

Brigadier General Carl Rogers Darnall: Saving Lives on a Massive Scale

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The Carl R. Darnall Army Medical Center at Fort Hood, Texas, is named in honor of Brigadier General Carl Rogers Darnall, a Texas native and career Army physician whose active-duty service spanned 35 years. Darnall, the oldest of 7 siblings, could not have imagined the enormity of the contributions that he would make and the lives that would be saved as he pursued a career in medicine.

Born on the family farm north of Dallas on Christmas Day in 1867, Darnall attended college in nearby Bonham and graduated from Transylvania University in Kentucky. He attended Jefferson Medical College in Philadelphia, Pennsylvania, graduating in 1890. Darnall spent several years in private practice before he joined the Army Medical Corps in 1896. He completed the Army Medical School in 1897. Opened in 1893, the Army Medical School was a 4-to-6-month course for civilian physicians entering active duty. The courses introduced physicians to the duties of medical officers as well as military surgery, medicine, and hygiene. It is considered by many to be the first school of public health in the U.S.

Darnall's first assignments in Texas were followed by deployment to Cuba during the Spanish American War and then the Philippines, where he served as an operating surgeon and pathologist aboard the hospital ship, *USS Relief*. Darnall later accompanied an international expeditionary force to China in response to the Boxer Rebellion. In 1902, Darnall received an assignment to the Army Medical School in Washington, DC, that would change his life and the lives of millions around the world. Detailed as instructor for sanitary chemistry and operative surgery, he also served as secretary of the faculty. Just as Major Walter Reed and others before him, Darnall used his position at the Army Medical School to pursue important clinical research.

The complete story of the purification of



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drinking water is beyond the scope of this short biography. In brief, as early as 1894 the addition of chlorine to water was shown to render it "germ free." In the 1890s, there were at least 2 attempts at water purification on a large scale with chlorine in European cities. One of the first uses of chlorine in the U.S. occurred in 1908 in Jersey City, New Jersey. At the Army Medical School, Darnall discovered the value of using compressed liquefied chlorine gas to purify water. He invented a mechanical liquid chlorine purifier in 1910 that became known as a chlorinator. In November 1911, Major Darnall authored a 15-page article concerning water purification.¹ Darnall also devised and patented a water filter, which the U.S. Army used for many years.

The principles of his chlorinator and use of

anhydrous liquid chlorine were later applied to municipal water supplies throughout the world. The positive benefit of clean drinking water to improving public health is beyond measure. It has been said that more lives have been saved and more sickness prevented by Darnall's contribution to sanitary water than by any other single achievement in medicine.

During World War I, Darnall was promoted to colonel and assigned to the Finance and Supply Division in the Office of the Surgeon General. After the war, he served as department surgeon in Hawaii. In 1925, he returned to the Office of the Surgeon General as executive officer. In November 1929, he was promoted to brigadier general and became the commanding general of the Army Medical Center and Walter Reed General Hospital, a position he held for 2 years until his retirement in 1931.

Darnall died on January 18, 1941, at Walter Reed General Hospital just 6 days after his wife of 48 years had died at their home in Washington, DC. He is buried in Section 3 at Arlington National Cemetery. His 3 sons, Joseph Rogers,

William Major, and Carl Robert, all served in some capacity in the Army.

Darnall Army Community Hospital opened in 1965, replacing the World War II-era hospital at Fort Hood. In 1984 a 5-year reconstruction project with additional floor space was completed. On May 1, 2006, the hospital was officially renamed the Carl R. Darnall Army Medical Center.

About this column

This column provides biographical sketches of the namesakes of military and VA health care facilities. To learn more about the individual your facility was named for or to offer a topic suggestion, contact us at fedprac@frontlinemedcom.com or on Facebook.

Author

COL Pierce is a retired U.S. Army pediatrician who served as Chief of pediatrics, Director of Medical Education, and Chief of the medical staff at Walter Reed Army Medical Center. COL Pierce also was the consultant in pediatrics to the U.S. Army Surgeon General for 7 years. He co-authored a book on Dr. Walter Reed and his research on yellow fever and edited a book on the Walter Reed Army Medical Center.

Reference

1. Darnall CR. The purification of water by anhydrous chlorine. *J Am Public Health Assoc.* 1911;1(11):783-797.