The National Museum of Health and Medicine . . .

. . . remains the Army's medical museum, continuing the mission established by Surgeon General in 1862: the study of combat-related injuries, and other pathologies. Yes, the bullet which killed Lincoln is still there, along with Dan Sickel's leg. The docents weave medical discoveries and historical events into compelling perspectives. Take Captain Wirz, commandant of Andersonville, the only Confederate officer hung after the civil war – for war crimes. After he reported a broken arm, he was reassigned to the 'camp', which was actually just an unroofed pen, enclosing a small stream used for both drinking and waste disposal by thrice the number of me for which the 'camp' was designed. Wirz ran Andersonville with extraordinary cruelty, from personal pistol whippings to general starvation; photographs of his prisoners foreshadow those of Auschwitz inmates. The exhibit features vertebrae which reveal that he strangled when hung, to cheers from his ex prisoners who had come to the Capitol for the hanging. What they didn't know is that Wirz faked his war wound; the unbroken arm proves that he was a 'malingerer'.

One particular tour focused on Civil War stories. So the majority of surgical instruments in the display case were different varieties of saws, or course. Amputations were usually performed on limbs rather than the torso for two reasons. First, most abdominal wounds were inoperable. Soldiers with these sorts of wounds were given laudanum to kill the pain and then set aside in a sort of triage. Second, the Minie ball, a recent invention used by both sides, shattered limbs. The Minie ball, shot from a rifled barrel, had a range of up to 400 yards. When one entered the target, striking the organs and bone, its diameter expanded, ripping an exit wound much larger than the entry.

Surgeons were volunteers, basically peer-reviewed in the operating room. Those too slow, or inaccurate, with amputations were thanked for their efforts and reassigned to other tasks. Chloroform was effective for about 20 minutes. While many surgeons could saw well within this window, blood loss was another issue. It accounted for most of the 18% mortality rate. Doctors tried to amputate as far from the waist as possible, since if a wound was re-infected, another amputation might be necessary.

While the Union blockade prevented much Chloroform from reaching Confederate doctors, Lincoln once ordered that a ship carrying the anesthetic be allowed through the blockade, on humanitarian grounds. The South's answer was the "Chisholm inhaler", which had a tube for each nostril to inhale the chloroform directly. Not only did this invention conserve chloroform, it kept the Confederate doctors more sober than their Union counterparts, who applied the anesthesia directly to leaky masks. Dr. Chisholm went on to establish the Ear Nose and Throat department at the University of Maryland.

Medicine was advancing: bleeding and leaches were phased out early in the war, for example. Ether was phased out, since it was too explosive, but that was quickly replaced.

Yes, Daniel Sickel's leg is still on display. It appears folded over; strange for a display. Why? After Sickles lost it, he had a little coffin made, and personally presented the leg, folded as we see it today, to the Army Medical Museum. He was angry that his foot was not preserved as well. But, after drinking to his leg on the first July 2<sup>nd</sup> anniversary of its loss, he resigned himself to its loss, and often returned on subsequent second days of July.

We learned that Theresa Sickles, much younger than her husband, often required a male escort to social events, which is how she met Barton Key. Her husband was busy taking one of Washington's noted madames, Fanny White, to the UK, presenting her to the queen. His mission was to keep Britain out of

the Civil War, despite lobbying by the Liverpool cotton merchants who wanted the blockade broken. Did she help? There is no direct evidence pro or con. But a cab driver noticed how Mrs. Sickles signaled Key that she was available, and denounced her to her husband.

Most know how he forced Theresa to signal Key, so that he could shoot him in –in the groin – in Lafayette Park, yelling "You have disgraced my family". Whether a well-known dalliance might outweigh the embarrassment of the very detailed – virtually pornographic – confession he forced her to sign is quite doubtful. Harpers Weekly had no scruples about publishing the lurid details. (Was "I bought it for the articles" an excuse back then?)

Many women served alongside their husbands, brothers, or neighbors during the war. We do not have an exact count, since the Army did not even know that these women were . . well, women. There were only two things examined during the intake physicals. Did the trigger finger work? And did the recruit have four front teeth intact? One needed to bit off the top of a cartridge, and shoot. A woman could cut her hair and flatten her bosom. Even if discovered they were not disciplined. Nor was rape common as it is today; it was a capital crime beyond even Lincoln's noted forgiveness.

Mary Walker – for whom the Whitman-Walker Clinic is named – virtually defined the glass ceiling of the time. She and her husband were both physicians in Syracuse, NY, though the patients spurned her. She moved to Washington, where she was offered a nurses position. Another option for women was espionage, but she was rejected. Perhaps it was because she often wore pants, which – though practical – made her something of a cross dresser. Though she could not be employed as a physician she could volunteer, becoming the first woman surgeon in the U.S. Army. Eventually she became a contract surgeon, often crossing lines to tend the wounded. And while she did not spy, the Confederates captured and imprisoned her for espionage. She refused to wear more "appropriate" clothing, and was gladly exchanged for a Tennessee physician.

To this day, she is the only woman Medal of Honor recipient. Just before WWI, Congress instituted a pension plan for those awarded a Medal, but set up a board to confirm eligibility. Because Walker, as a contractor, was never awarded a brevet rank, she was stripped of the medal until President Carter restored it in 1975.

Walker went on to work with the Post Office, where she invented the Return Receipt still used today. She also worked for Womens' Sufferage. OK, she was kicked of the organization because she was considered too radical and held some strong opinions which differed from the mainstream suffragettes. But she soldiered on, and survived most of her Civil War-era contemporaries.

The casualties, now estimated at 700-750,000, included 200-225,000 killed in battle, with the rest dying of disease. President Garfield's vertebra, on display, was pierced but one can see how the bullet missed the spinal cord. The problem was that, according to our docent, nineteenth-century doctors were too concerned with removing bullets. Alexander Graham Bell brought his new metal detector to Garfield's bedside, but that did not help. Garfield's official physician, Dr. Bliss, insisted that the bullet was on his right side, so Bell could not search the left side where the bullet lodged. We know that Garfield died of the infection, and assassin Charles Guiteau tried to avoid hanging by pointing out the fact that the doctors' infected hands killed the President, not the bullet. It didn't work.

Another surprising shooting survivor is one of the unknowns. He has a bullet right above the eyes, which somehow left him live. The skull is a discolored, a dark color reflecting the infection which did kill him. We are not sure of the particular bullet in this case, but there is a surprising plethora of data in

"The Medical and Surgical History of the Rebellion". Commissioned by Surgeon William Hammond in 1862, as part of the museum's research mission, it includes case detailed notes on the many numbered bullets: who they entered, the target's medical history, and what finally happened. These bullets, remains, and reports were circulated among medical schools for many years. In that way, Lincoln's case bears an eerie resemblance to his soldiers', The bullet which killed him and a terse typewritten medical report remain.

Doctor Lisle, probing the wound, decided not to pierce the coagulated blood which kept Lincoln from bleeding out immediately. In fact, Lisle's probing released just enough blood to ease pressure within Lincoln's skull, allowing him to survive the night at the Peterson House. Ms. Laura Keene, the star of the evening's play, cradled the wounded President while the decisions about him were made. The bloody dress is currently in storage, owned by the Smithsonian.

One ironic story about the Peterson House came from Park Ranger Brad Berger, at a DOI lecture. Let me note it here. Billy Fergeson, like other Ford's employees, rented the room where Lincoln died. One evening he hosted a party which J.W. Booth attended. Booth, tired, reclined on the very bed where Lincoln would die. Willie Cass would later rent the room, and was doing some serious celebrating the weekend after Appomattox. When he returned, he was so tired that he didn't notice the stained sheets, and just passed out. Lincoln had been moved to the White House for the autopsy, where the bullet fell out.

The museum's 25 million other artifacts are not all from the Civil War. Our particular docent, Dr. Frank Bruno, a Vietnam vet, started by asking we guides what we wanted to see, and of course the questions about the Civil War artifacts took most of the time. He also explained the progress which he observed personally. During the Korean conflict, patients were medevaced bound to the skids of the small helicopters, as one sees in M\*A\*S\*H. By his time, helicopters were large enough to accommodate both patients and medics. Twenty minutes was the target time to transport soldiers from the jungle to medical unit.

Military and NASA medicine have "dramatically improved" civilian medicine as well. One sad case was Able, a female Rhesus monkey whose partner one sees at the Air and Space Museum. She died on the operating table where sensors were being removed. The monitoring devices are the ancestors of much medical equipment used today.

The museum is located in Silver Spring, technically part of the Fort Detrick annex. It is not within the base,, but tucked into an industrial park. It was originally located on the site of the Riggs bank by the White house, and moved to Ford's Theatre after the building was confiscated and closed. From there, it moved to the site of the Hirshorn museum until 1968 when it was relocated to the Walter Reed Army Hospital.

It currently has three galleries. Beyond the historical one we have been discussing, is one detailing pathologies which are not strictly battle related, but have been helped by military research. There is a leg with elephantiasis, a smoker's lung, and part of the tumor from U.S. Grant's throat.

A third gallery currently exhibits models of Army hospital ships. Yes, they were Army, not Navy ships. The inter-service rivalry one sees at the Army-Navy game is not limited to football. The Army did not have sailors, so it contracted with merchant marine to man the ships. The first purposely built hospital ship in the U.S. Navy was USS Relief which was commissioned in 1921. During World War II both the United States Navy and Army operated hospital ships though with different purposes.. The Navy's

ships were fully-equipped floating hospitals, while the Army's ships were more like primary care and transport facilities. This exhibit will be changed in a few months, though no plans are officially announced.

Docents prefer to work with groups of about twenty people. The museum is not staffed as, say, the Cathedral, so one should call ahead as soon as possible. The museum has an off-base separate parking lot, so one does not need special permission to enter. It could accommodate a bus most days. There is no official security check on entry, as at Arlington. There is much more than this note describes; one thing about excellent docents is that they can tell such absorbing stories than one just moves a bit slowly. So, if you will be on a tight schedule, please let them know.

erelocated from Walter Reed Army Hospital to a new site in a corner Fort Dietrich's annex in Silver Spring