

CAMP MEADE AND THE INFLUENZA EPIDEMIC OF 1918



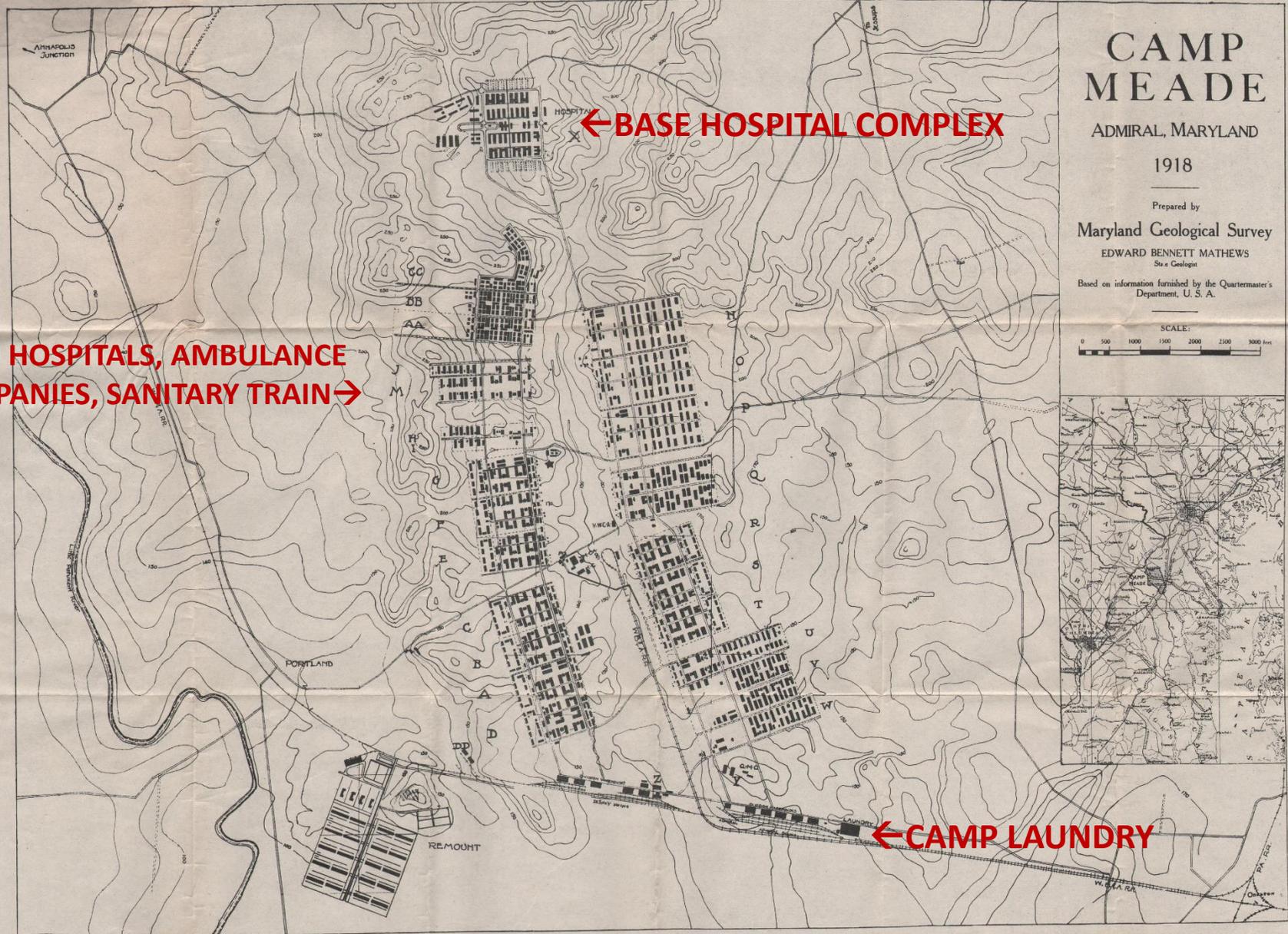
Camp Meade Base Hospital Receiving Ward, 1919

The State of Military Medicine During World War I

- Improvements over the Civil War era: Knowledge of **microbes** as agents of disease and of the need to **sterilize** equipment
- Recent **professionalization** of medical education: universities and strict licensing procedures rather than brief apprenticeships
- Creation of the **Army Nurse Corps** in 1901—professional training under direct supervision of the Army
- **Medical Reserve Corps** established in 1908—over 9,000 doctors, dentists, and veterinarians available for war-time needs
- Established and experienced **Red Cross** ready to assist U.S. military

Camp Meade, Maryland, during World War I

- Established May 1917 as one of 16 major Army cantonments, named for Civil War Major General George G. Meade
- Admiral, MD—18 miles from Baltimore, 27 from D.C.
- Connected to Pennsylvania Railroad and Baltimore & Ohio RR
- Over 400,000 Soldiers passed through during the war; 96,000 returned from overseas and mustered out of service at Camp Meade.
- Training site for three Divisions: 11th, 79th, elements of 92d (African-American)
- Summer 1918: Incorporated Camp Franklin and “Hello Girls” (Signal Corps switchboard operators)
- Quartermaster Remount Station—handled over 22,000 horses and mules
- Medical training for Army officers, medics, and nurses



CAMP MEADE

ADMIRAL, MARYLAND

1918

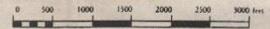
Prepared by

Maryland Geological Survey

EDWARD BENNETT MATHEWS
State Geologist

Based on information furnished by the Quartermaster's Department, U. S. A.

SCALE:



FIELD HOSPITALS, AMBULANCE COMPANIES, SANITARY TRAIN →

← BASE HOSPITAL COMPLEX

← CAMP LAUNDRY

ORGANIZATION	SECTION
794th Division Headquarters	* K
157th Infantry Brigade—H. Q.	1/2 F & G
318th Infantry Regiment	1/2 F & E
314th Infantry Regiment	1/2 C
317th Machine Gun Battalion	S
158th Infantry Brigade—H. Q.	R & 1/2 S
315th Infantry Regiment	T & 1/2 S
316th Infantry Regiment	U
312th Machine Gun Battalion	O
154th Field Artillery Brigade—H. Q.	N
316th Field Artillery Regiment	

ORGANIZATION	SECTION
311th Field Artillery Regiment	Q
312th Field Artillery Regiment	Q
154th Depot Brigade—H. Q.	BB
1st Training Battalion	BB
1st Sep. Det. Con. Objectors	C
4th Training Battalion	C
6th Training Battalion	CC
30th Training Battalion	C
310th Machine Gun Battalion	C
27th Engineers	AA*
28th Engineers	AA*
324th Field Signal Battalion	

*Temporary

ORGANIZATION	SECTION
304th Field Signal Battalion	H
304th Division Trains and Military Police	J
Camp Quartermaster	I
Bakery Company No. 301	Z
23rd Engineer Regiment	1*
Ambulance Cos.	M
Field Hospitals	N & O
364th Trench Mortar Battery	N & O
364th Engineer Regiment	V
364th Supply Train	V
364th Ammunition Train	W
Truck Company No. 328	W

ORGANIZATION	SECTION
Truck Company No. 63	W
Ordnance Depot Co.	DD
Camp Quartermaster	Y
Bakery Company No. 301	Z
23rd Engineer Regiment	1*
368th Infantry Regiment (Colored)	1/2 A & D
351st Field Artillery (Colored)	1/2 A & B
Remount Depot	Dancy
Base Hospital	G
488th Sub. Depot Detachment—H. Q.	C
486th Sub. Depot Detachment Co.	V

*Temporary

Camp Meade's Base Hospital

- Opened 10 November 1917 at far north end of camp
- 48 wards, each in a separate building
- 32 wards connected by wooden corridors
- Isolation wards in the woods for infectious patients
- More than 150 buildings: Laboratory, X-Ray Building, Operating Pavilion, Kitchen, Mess Hall, Baths, Sterilizing Plant, Mortuary, Officers' and Nurses' Quarters, Red Cross building for convalescent patients and hospital visitors, Chapel, Exchange, Storehouse, Powerhouse, Fire Department Building

The Global Influenza Pandemic of 1918-1919

- **“Spanish Influenza” may have originated in Haskell County, Kansas.**
- **Fort Riley, Kansas: 107 Soldiers reported sick with a severe flu on 11 March 1918.**
- **March-May 1918: Soldiers moved throughout U.S.; flu spreads to more than a dozen Army camps and several states.**
- **May 1918: American Soldiers carry flu to Europe.**
- **Fall 1918: Deadly second wave—Flu virus mutates into a more virulent form, spreads to Asia, Africa, South America, back to North America.**
- **Third but somewhat less lethal wave in early 1919.**

The Global Influenza Pandemic of 1918-1919



- **Symptoms:** Body temperature as high as 105 degrees, delirium, severe coughing producing “pints of greenish sputum,” cyanosis (oxygen-deprived skin turned blue)
- **Pneumonia:** Flu weakened immunity to pneumonia-causing bacteria. Pneumonia drowned lungs in blood, other fluids and was primary cause of flu-related deaths.
- **Other complications:** meningitis, other respiratory problems (tuberculosis), permanent brain damage, otitis media (inner ear swelling), etc.
- **Killed between 20-50 million worldwide (some estimates: 100 million) including many young people in their prime—Deadliest disease of all time.**
- **675,000 Americans** died, including about **50,295** U.S. servicemen in Army camps and overseas and **4,907** on U.S. Navy installations and ships (vs. over 50,500 U.S. servicemen killed in combat or died of wounds in WWI).

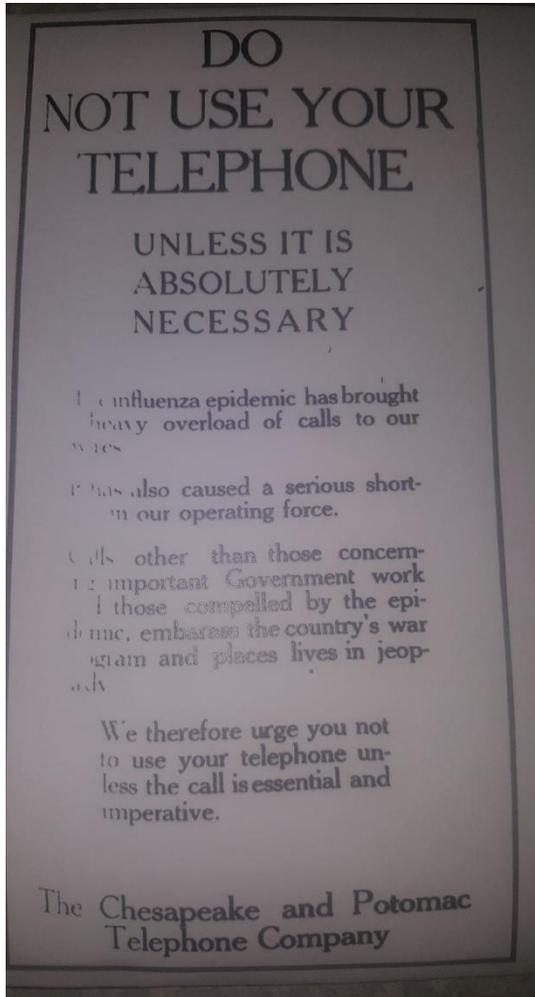
Influenza Arrives at Camp Meade

- **17 September 1918:** A handful of Soldiers report to the Base Hospital and are diagnosed with influenza.
- **22 September 1918:** There are 286 influenza cases at Camp Meade (11th Division Surgeon's report); 71st Infantry Regiment placed under quarantine.
- **23 September 1918:** Sanitary order prohibits singing groups ("it was observed that men singing in large groups frequently held their heads close together"); Liberty Theater, YMCA auditorium, and recreational Hostess House are closed.
- **24 September 1918:** 800 new flu patients hospitalized; six companies of the 71st Infantry ordered out of barracks to tents four miles away; **all of Camp Meade placed under quarantine.**
- **28 September 1918:** Maryland reports 1,173 cases of influenza to the Public Health Service (24,300 cases reported by 12 October 1918).

Newspapers and Officials: “What Flu Problem?”

- *The Harrisburg Patriot* (Pennsylvania), 24 Sept. 1918, “Influenza Hits Boys at Camp Meade”—Only 20-30 soldiers ill. “The malady is not spreading.” 11th Division Commander MG Jesse McIvane Carter—“no cause for alarm,” no quarantine necessary. (Truth: 11th Division Surgeon’s report: 286 cases on 22 Sept., numbers of flu patients increasing. Camp quarantine imposed 24 Sept.)
- *Philadelphia Inquirer*, 25 Sept. 1918, “500 Influenza Victims at Meade”—“Situation Disagreeable, But Not Alarming”—Officials hopeful no quarantine necessary. No deaths. (Truth: 800 hospital admissions by 24 Sept.; two deaths reported 27 Sept.)
- *Washington Times*, 1 Oct. 1918, “Meade Fills Ranks Depleted by Grip”—Ample medical facilities for flu patients. (Truth: 3,000 flu patients; base hospital exceeds capacity)
- *The Camp Meade Herald*, 27 Sept. 1918, “Camp Takes Precautions to Forestall Influenza”—Camp officials’ “extraordinary precautions” will prevent the spread of disease. No cause for alarm. (Truth: Illness spreading among nurses; extra hospital wards converted for use by flu patients; flu spreading despite all containment efforts)

CONSEQUENCES OF OFFICIAL OPTIMISM



Front page of *The Capitol* newspaper
(Annapolis, Maryland,
12 October 1918)

- **Rumors** fill the information gap—Army medical establishment at Camp Meade said to be infiltrated by pro-German doctors and nurses who deliberately spread flu to **Soldiers**.
- **Flood of letters from anxious relatives**—Inquiring about truth of rumors and requesting more information about the flu epidemic at Camp Meade. Distrust of newspaper reports.

Influenza Multiplies

- **28 September 1918: Record 875 admissions to hospital (414 discharges)**
- **30 September 1918: Illness in 72d Infantry Regiment. Regiment moved into tents. 13 flu deaths, including talented Remount rider Sgt. Floyd Huyck.**
- **1 October 1918: Base hospital with capacity of 1,890 houses 3,375. Field Hospitals 241 and 244 set up in barracks to house hundreds of patients (quickly become overcrowded). Recreational buildings converted to flu wards; Quartermaster 154th Depot Brigade sets up additional emergency infirmary.**
- **2 October 1918: Number of new flu patients peaks, but **pneumonia** spreads.**
- **3 October 1918: 34 Soldiers die, 700 new flu cases, 99 pneumonia cases.**
- **4 October 1918: Camp flags at half-mast in tribute to 98 Meade Soldiers who have died.**

October 1918: Pneumonia Crisis Peaks

- **6 October: 45 deaths. Number of new flu cases drops to weekly low of 369. 716 new cases of pneumonia.**
- **8 October: 60-65 deaths. Not enough embalmers to deal with accumulating bodies. Emergency morgues constructed.**
- **30 September to 11 October: 154th Depot Brigade infirmaries receive over 2,220 patients from several training battalions.**
- **11 October: Army enlists 3 additional stenographers to answer telegrams from “anxious parents.”**
- **Next of kin (mostly parents) allowed into camp to visit critically ill patients.**
- **20 October: Crisis peaks. Camp quarantine lifted. At least 10,000 flu patients have been admitted to the base hospital since late September.**

Hospital Staff, Volunteers, and Departments

- **86 doctors in Oct. 1918 (55 in Jan. 1919, 25 in Mar. 1919). With everyone “working to the limit of his ability,” 40 were held back to replace exhausted doctors.**
- **Medical students of Johns Hopkins University (Baltimore) assisted in hospital wards.**
- **By mid-October 1918, 61 out of 137 female nurses had gotten sick. 40 trainees who arrived at the nurses’ school in September were put to work in the hospital.**
- **Catholic orders—Daughters of Charity (Emmitsburg, MD), Bon Secours, St. Francis, Sisters of Mercy (Mercy Hospital, Baltimore)—sent nuns who were trained nurses.**
- **Other medical/hospital staff: enlisted staff, cooks, clerks, typists, hospital stable and farm staff, dieticians, bread bakers, pharmacists, accountants, sanitary unit members, ambulance unit members, maids**
- **Chaplains, religious org. volunteers (Y.M.C.A., Jewish Welfare Board, Knights of Columbus)**

ULTIMATE SACRIFICE: DOCTORS



First Lieutenant William Karp, M.D., U.S. Army Medical Corps—
Born in Russia in 1888 into a Jewish family which emigrated to Portsmouth, Virginia. Graduated from the Medical College in Richmond in 1915. Died 9 October 1918 from influenza at Camp Meade, aged 38. Buried at Gomley Chesed Cemetery in Portsmouth.



Captain George Shrader Mathers, M.D., U.S. Army Medical Corps—
Graduated from Rush Medical College (Chicago) in 1918. Worked in the medical laboratory at Camp Meade, where he identified the bacteria which caused pneumonia among Soldiers there. Died 6 October 1918, aged 31, of influenza and pneumonia. His work was taken up by Dr. Ruth Tunnicliff, a civilian contract surgeon.

ULTIMATE SACRIFICE: NURSES

- **Etta (“Ettie”) May Perkins**, age 30, of Morgantown, NC, died 4 October 1918—Received nursing license in 1913; worked at a sanatorium in Statesville, NC, and as a superintendent of Sarah Elizabeth Hospital, Greensboro. “A young woman of striking personality, strong will power, dependable and worthy of confidence and esteem”—*Morgantown News-Herald*
- **Olive Schureman**, Army Nurse Corps, age 32, of Toms River, NJ, died 11 October 1918—Worked as a cooking school instructor in Baltimore; graduated from Johns Hopkins University nursing program in 1916 and worked at Hopkins’ Harriet Lane Home (children’s clinic). Left \$500 to the new endowment of Johns Hopkins nurses training program.
- **Bessie Porter Edwards**, nurse trainee, age 21, of Washington, DC, died 13 October 1918—only child of MG Clarence R. Edwards, 26th Division Commander serving in France. She was buried with military honors at Arlington National Cemetery. “You must be so proud of what she did—truly a soldier’s daughter.”—COL Harvey Cushing
- **Beverly Ann Bird**, age 22, of Waldron, Arkansas, died 5 February 1919—Trained as a nurse in Arkansas; worked as a teacher in Oklahoma. Buried in Waldron. Her casket was carried by six uniformed Soldiers. Headstone inscription notes that she “died in service.”

African Americans, Camp Meade, and Influenza

- Segregated units, inferior housing, separate “colored hospital” and recreational facilities, some white Soldiers assaulted black Soldiers (“race disturbances”). Conscious objectors, viewed as “cowards and scum,” were confined in desegregated barracks.
- In September 1918, black Soldiers appeared less susceptible to flu, but admissions of black patients increased in October to 560 (95 of whom developed pneumonia) as admissions of whites decreased.

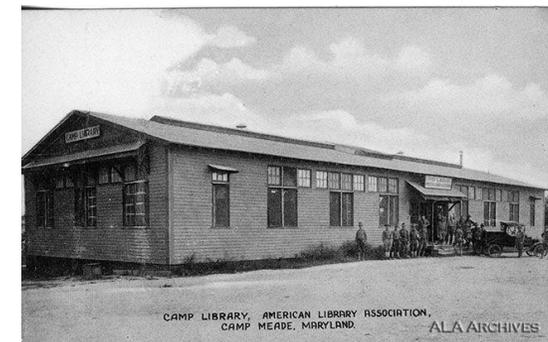


In Baltimore, African Americans were relegated to a few segregated hospitals and died at twice the rate of whites—not enough undertakers, grave diggers. On 20 October 1918, 372 Soldiers of “colored contingent” Meade’s 1st Development Battalion sent to Mount Auburn Cemetery to bury black bodies.

Gordan L. Smith, age 22, who died of flu at Camp Meade in mid-October 1918, was buried at Mount Auburn. He had been a wagon driver for a Baltimore baggage hauling firm.

Morale, Welfare, and Recreation

- **Outdoor sports** encouraged due to belief in fresh air—football, cage ball, running.
- *Camp Meade Herald*—solicited news, jokes, incidents, stories from Soldiers.
- **Letters:** Relatives encouraged to send “sun-shiny,” upbeat letters; recreational facilities open for Soldiers to write letters home.
- **Libraries**—American Library Association established 16 library branches at Meade. In January 1918, 75% of books checked out were non-fiction. Circulation increased during the flu epidemic. Two-thirds of books checked out in October were fiction “of the light and entertaining kind.”
- **Post-quarantine** entertainment included a Wild West show, theatrical performances, concerts, special banquets, and a Halloween party.



Statistics: 1918-1919 Epidemic

- **Camp Meade: 11,000 to 14,000 cases of influenza affecting 25-27% of camp pop. of 44,000-52,000**
- **Camp Meade: 607 to 763 deaths (56 African Americans) of influenza and pneumonia, fatality rates of 4.4% to 6.7% (fairly comparable to Camp Dodge, Iowa—13,700 flu cases, 700 deaths, in a camp of over 35,000)**
- **Camp Meade: Fatality rates of about 27% of flu patients who contracted pneumonia**
- **Data on 118 U.S. civilian communities found 1918-19 flu mortality rates of 2.7% to 4.6%.**
- **Camp Grant, Illinois: 10,713 flu cases, 1,060 deaths in a camp pop. of 40,000**
- **Camp Devens, Massachusetts (first large camp where flu appeared): over 14,000 flu cases, over 500 deaths (at peak period) in a camp population of 50,000**
- **Camp Lee, Virginia: over 12,000 cases of flu with at least 634 deaths (at peak period) in a population of less than 57,000.**

Influenza and Pneumonia Today

- Influenza & pneumonia (same category) are consistently in the **top 10 medical causes of death** in the United States each year.
- **2009:** World Health Organization declares pandemic of **H1N1** flu; many U.S. Army Soldiers in Egypt test positive for H1N1, causing “a serious operational impact.”
- **2015-2016 Season:** **25 million** flu-related cases in U.S.; 310,000 hospitalizations; 12,000 deaths. **Flu vaccines** prevent 5.1 million illnesses; 71,000 hospitalizations; 3,000 flu/pneumonia deaths (Centers for Disease Control and Prevention)
- **January 2017:** Many hospitals in France are “at breaking point” due to a severe strain of flu, **H3N2**, “cousin” of the flu which caused 18,000 deaths there two years before.
- **2016-2017:** “Bird flu” **H7N9** jumps from chickens to humans in China. 88% of these humans develop pneumonia; 75% are hospitalized for respiratory issues; 41% die.
- **2 September 2017:** CDC reports 18 **H3N2** variant viruses in four U.S. states.

Things to Consider

- **Vaccines**—reduced % of deaths by infectious disease: 40% (1940) to 3% (2010). Production, distribution, supply issues. 30 million yellow fever vaccines needed in Africa (2015); only 6 million available. Pneumonia vaccines partly successful at Meade in 1918.
- **Quarantines/Space**—Soldiers moved to isolated area, segregated African-Americans less likely to get sick. After flu, Meade officials advocated smaller, less crowded barracks.
- **Transportation**—Flu traveled with U.S. Army Soldiers on ships and trains. Today, there are approximately 4 billion airline passengers per year.
- **Public Health**—Quarantines ultimately stopped Ebola in West Africa in 2015. Sanitation, nutrition, and basic medical care (IVs for hydration) remain vital.
- **Medical research & planning**—New pandemic may require vaccines, anti-viral medicines. DOD has basic pandemic plan; Army has held limited pandemic exercises.
- **Information**—Rumors in 1918; lack of accurate info. Ebola epidemic: misinformation on electronic media (Twitter) led to hostility to doctors & officials, unsafe behaviors.