the treatment of soldiers and veterans led to reforms of military medical care. By the early 20th century, all modern militaries refined medical practices to better manage disease, treat the wounded promptly and effectively, and maintain the health and fitness of military personnel.

Many of the displays in "The System" examine the military medical system that developed during the First and Second World Wars, which laid the foundations of current practice in most modern armed forces. Through a selection of key artifacts, the visitor learns about the principles of first aid, the importance of medical evacuation, treatment and conditions in rudimentary field hospitals, and longer-term care in hospitals further from the battlefield. Artwork such as Cyril Barraud's *The Stretcher Bearer Party*, the uniform and equipment of a Canadian medical technician who served in Afghanistan in 2009, and allied and enemy surgical kits offer insight into continuity and change in care for the injured.

Weapons of war inflict ghastly wounds on the human body – burns, gunshot injuries, blast explosions, and traumatic amputations. The second section of the show, "The Body," explores the impact of war on the body. This area is thematically grouped around components of the

body: face, skin, eyes, extremities, brain and torso. The artifacts reveal, occasionally in grisly detail, the effects of weapons and the ravages of diseases on soft tissue and bone. These messages are supported by powerful artifacts, such as pathology samples and wax casts of wounds from military and civilian subjects, as well as actual human remains that demonstrate the damage done to muscle, bone, and soft tissue by artillery and infantry weapons. Loaned to the CWM by the Sanitatsakademie der Bundeswehr in Munich, these samples were preserved from autopsies of Germany's dead from the world wars. Graphic photographs and works of art illustrate how plastic surgeons sought to repair or disguise disfiguring injuries, and how injured veterans learned to walk and work using prosthetics made of plywood, steel and electronics, such as the Canadian-designed C-Leg issued to injured soldiers today.

The final section explores war's effect on the mind. Even where conflict has left the body untouched, the mind can still be scarred. In the 19th and early 20th century, military personnel with psychological trauma were characterized as suffering from character flaws or emotional disorders. During the First World

Patti Normand/CWM



Above: Malaria-carrying mosquitoes have destroyed armies since antiquity and, despite the introduction of preventative drugs, still threaten military forces. Malaria remains the world's most common cause of death from infectious disease.

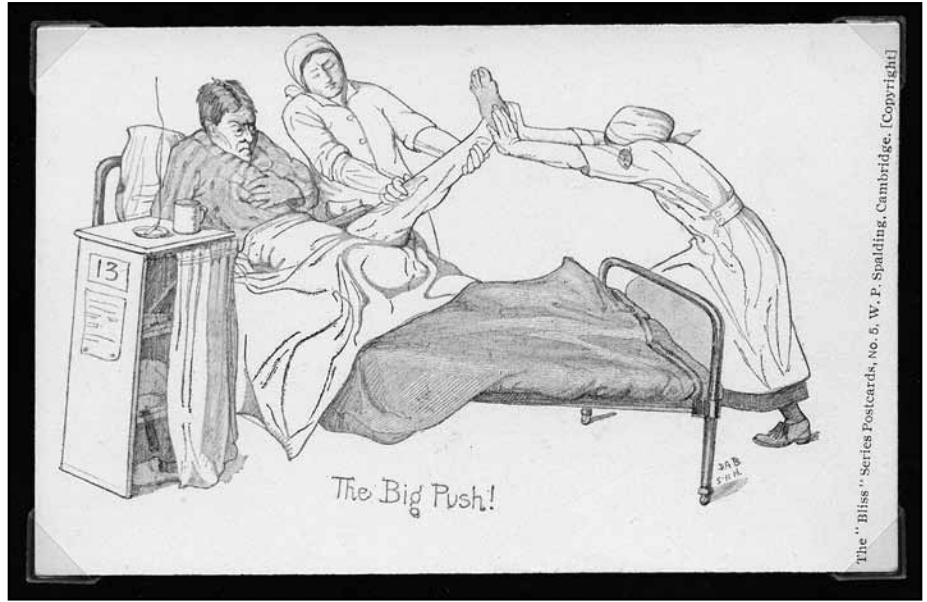
The System

Right: In July 1863, Private P. Larkin was injured by artillery shrapnel in his right foot, which doctors amputated at the ankle. Soon after the operation, his leg swelled as the bone became severely infected and pus discharged from the skin. Another amputation did not cure the infection. After the war, Larkin was forced out of work because of chronic pain and the smell from his leg, which sickened his co-workers. It was not until 1879, some 16 years after his injury, that surgeons finally removed his diseased leg below the knee.



McGill Pathology Museum/CWM 20110062-004

Sanitatsakademie der Bundeswehr



CWM 20020129-036_5

The Body

Above left: A shell fragment severely damaged this right hand, which belonged to an anonymous German soldier during the First World War. The patient died, likely of other wounds, and doctors amputated his hand to use as a teaching tool.

Above right: This First World War British postcard from the “Bliss” series reveals some of the work of nurses and physiotherapists in helping wounded soldiers recover. From the looks of pain on the patient’s face, physiotherapy was anything but “blissful.”

Right: The Army Spectacle Depot in the United Kingdom manufactured this Canadian government-issued glass eye during the First World War. Fully or partially-blinded war veterans received eyes like this one to restore their appearance. Durable acrylic eyes replaced fragile glass prosthetics after the Second World War.

Below right: This is a model of Corporal James Rednour’s skull, shattered in an IED attack in Iraq on 7 December 2003. Repatriated to the Walter Reed Army Medical Centre in Washington, DC, medical technicians there scanned Rednour’s skull using computer imaging techniques, and used a laser to create this resin model. Technicians then used it to create a plate to replace the missing part of Rednour’s skull.



CWM 19830333-001

The Mind

CWM 19710261-2189



Above: Sergeant P.J. Ford painted by Charles Comfort in 1944

During the fierce fighting in Italy during the Second World War, Sergeant P.J. Ford of the Princess Patricia’s Canadian Light Infantry sat for this portrait, painted by war artist Charles Comfort. Hours before the session, Ford’s closest friend had been killed in combat. Ford’s empty expression speaks to his loss, and evocatively captures the strain of war.



National Museum of Health and Medicine/CWM 2011006-001g

War, the strain of service, unrelenting artillery bombardments, the horrors of chemical weapons, and life in the trenches amid the rats and unburied corpses led to thousands of cases of psychological breakdown. Medical practitioners believed initially that the collapse was a physical reaction to high explosive blasts, and termed the disorder shell shock. Later studies observed that shell shock was more often a psychological injury from accumulated stress, although there was no consensus on this. Officers, doctors, and psychiatrists were unsure about how to diagnose shell shock cases and even less certain about effective treatment. Even after a century of industrialized warfare, and the emergence of new diagnostic techniques, medical practitioners still struggle to identify, diagnose, and treat mental trauma.

In "The Mind," selected artifacts and graphics illustrate the different ways military and civilian specialists have attempted to classify and treat psychological injuries. Visitors are introduced to "battle exhaustion"

during the Second World War, accompanied with the haunting portrait of Sergeant P.J. Ford, who, in the hours before sitting for official war artist Charles Comfort, received word that his friend had been killed. Acclaimed director John Huston's 1946 film *Let There Be Light* features candid interviews with psychological casualties in American forces from the Second World War. The visitor is also introduced to the growing acceptance of stress disorders in the postwar period, including the combined efforts of Vietnam War veterans' associations and the American Psychological Association to have post-traumatic stress disorder accepted as an official mental illness in key medical texts. The impact of PTSD and other "operational stress injuries," as they are now labelled in the Canadian Forces, are shown through the personal artifacts of those who have suffered from its effects, including the ballistic vest worn by Lieutenant-General Romeo Dallaire during his command of the United Nations mission in Rwanda, and the

personal war diary of a Canadian soldier posted to a desolate forward operating base in Afghanistan.

Wars linger on in the mind, even after peace is declared or the mission ends. Flashbacks, nightmares, and depression continue to affect those scarred by war. Years may pass before service personnel can talk about what they have experienced. This ongoing trauma has an impact on friends and family, as well as on society's broad understanding of the costs of military conflict. The exhibition concludes with an audiovisual collection of first-hand accounts from Canada and around the world that reflect upon, and offer a glimpse into, the psychological toll of war.

The relationship between military operations and medical practice is ongoing. Today, more than 30 armed conflicts are underway around the world, fought with varying levels of intensity. Military medical practitioners and their civilian counterparts face challenges that are at once historic, and always changing. They must provide aid to the fighting forces, prevent disease, repair injuries, and rehabilitate the wounded. Perhaps most challenging is the long term aid to survivors who cope with the physical and psychological scars of war every day.

For more information see < <http://www.warmuseum.ca/medicine> >



CWM



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Tim Cook is the First World War historian at the Canadian War Museum. He is the author of several books, including *The Madman and the Butcher: The Sensational Wars of Sam Hughes and General Arthur Currie* (Allen Lane, 2010). Cook is the co-curator of the CWM's summer exhibition, *War and Medicine*.