



A Century of Service
at Jackson County Public Health

FOREWORD	HEALTH DISPARITIES	KEY TERMS & PLAYERS	PUBLIC HEALTH & LIFE EXPECTANCY	HEALTH DIRECTORS
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A Century of Service in Jackson County, *1925-2025*

1821 – 1925	1925 – 1930	1930 – 1940	1940 – 1950	1950 – 1960	1960 – 1970
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1970 – 1980

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FOREWORD

Looking Back, Moving Forward

As the Health Director of Jackson County Public Health (JCPH), it is both an honor and a privilege to introduce this publication commemorating a century of dedicated public health service to the residents of Eastern Jackson County. Since its establishment in January 1925 as the Jackson County Health Unit, our department has stood as a beacon of prevention, education, and care—committed to safeguarding the health of our community.

This centennial celebration is more than a milestone—it's a testament to the resilience, adaptability, and unwavering commitment of public health professionals who have navigated decades of challenges. From smallpox and scarlet fever in the early 20th century to the global COVID-19 pandemic of the 21st, our department has worked tirelessly to ensure the well-being of our community through immunizations, health education, and supportive care services.

The progress chronicled in these pages reflects the evolution of public health over the decades. It tells the story of how our community has benefited from the dedication of our staff, innovative programs, and collaborations with local partners. *A particularly proud milestone is our recent*

achievement of national accreditation in 2025 by the Public Health Accreditation Board, which underscores our commitment to excellence and continuous improvement in serving the public.

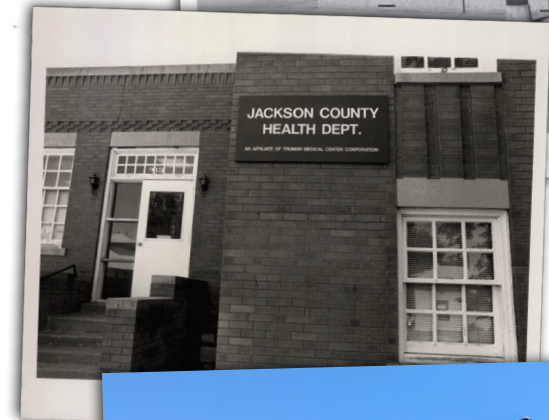
As we celebrate 100 years of service, we also look to the future. Public health faces more challenges than ever before—from the opioid epidemic to emerging infectious diseases and the spread of misinformation. Today, it is more important than ever that our department continues to prioritize vigilance, innovation, and collaboration.

To the residents of Jackson County, we thank you for your trust and partnership over the past century. Together, we have built a healthier, stronger community—and there is still more work to do.

I invite you to explore these stories, which celebrate not only the achievements of Jackson County Public Health but also the spirit of resilience and commitment that defines our community.

Here's to the next 100 years of public health excellence.

BRIDGETTE SHAFFER, MPH
HEALTH DIRECTOR
JACKSON COUNTY PUBLIC HEALTH



ADDRESSING HEALTH DISPARITIES

A Century of Progress & Challenges

Over the past 100 years, Jackson County Public Health has played a crucial role in improving public health outcomes, reducing the burden of disease, and increasing life expectancy. However, this progress has not always been experienced equally across all communities. Throughout our history, disparities in health outcomes have persisted, often disproportionately affecting marginalized and underserved populations.

In the early decades of public health, initiatives primarily focused on broad, population-based measures—sometimes overlooking the unique needs of low-income communities, communities of color, and rural populations. This omission contributed to measurable differences in health outcomes across these populations, helping to shape the disparities we continue to see today.

As awareness of health disparities grew, JCPH worked to implement more targeted interventions. The mid-to-late 20th century saw increased efforts to expand health care access through public health programs, vaccinations, and community

health initiatives. Still, disparities in maternal and infant health, chronic disease prevention, and exposure to environmental hazards remain pressing concerns.

In more recent decades, the Health Department has committed to more intentional strategies aimed at achieving equitable opportunities for all individuals to attain good health. Initiatives such as community-based outreach, culturally responsive care, and data-driven policy changes have been critical in closing these gaps. Programs addressing social determinants of health—such as housing, education, and economic opportunity—are now central to our public health efforts.

While significant strides have been made, the work is far from complete. JCPH recognizes and acknowledges how both our actions and inactions have contributed to the undeniable disparities in health outcomes across Jackson County. Moving forward, our commitment to addressing these disparities will continue to shape public health policies and programs, ensuring that every individual has the opportunity to achieve optimal health.

EXAMPLES OF HEALTH DISPARITIES

Health is shaped by environmental and social factors, but structural barriers often intersect in complex ways that hinder meaningful change. These overlapping factors contribute to a range of health disparities across the United States, including:

RACIAL AND ETHNIC DISPARITIES

Communities of color—including Black, Latino, and Native American populations—are disproportionately affected by chronic diseases, higher infant and maternal mortality rates, and other negative health outcomes.

SOCIOECONOMIC DISPARITIES

Individuals living in poverty often face barriers to quality health care, nutritious food, safe housing, and other essential resources for maintaining good health.

GEOGRAPHIC DISPARITIES

People living in rural areas frequently encounter limited access to health care providers and facilities, resulting in poorer health outcomes.

SEX DISPARITIES

Women experience distinct health challenges, including inadequate screening for cancers like breast and cervical cancer, as well as barriers to accessing comprehensive maternal healthcare.

KEY TERMS

VI

PROGRAMS & HEALTH TERMS

Sabin Oral Sundays (SOS)

Mass vaccination across the U.S. during the 1960s where the live oral polio vaccine developed by Albert Sabin was administered.

Human Immunodeficiency Virus (HIV)

Virus that attacks the body's immune system.

Acquired Immunodeficiency Syndrome (AIDS)

Chronic disease caused by HIV.

Multiple Sclerosis (MS)

Chronic disease affecting the central nervous system.

Prescription Drug Monitoring Program (PDMP)

An electronic database that tracks controlled substance prescriptions in a state.

GEOGRAPHICAL REGIONS

Eastern Jackson County (EJC)

All Jackson County communities outside of Kansas City, Missouri; the region served by JCPH.

KC Kansas City, Missouri.

& KEY PLAYERS

PUBLIC HEALTH ORGANIZATIONS

American Academy of Pediatrics (AAP)

Est. 1930; Professional organization focused on the health of children.

Centers for Disease Control and Prevention (CDC)

Est. 1946; U.S. federal agency for public health and disease prevention.

U.S. Department of Health and Human Services (HHS)

Est. 1953; Protects the health of all Americans and provides essential human services.

Missouri Department of Health and Senior Services (DHSS)

1883; Missouri Legislature created State Board of Health. 1985; renamed Missouri Department of Health (DOH). 2001; renamed Department of Health and Senior Services.

World Health Organization (WHO)

Est. 1948; United Nations agency focused on promoting global public health.

EAST JACKSON COUNTY HOSPITALS

Jackson County Poor Farm

Est. 1852; Jackson County courts purchased 160 acres to "care for poor persons." A bond was passed in 1906 to build a hospital on the site.



Jackson County Home for the Aged and Infirm

Est. 1908; The new hospital building, Patterson Hall, was opened as a care home.



Jackson County Emergency Hospital / Public Hospital

Est. 1930; A new, 88-bed hospital facility supporting emergency and public health services was built on the site.



Truman Medical Center - East (TMC)

Est. 1978; New name for the emergency hospital, which saw significant expansions during the 1990s and 2000s.



University Health Lakewood (UHLMC)

Est. 2021; New name for TMC to reflect its long history as a teaching hospital for the University of Missouri.

KANSAS CITY AREA HOSPITALS

City Hospital

Est. 1870; Original, 175-bed hospital facility serving the Kansas City area. A bond was passed in 1903 to build a larger General Hospital.



General Hospital

Est. 1908; The new 600-bed Hospital facility opened on adjacent land. In 1930, a second building was added to segregate patients of color. In 1957, the two divisions merged. In 1971, the hospital entered a contract to maintain and operate the Jackson County Health Department, which remains in place today.



Truman Medical Center - Hospital Hill (TMC)

Est. 1976; The hospital was dedicated with a new name alongside the new medical school at the University of Missouri - Kansas City.



University Health Truman Medical Center (UHTMC)

Est 2021; New name for TMC to reflect its function as a teaching hospital.

HEALTH DEPARTMENTS

Jackson County Health Unit

Est. 1925; first public health department serving EJC.

Jackson County Health Department (JACOHD)

Official name used during much of the 20th century.

In 1971, the Jackson County judge signed an order delegating the maintenance and operation of the Health Department to the General Hospital. This contract, intended to reduce spending and consolidate duplicate health programs, remains in place as of 2025, with UH providing key support for JCPH systems .

Jackson County Public Health

(JCPH) New name and brand adopted in 2023, reflecting a broader scope of services.

Kansas City Health Dept.

Est. 1866; serves the city of Kansas City, Missouri.

Independence Health Dept.

Est. 1963, closed 2018, re-established 2020. Serves the City of Independence, Missouri.



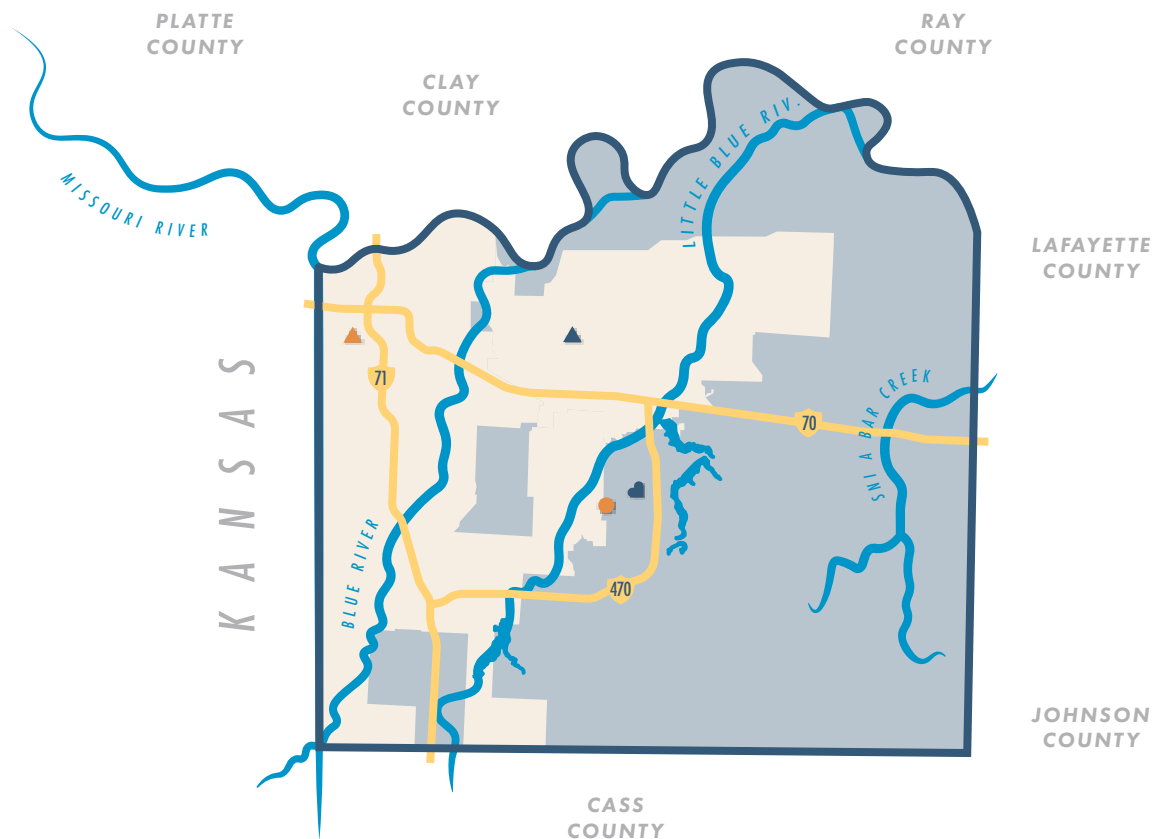
JACOHD anniversary logo used on the department's 1940 annual report.



JACOHD logo, used as the department's official logo for much of the 20th century.



JCPH logo, adopted in June 2023.



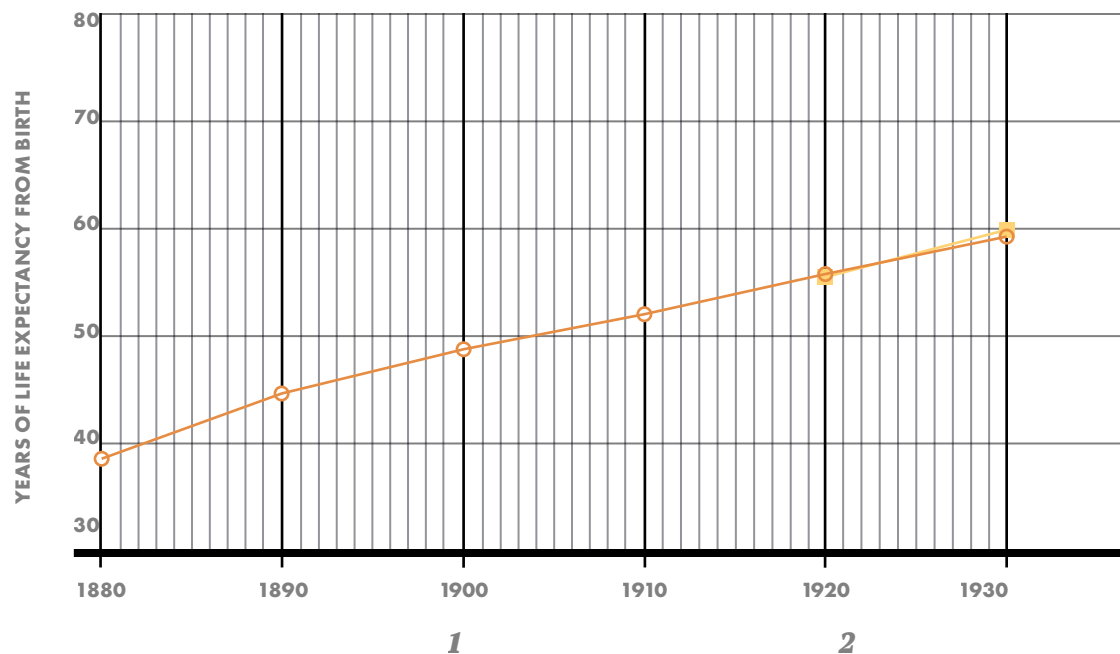
- JACKSON COUNTY, MO
- JCPH SERVICE AREA
- MAJOR HIGHWAY
- RIVER/CREEK
- JCPH
- ▲ JACOHD
- ▲ UHTMC
- UHLMC

PUBLIC HEALTH & LIFE EXPECTANCY

VIII

○ UNITED STATES
 ■ MISSOURI
 ▲ JACKSON COUNTY

See page 72 for life expectancy and public health achievements sources



10 GREATEST PUBLIC HEALTH ACHIEVEMENTS

During the 20th century, the health and life expectancy of people living in the United States improved dramatically, largely due to advances in public health policy and practice. These achievements, published by the Centers for Disease Control and Prevention (CDC), are difficult to attach to specific dates, as they mark broad shifts in scientific understanding often cemented by technological advancement, legislation, or lifestyle changes among the public. The decades listed to the right provide general timeframes for when these factors culminated in significant jumps in life expectancy.

1

1900

SAFER & HEALTHIER FOODS

Food safety measures, improved nutrition practices, and food fortification (such as adding vitamins and minerals to processed foods) decreased foodborne illnesses and nutritional deficiencies.

3

1930s

HEALTHIER MOTHERS & BABIES

Improvements in prenatal care, maternal education, and infant care dramatically reduced maternal and infant mortality rates and improved child health outcomes.

2

1920s

CONTROL OF INFECTIOUS DISEASES

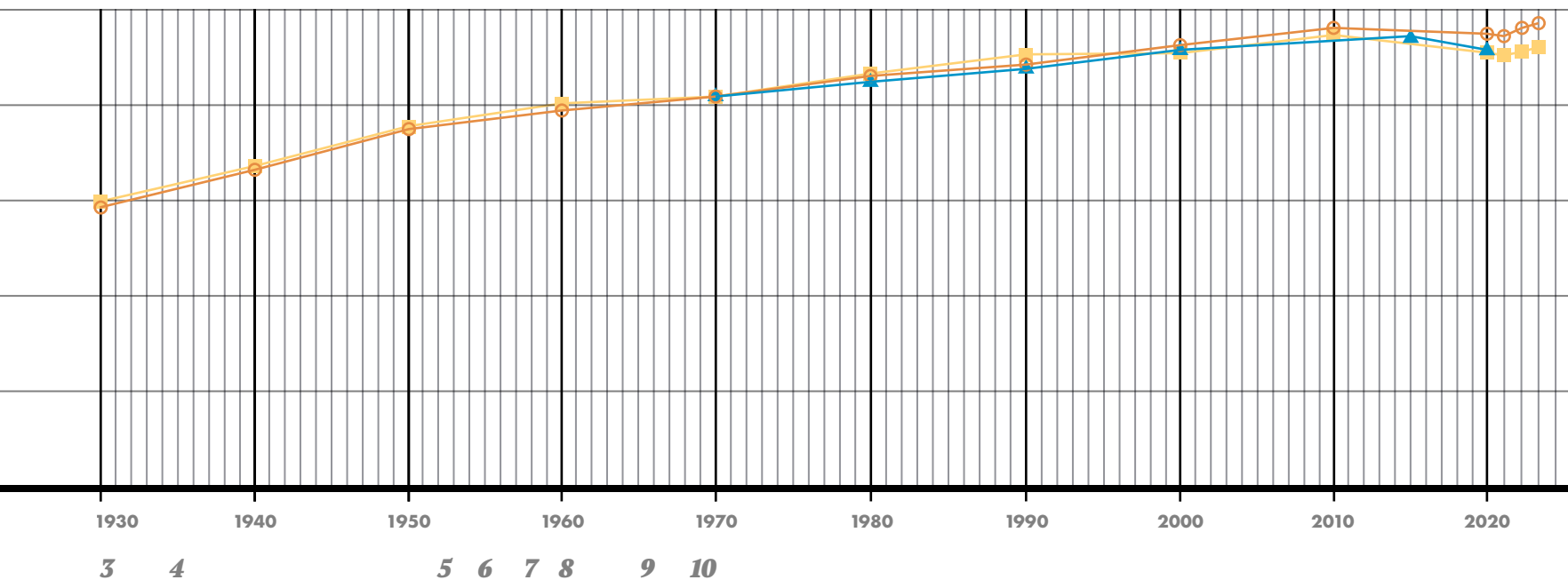
Measures such as sanitation, water treatment, improved hygiene, and antibiotics greatly reduced the impact of infectious diseases including tuberculosis, cholera, typhoid, and influenza.

4

1945

FLUORIDATION OF DRINKING WATER

The introduction of fluoride into public water supplies significantly reduced tooth decay and improved oral health for millions of Americans.



5

1950s VACCINATION

Led to the eradication of smallpox, elimination of polio in the Americas, and control of infectious diseases including measles, rubella, tetanus, diphtheria, dramatically reducing their morbidity and mortality.

6

1960s FAMILY PLANNING

Greater access to contraception and reproductive health services allowed pregnancy planning, improving health for women and children while supporting social and economic progress.

7

1960s MOTOR VEHICLE SAFETY

Improvements in vehicle design, road infrastructure, and safety laws (such as seat belt and child safety seat use, and impaired driving prevention) reduced motor vehicle-related deaths and injuries.

8

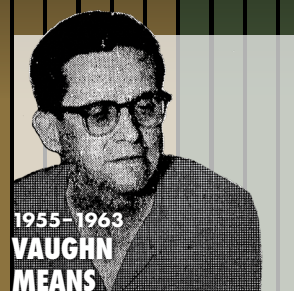
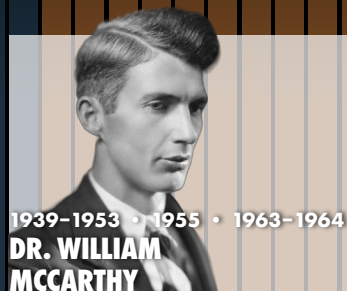
**1964
RECOGNITION OF TOBACCO RISKS**
Public health campaigns, policy changes, and tobacco control programs significantly decreased tobacco use and related diseases, like lung cancer and heart disease.

9

**1970s
SAFER WORKPLACES**
Occupational safety regulations and advances in workplace safety practices led to a significant decline in work-related injuries, illnesses, and deaths.

10

**1970s
DECLINE IN CARDIOVASCULAR DEATHS**
Advances in prevention and treatment—like hypertension control, better emergency care, and smoking cessation—greatly reduced deaths from heart disease and stroke.



1925

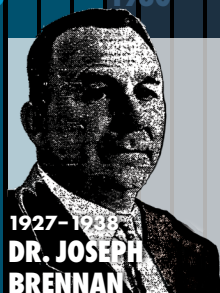
1930

1940

1950

1960

1970



HEALTH DIRECTORS *of* JACKSON COUNTY

1972-1983
DEPUTY DIRECTOR

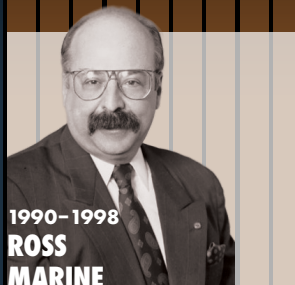
FLORENCE BRUNSON, RN



1974-1978
**DR. EDWARD
TWIN**



1981
**DR. JAMES
MONGAN**



1990-1998
**ROSS
MARINE**



2001-2009
**DR. PAULA
LIVINGSTON, MPH**



2015 - PRESENT
**BRIDGETTE
SHAFFER, MPH**

1975

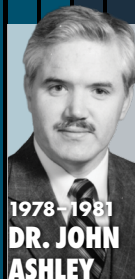
1980

1990

2000

2010

2020



1978-1981
**DR. JOHN
ASHLEY**



1987-1995
DEPUTY DIRECTOR
JOAN KOLICH, RN



1998-2001
**BILL
SCHMIDT, MPH**



2009 - 2015
**JIM
KELLY**

When the 100 years project began, there was no known chronology of health directors. At the time, Jackson County Public Health only had a record of three directors—one of whom is our current director. The names and dates shown here were uncovered through extensive research, including newspaper archives, official documents, and the recollections of past employees spanning the department's century of service. At some points, deputy directors rather than directors led the department from day-to-day, which we've chosen to honor here.

100 YEARS *of*
PUBLIC HEALTH

in Jackson County

1826-

THE BIRTH *of* PUBLIC HEALTH

The history of Jackson County, Missouri, is intertwined with the evolution of public health. From the county's organization in 1826 to the founding of the Jackson County Health Unit in 1925, decades of disease outbreaks, medical discoveries, and shifting strategies illustrated the vital need for a dedicated health department to serve the community.



1821

AUG 10 • Missouri enters the Union as a slave state.

1826

DEC 15 • Jackson County organizes.

1844 - 1880

Dr. Leo Twyman and his son, Dr. Lydall Twyman, begin to chronicle the health of Jackson Countians.



1850

Jackson County census lists 51 physicians, eight druggists, and one dentist.

1860

KC population: 4,418; Jackson County: 22,913.

1866

Immigrants from St. Louis land at the river levee with cholera. An epidemic breaks out, killing 117 in the region. David R. Porter, a local physician, writes: "Some ten or twelve who landed from the (Steamboat) 'War Eagle' were taken out by Union Cemetery and placed in a tent... Nearly all died."

1866

Kansas City establishes a health department to address smallpox, yellow fever, malaria, scarlet fever, typhoid fever, dysentery, tuberculosis and other diseases.

1872

Smallpox epidemic in Kansas City.

1881

Another smallpox epidemic in Kansas City.

1889

Flu epidemic in the U.S.



LEFT Flooding in 1903 damages train and tracks in Kansas City, MO. *The State Historical Society of Missouri.*



LEFT View of a flooded Kansas City, MO in 1903. *The State Historical Society of Missouri.*



LEFT 1903 flood refugees in Kansas City, MO. *The State Historical Society of Missouri.*



LEFT A postcard illustration of the Kansas City riverfront in 1855. *The State Historical Society of Missouri.*

1893

Initial discovery of insect-borne disease transmittal.

1896

First typhoid vaccination.

1914

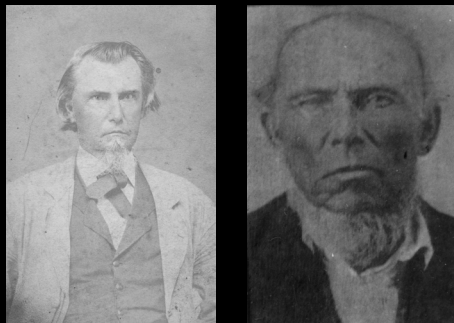
Pasteurization of milk begins in major U.S. cities.

1917

Smallpox epidemic in Kansas City strikes late in the year. City health authorities utilize Leeds TB Hospital, closed several months for the lack of funds, as an isolation unit for smallpox patients.

1918

Great Influenza pandemic. 675,000 deaths in U.S.; 20 million worldwide. Pandemic hits KC in Oct. Dr. A.J. Gannon, city health official, orders businesses and theaters to close.



Dr. Lydall Twyman (left) and his father Dr. Leo Twyman (right). *Jackson County Historical Society*

1844

"June... great flood...
July... very dry and
hot... sickness general
through the state."

1845

"May... heaviest rains
ever... August sickness
commenced... more
malignant type... still
quite manageable."

1846

"Summer... epidemic
of scarlet fever...
fall... jaundice."

1849

"April... smallpox among
immigrants... May 6...
Asiatic cholera... great

malignancy... hotels
crowded... seven deaths
in first twenty-four
hours... fevers in August,
September, October."

1851

"Cholera again made
its appearance...
excessively malignant...
May to August...
followed by fever."

1855

"Late in fall... typhoid
fever... scarlet fever."

1858

"Early in August fevers
commenced... more
sickness than in any
year since 1845."

EARLY YEARS IN JACKSON COUNTY: A CHRONICLED HEALTH STRUGGLE

In the mid-19th century, Dr. Leo Twyman and his son, Dr. Lydall Twyman, meticulously documented the health conditions of Jackson County residents. Their journals reveal a community plagued by recurrent epidemics of smallpox, scarlet fever, typhoid fever, and cholera. Severe floods, droughts, and unsanitary conditions exacerbated these outbreaks, making disease a constant threat.

The summer of 1849 brought cholera to the county, claiming seven lives within the first 24 hours of its arrival. The disease reemerged in 1851 and again in 1854, with increasing intensity. In 1866, a cholera epidemic killed 117 residents—many of them immigrants who just arrived on the banks of the Missouri River via steamboat from St. Louis. Each episode underscored the urgent need for coordinated health interventions.

By 1866, Kansas City had established its own health department to combat diseases like smallpox, yellow fever, malaria, and tuberculosis. However, the broader Jackson County area remained without a formal public health institution, leaving rural residents more vulnerable to preventable diseases.

A CHANGING LANDSCAPE: SCIENTIFIC BREAKTHROUGHS

The late 19th and early 20th centuries sparked groundbreaking discoveries that revolutionized public health. Scientists identified bacteria as the cause of tuberculosis and cholera, while advances in vaccines—including those for typhoid and diphtheria—began to reduce mortality rates. Innovations such as milk pasteurization and improved sanitation practices demonstrated that disease prevention was both possible and effective.

Despite these advancements, the 1918 influenza pandemic exposed the limitations of existing health systems. In Kansas City, theaters and businesses were ordered to close, and isolation units were hastily established to manage the crisis. By the pandemic's end, 675,000 Americans had died—many in communities lacking robust public health infrastructure.





Soldiers stricken with influenza lie in rows at the hospital in Camp Funston, Kansas, 1918. Located on the grounds of Fort Riley, Camp Funston was one of the first major sites of the deadly influenza pandemic that would claim over 50 million lives worldwide, including 675,000 Americans. Troop movements during World War I helped spread the virus to other military bases.

The State Historical Society of Missouri.

FOUNDING THE HEALTH UNIT

In January 1925, Jackson County took a decisive step toward meeting its public health needs by forming the Jackson County Health Unit, which later became the Jackson County Health Department. This milestone enabled coordinated efforts to address pressing health concerns such as infectious disease control, sanitation, and health education.

Almost a century after Dr. Twyman began tracking the health of Jackson County residents, the department was founded on hard-won experience in managing epidemics and adapting to new insights in public health. It also reflected a broader national trend toward professionalized health departments, spurred by growing recognition that health is not just a private matter, but a community responsibility.

The Health Unit operated on a budget of \$11,600 for its first year, equivalent to approximately \$211,500 in 2025.



A HEALTH UNIT FOR COUNTY

COURT NAMES DR. FRANK G. CRANDALL TO TAKE CHARGE.

Physician to Devote Full Time in Looking After Conditions in Rural Communities—Special Attention to School Children.

The county court yesterday afternoon started the operation of a health unit for Jackson County by appointing Dr. Frank G. Crandall, city physician of Independence, deputy state commissioner of health and full-time health officer for Jackson County for a period of one year.

The appointment also makes him a field agent of the United States Public Health Service. Dr. Crandall explained last night at his home. He said that under a provision of the state law, a county appointment in this particular office to which he has been appointed, makes him a state officer.

Dr. Crandall is to receive a salary of \$11,600 a year for the first year.

The Kansas City Times
Feb 28, 1925

1925

JAN • Jackson County Health Unit formed.

1925

FEB • Dr. F.G. Crandall named head of Jackson County Health Unit.

1926

Dr. Joseph T. Brennan named JACOHD Health Director.

1926

First determination of viruses from bacteria.

1926

JACOHD offices move to 310 North Liberty in Independence.

1927

Sanitary division added to JACOHD; Gilbert Strode and Harry Gallagher employed as inspectors.

1927

Virginia Westering, RN joins department for specialized TB work, partially paid by the Tuberculosis Society.

1928

Iron lung invented.

1925-

FROM SCHOOL HEALTH TO SANITATION *Laying the Foundation*

When the Health Department opened its doors in March 1925 under the name Jackson County Health Unit, it focused on disease prevention, family health care, and hygiene education. The work began at a critical time—Kansas City had the highest death rate of any city its size in the United States. Health leaders believed that better hygiene education could address up to 75% of the city's health problems, sparking a countywide commitment to public health.

One notable advocate for this cause was Dr. F.G. Crandall, who resigned from his position as the physician for the City of Independence to lead the newly formed Health Unit. The original team also included Mrs. Mullins, RN, Miss Elizabeth Humber, RN, and Betty Baker, who served as a clerk. Together, the four staff members worked out of the Masonic Building on South Main Street in Independence. By 1926, the department moved its offices to 310 North Liberty Street.

The Kansas City Times
Jan 15, 1925

COUNTY HEALTH UNIT PLANNED.
Movement Advocated by Dr. J. W. Mountin at Independence.
Plans for a county health unit to better health conditions in Jackson County were discussed at a meeting last night at the city hall, Independence.
The movement was advocated by Dr. Mountin, state director of

In its first year, the Health Unit set an ambitious goal: to conduct a complete physical examination of every school child in Jackson County during the 1925-26 school year. The staff's work quickly made headlines, with The Kansas City Journal highlighting their efforts. Within the first months, the department weighed and examined more than 3,300 Jackson County children, while also offering home nursing and hygiene education classes that local families eagerly attended. These early efforts laid the foundation for a healthier community.

PREVENTION, HEALTH GOAL

PROPOSED PROGRAM IS EXPLAINED
BY ALBERT H. JEWELL.

Most of Problems Can Be Solved by
Educative and Preventative Measures, He Tells the County
Medical Society.

HIGH DEATH RATE HERE.

Kansas City has a higher death rate practically than any other city of its size in the country. The table below shows the number of deaths for 1922 and 1923 for each thousand inhabitants:



LEFT, FROM TOP

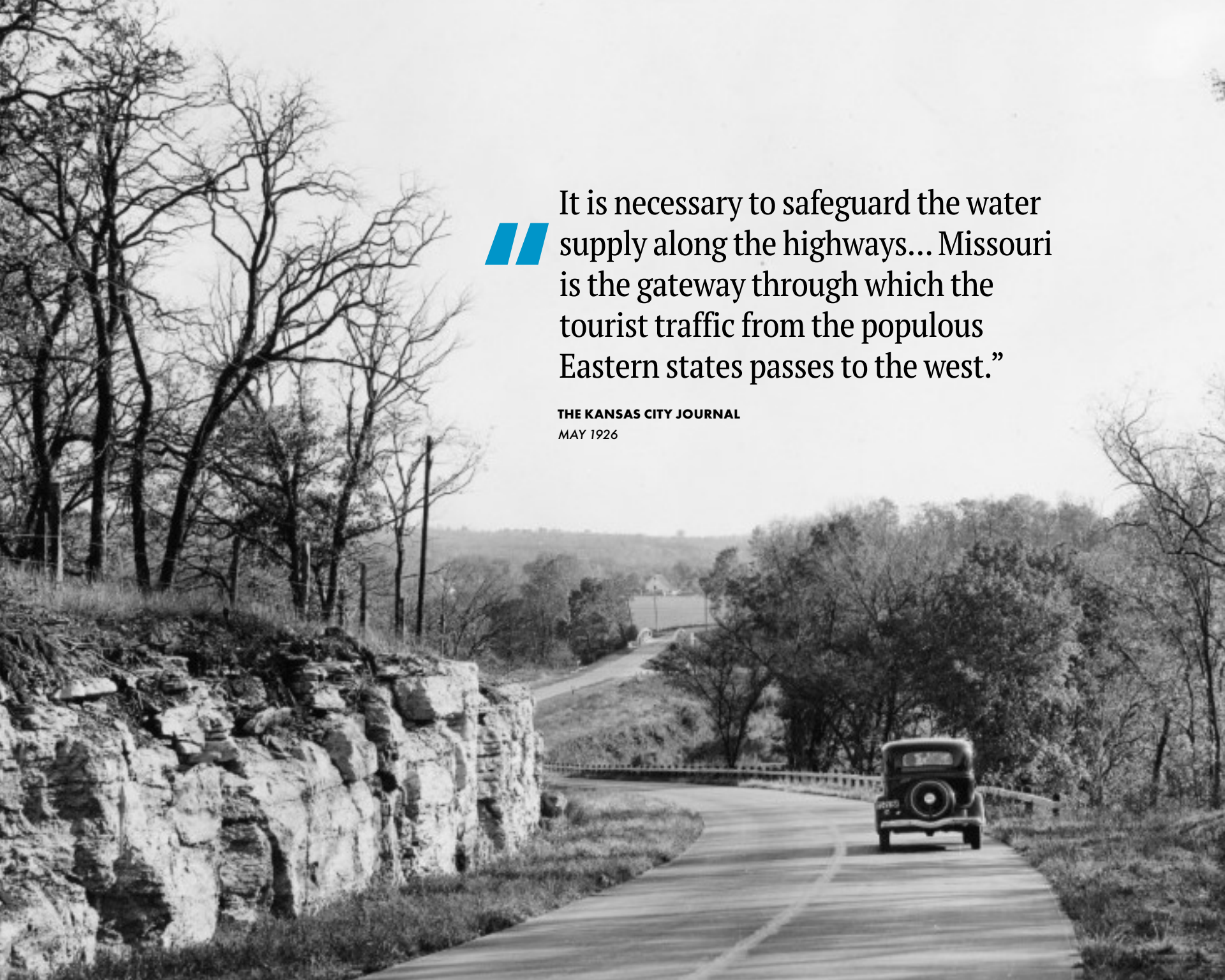
The Kansas City Times
Mar 24, 1926

Public health nurse teaches
mother, 1920. *The Missouri
Historical Society*

Adjudged a "Perfect Baby."

Betty Jane, the 17-month-old baby of Constable Edison L. Watson of Blue Township, was cited as a perfect baby at a baby clinic conducted by the Jackson County Health Unit in Independence Saturday, it was announced yesterday. According to Dr. F. G. Crandall, in charge of the unit, all Betty Jane's measurements are just what they should be for her age. She weighs twenty-five pounds.

The Kansas City Times
Jun 10, 1926



It is necessary to safeguard the water
supply along the highways... Missouri
is the gateway through which the
tourist traffic from the populous
Eastern states passes to the west.”

THE KANSAS CITY JOURNAL
MAY 1926



TOURIST DISEASE AROUSES STATE

**Proposed Comfort Station
Plan Is Explained by
Health Engineer.**

Construction of hardsurfaced high-
state health commissioner, urged
men of the federation to support
in the effort

JACKSON COUNTY AS A TOURIST HUB

The rapid expansion of the automobile industry in the 1920s transformed Missouri into a growing tourist destination. With the construction of hard-surfaced highways, travelers began flocking to Jackson County—but this influx brought new public health challenges.

As roadways improved and traffic increased, health officials recognized the potential for sanitation issues and the spread of disease. To address this, a



statewide sanitary program was launched, featuring “comfort stations” along highways. These rest stops were designed to prevent outbreaks and provide sanitary facilities for travelers.

By 1927, the Jackson County Health Department expanded its capabilities by creating a Sanitary Division. This team of inspectors focused on monitoring the water supply at highway stations and county schools, ensuring public health and safety for both residents and visitors alike.

MAIN Vehicle traveling on
Noland Road & 40 Highway.
Kansas City Public Library

ABOVE LEFT
Kansas City Journal
May 14, 1926

ABOVE RIGHT Missouri
Driver, 1928. *The Missouri
Historical Society*

1930 -

GROWTH, INNOVATION, & PUBLIC HEALTH ADVANCES

1932

JACOHD health offices move to the First National Bank Building in Independence.

1933

JACOHD moves into the Court House.

1934

JACOHD moves to 313 S. Liberty Street in Independence, remaining there for the next 89 years.

1937

Jackson County Emergency Hospital opens as a 25-bed unit for care of indigent county patients and emergency cases, particularly county highway accident victims.

1938

Health Director Dr. Joseph T. Brennan dies after suffering a heart attack in his office.

1939

Dr. William F. McCarthy named JACOHD Health Director.

1939

JACOHD opens public health clinics at the Jackson County Emergency Hospital.

Children playing in the Troost Kindergarten classroom.
Kansas City Public Library



Jackson County Public Hospital.
Jackson County Historical Society



The 1930s marked a pivotal period for the Health Department as it expanded both its reach and services. Less than a decade after its founding, the department moved again—this time to 313 S. Liberty Street, a facility it would call home for the next 89 years. The move symbolized a deepening commitment to the health and well-being of Jackson County residents, particularly its children.



View of the Jackson County Courthouse taken from N. Liberty St., Independence, MO. *Jackson County Historical Society*

Nursery children, 1930s.
Kansas City Public Library



ADVANCING CHILDREN'S HEALTH

During this era, the department placed a strong emphasis on pediatric health, aligning its work with recommendations from the Jackson County Medical Society and the Kansas City Pediatrics Society. These organizations championed new strategies to address contagious diseases, particularly among young people. A key focus was the promotion of immunizations against diphtheria and smallpox—especially after

the American Academy of Pediatrics (AAP) published its first recommendations for routine childhood vaccinations in 1938.

Physical examinations for school-aged children also became a priority. In 1934, fewer than half of the children entering first grade across the county's 98 school districts had undergone a physical examination. Dr. Joseph T. Brennan, the Health Department's director at the time, urged parents to take action.

A nurse takes measurements during a well child exam.
Kansas City Public Library



"I cannot see how parents can afford not to have their children receive the examination," Dr. Brennan told *The Kansas City Times*. "A child has a right to begin school in the best possible physical condition."



The Jackson County Emergency Hospital.
Jackson County Historical Society



Ambulance service at the Jackson County Emergency Hospital.
Kansas City Public Library



A NEW ROLE: EMERGENCY MEDICINE

While the Health Department's primary focus remained on prevention, 1937 marked a new chapter with its expansion into emergency medicine. That fall, the Jackson County Emergency Hospital opened on Lee's Summit Road, operating as part of the long-term care facility known as The Jackson County Home for the Aged and Infirm. Designed to treat patients injured in automobile accidents, the hospital played a

critical role in community health.

Operated by the Health Department, the facility initially housed 25 beds and served as a "safety net" hospital. Its mission was to deliver medical care to individuals who were often excluded from treatment in Kansas City or unable to afford private health care. Today, that hospital continues its legacy of care under the name University Health Lakewood.



1940 -

A HEALTH DEPARTMENT PUT *to the* TEST

A VISITOR FROM WASHINGTON

A momentous visit marked the start of a new decade for public health in Jackson County. Inspectors from Washington, D.C., arrived in Independence to assess the Health Department. Among them was Dr. Katherine Bain, Director of the Division of Research in Child Development at the U.S. Children's Bureau. Renowned for her dedication to improving children's health, Dr. Bain toured the department's facilities for women and children and provided her expert evaluation.

Her inspection left a strong impression. Speaking with *The Kansas City Star* during her visit, Dr. Bain described the Health Unit as "quite adequate," emphasizing how rare it was at the time for counties to have full-time health departments. Her recognition underscored the department's progressive efforts to serve its growing community.



Dr. Katherine Bain. *The Missouri Historical Society*

THE WELL BABY CLINIC: A LIFELINE FOR FAMILIES

The 1940s were marked by the hardships of World War II, and families across the nation faced profound challenges. With many physicians deployed overseas, children's health care at home suffered. At the height of the war, 18% of American Academy of Pediatrics (AAP) members were serving in the military, creating significant care gaps. In response, AAP leaders advocated for policies to protect child health, including easing rationing rules for critical items such as milk and shoes.

Locally, the Jackson County Health Department joined with the Church Women United of Independence to open the Independence Well Baby Clinic in March 1942. This initiative offered free medical services and immunizations for children from infancy through kindergarten, providing essential support for families in need.

The clinic's impact was recognized 50 years later in 1992. To honor its enduring legacy, the Mayor of Independence proclaimed March 5th as "Church Women United, Well Baby Clinic Day," a tribute to its historical importance and service.

Child being weighed during a well child exam, 1945.
Kansas City Public Library



1941

OCT 6 • A tornado strikes Kansas City's East Side and EJC, killing 3 and injuring 135. JACOHD officials set up a typhoid immunization station in Dunbar School.

1941

Rural milk inspections begin at roadside stands throughout the county.

1942

Mildred Duer, MD in conjunction with the Church Women United of Independence, MO and JACOHD begins the Independence Well Baby Clinic.

1947

APR • 2 cases of smallpox reported in Kansas City. President Truman and thousands of children get vaccinations.

1949

Polio epidemic strikes Kansas City, lasting for the next decade.



The Independence Examiner, Mar 9, 1992



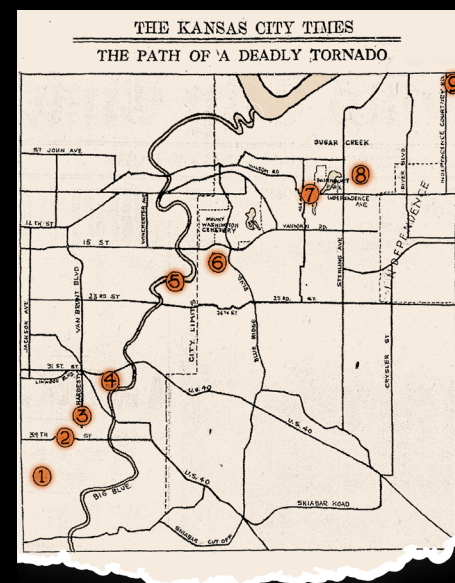
Well child exam, 1949. The Missouri Historical Society.

A TORNADO'S TEST OF PREPAREDNESS

Nature tested the department's resilience just two months before the attack on Pearl Harbor. On October 6, 1941, a devastating tornado tore through Jackson County, touching down along Independence Avenue at exactly 5:13 p.m.—a time preserved on clocks stopped by the storm's destruction.

The tornado's damage was immense: three lives were lost, over 130 people were injured, and homes across the county were destroyed. One account reported by The Kansas City Star described a woman, her infant daughter, and her mother-in-law being thrown from their home by the winds. Miraculously, all three were later found alive, lying in the mud of a nearby potato field.

In the aftermath, the Jackson County Health Department collaborated with the Red Cross and the Kansas City Health Department to open two emergency shelters and provide critical aid. Due to concerns over contaminated floodwaters, typhoid immunizations were administered to safeguard the health of those affected.



The Kansas City Times, Oct 7, 1941.

1950-

16



Boys exercise at summer camp shortly before the government paused public gatherings to prevent polio outbreaks. *Kansas City Public Library.*



Children with polio in an iron lung. *Boston Children's Hospital.*

1950

Following a 5-year trial in multiple cities, U.S. Public Health Service endorses a national program for controlled water fluoridation to prevent tooth decay.

1951

JUL 13 • A devastating flood hits the Kansas City area. JACOHD employees test water supplies, provide emergency purification for drinking water, and fill sandbags alongside national guard and state police.

Floodwaters cripple the industrial district, damaged the city water service and forced citizens in many areas to boil water.



1952

Polio strikes 57,628 in the U.S., mostly children.

1953

Dr. C.G. Leitch named JACOHD Health Director.



Paralysis was one of polio's most devastating symptoms.
Kansas City Public Library.

THE RISE & FALL OF POLIO *in* KANSAS CITY

In the years following World War II, polls suggested that the only thing Americans feared more than nuclear war was polio. From the 1930s to the 1950s, Kansas City, like many American cities, faced significant challenges due to recurring outbreaks of the disease.

Poliomyelitis, a highly contagious viral disease of the nervous system, often caused fever, headache, and fatigue. In severe cases, it led to paralysis of the limbs, throat, or chest, sometimes leaving patients unable to breathe without mechanical assistance from a ventilator or the full-body cylindrical respirator known as the "iron lung." The disease was especially cruel in its tendency to strike children.

Between 1930 and 1934, Kansas City health officials recorded 59 polio cases and seven deaths. But cases surged in the 1940s, and between 1945 and 1949, the city saw 430 cases and 39 deaths. The summer of 1949 was particularly dire. In July, officials closed nearly all public swimming pools, movie theaters, summer camps and other gathering places to contain the outbreak.

1954

National Foundation for Infantile Paralysis selects Kansas City, MO, Jackson County, MO, and Johnson County, KS as sites for nationwide field trial of polio vaccination for school children.

1955

Dr. William F. McCarthy reinstated as JACOHD Health Director.

1955

First polio vaccine federally approved.

1955

APR • More than 50,000 kids in the greater Kansas City area receive first rounds of polio vaccines.

1955

Vaughn Means named JACOHD Health Director.

1957

A devastating tornado strikes Ruskin Heights in the southern section of the city.

1959

Kansas City's final polio epidemic begins.



THE PRESIDENTIAL FIGHT AGAINST POLIO

Kansas City's most famous family played a prominent role in the national campaign against the disease. In 1946, President Harry S. Truman declared polio a national threat and called for coordinated action. First Lady Bess Truman visited children's hospitals across the country, offering support to young polio patients and their families.

In a 1948 radio broadcast, President Truman described polio as a "ruthless enemy" and called on Americans to donate to the National Foundation for Infantile Paralysis—an organization founded a decade earlier by President Franklin D. Roosevelt, himself a polio survivor.



LEFT First Lady Bess Truman visits a three year old polio victim.

RIGHT Kansas City Times, Jul 23, 1949.

POLIO CLAMP ON

The Cancellation of City Recreation Program Into Effect Today.

CONCERT SEASON IS ENDED

Wading Pools and Children's Zoo Closed—Playground Activities Curtailed.

ADVISED BY DR. DWYER

Officials Adopt Suggestion of Health Director, Who Urges Calm Outlook.

[ANOTHER POLIO STORY ON PAGE 9.]

The cancellation of the city recreational program is in effect today. It is a precautionary measure in the polio situation.

MAY HALT POLIO SOON

MASS TEST OF VACCINE COULD SHOW DISEASE IS WHIPPED.

Thousands of Children in the Kansas City Area Will Become "Soldiers" This Spring in Battle Against "Crippler."

The historic trial of a new vaccine against polio will include pupils from the second grades in Kansas City, Clay and Jackson counties in Missouri, and Johnson County, Kansas. The tests will involve a vaccine developed by Dr. Jonas E. Salk of Pittsburgh which, if it proves successful, will end the crippling threat of paralytic poliomyelitis. This is the first of three articles on the experiment, of wide interest for readers from this area.

By ALTON L. BLAKESBERG, Associated Press Science Reporter.

The next six months can spell the beginning of the end of polio, if all goes well.

The weapon is a polio vaccine developed by Dr. Jonas E. Salk and associates of the University of Pittsburgh.

It Should Work. By present scientific evidence,

Preparing for Polio Vaccine Test.



WORKERS at the polio vaccine field trial headquarters at City hall today began unpacking 1,500 syringes and 25,000 hypodermic needles to be used in vaccinating school children here. The equipment, which arrived Friday, will be packaged in envelopes and sterilized before it is stored for use when the vaccine becomes available. More than 7,700 pupils in the second grade will be eligible for vaccination. Similar tests, all a

part of a nation-wide program through which the National Foundation for Infantile Paralysis hopes to determine the effectiveness of the new vaccine, will be held in Clay, Jackson and Johnson Counties. No date for beginning the polio test has been set. However, Dr. Hugh L. Dwyer, city health director, said today an announcement concerning the distribution of the vaccine probably would be made after a meeting of the

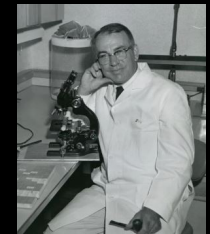
advisory board of the National Foundation in New York next week.

Unpacking syringes and needles are (left to right) Mrs. Dorene Crane, 1011-A East Fourth street, a city health department nurse; Mrs. Harry McGrail, 4423 Roanoke parkway, a volunteer member of the field staff, and Mrs. Margaret Truesdell, 827 West Thirty-ninth street, a health department nurse—(Kansas City Star photograph).

THE SEARCH FOR A VACCINE

In 1949, the National Foundation for Infantile Paralysis—known today as the March of Dimes—funded research at four universities: Kansas, Utah, Southern California, and Pittsburgh. At the University of Kansas Medical Center, Dr. Herbert Wenner led groundbreaking studies that helped identify the three main strains of the poliovirus. His research, along with that of Dr. Jonas Salk at the University of Pittsburgh, laid the groundwork for an effective vaccine.

In 1954, nearly two million children across the U.S. took part in field trials of Salk's vaccine. In Kansas City alone, more than 50,000 children received their first polio vaccines.



Dr. Herbert Wenner, 1955. University of Kansas Medical Center.

ABOVE The Kansas City Star, Mar 30, 1954.

RIGHT The Kansas City Star, Apr 19, 1954.



VACCINES FOR ALL

On April 21, 1955, the first vials of the Salk vaccine arrived at what is now Charles B. Wheeler Downtown Airport. They were quickly transferred to refrigerated storage at Kansas City's General Hospital (now University Health TMC). Within days, health care workers vaccinated 4,000 students in local schools. By week's end, 26,000 Kansas City children had received their immunizations.

Jackson County Health Director Dr. C. G. Leitch told the Kansas City Star, "We're going to give it to every child we can while our supply lasts." Even President Dwight Eisenhower's grandson, seven-year-old David Eisenhower, was vaccinated at Fort Leavenworth. In a statement, the president said, "When I think of all the agony that these people will be spared... I just say to you I have no words in which to adequately express the thanks of myself and all the people I know."



SABIN ON SUNDAY

While Salk's name became synonymous with the vaccine, another breakthrough followed. Dr. Albert Sabin of Cincinnati developed an oral version using a weakened form of the virus. Cheaper to produce and easier to administer, the Sabin vaccine made mass immunization possible.

On March 29, 1965, the Jackson County Health Department joined four nearby counties for its first "Sabin Oral Sunday" (SOS) event. Health workers distributed sugar cubes containing the vaccine to children and families, immunizing more than 176,000 people in a single day.



Before vaccines, the U.S. averaged 45,000 polio cases annually. By 1962, that number dropped to around 910. By 1979, polio was eliminated in the United States.

Kansas City's medical professionals, public health officials, and residents played a vital role in this success. Their commitment not only protected local children but also contributed to one of the most significant public health victories in American history.

LEFT A Missouri child receives the polio vaccine as an injection. *Courtesy of Missouri Historical Society.*

CENTER A child receives the polio vaccine during a Sabin on Sunday event.

RIGHT A child takes the Sabin oral vaccine in syrup form. *Cincinnati Children's Hospital.*



NURSES GIVING TYPHUS SHOTS TO WORKERS IN FLOOD AREA

Public health nurses give
typhoid vaccines to workers
following a flood. *University
of Missouri Kansas City.*

1960-

COMBATING TYPHOID *in* JACKSON COUNTY

By the 1960s, many of the infectious diseases that once ravaged American communities had all but vanished, thanks to modern sanitation systems and medical advancements. But in 1967, Jackson County faced an unexpected challenge when typhoid fever—once thought to be a plague of the past—resurfaced in the area.

1960

Jackson County and Kansas City jointly fund a health care feasibility study. A citizen study committee proposes a public hospital district to oversee health care services for all Jackson County residents.

1963

City of Independence opens its own health department.

1964

Dr. J.P. (John) McCalla named JACOHHD Health Director.

1965

JACOHHD participates in the Sabin On Sunday oral polio vaccination drive.

1967

Dr. John Singleton III named JACOHHD Health Director.

1968

Hong Kong Flu strikes Jackson County.

1968

JUL • 2 cases of typhoid reported in Independence.

TWO TYPHOID CASES PROBED

Disease Is Reported by Women Victims in Independence

TRACER ON SOURCE

Health Investigators Look Into Several Possible Causes

Two cases of typhoid have been reported this month to Independence Health department officials and measures are being taken to trace the source and prevent any spread of the disease.

The City Health department, the Jackson County Health department and the Divisions of Health in Missouri and Illinois are working to trace the sources.

The first case was reported July 10 when a 17-year-old girl entered the Independence hospital. A test at the state laboratory confirmed the disease. Results of tests of the second victim, a young married woman, have not been released.

The Jackson County Health department has inoculated about 300 youths who attended a church camp recently with the girl. The families of the victims have been given shots and checks of water, swimming pools and house plumbing have been made, officials said.

The young woman came to Independence about a month ago from Chicago, authorities said. She stopped in several towns along the way. The woman is being treated at the Independence hospital. The girl has been released.

A doctor at the state health office said the inoculations would help prevent any spread of the disease if the shots were administered soon enough after contact.

The Kansas City Star
Jul 28, 1967

Independence

SEES NO PATTERN IN TYPHOID CASES

State Health Official Says Two Apparently Were Unrelated

The two cases of typhoid reported in Independence in the last two weeks apparently are unrelated and do not at this time indicate an alarming pattern, a Missouri Health department official said over the weekend.

They are, however, being checked carefully on both the state and local level. Dr. C. W. Meinershagen, director of personal health services in the department, said. Final diagnosis in the typhoid cases is made at the communicable disease center in Jefferson City which Meinershagen directs.

"We were apprehensive about a possible typhoid outbreak after the recent floods in the Kansas City area," Meinershagen said, "but the normal incubation period has passed without a higher than usual incidence of the disease. The two cases in Independence do not seem to be related in the least to contact with contamination from the floods."

Meinershagen said one of the cases was a young married woman who came to the area from Chicago about 3 days before she became ill. The normal incubation period for the disease is from one to three weeks, he said. The other victim, a teen-

The Kansas City Times,
Jul 31, 1967

The Kansas City Star
Aug 31, 1967

Tense Search for Typhoid Carrier

(Continued From Page 1)
dents girl, the last first full in 13 days before the outbreak.

which the victim may have tests on the employees of all the restaurants the girl might be visiting.

been. Sources in City

typhoid is not foreign to

scourge it once was. Once capable of wiping out whole armies, the disease has been driven underground. Thanks to sanitation and water purification measures taken by all cities of any size, the greatest source of typhoid infection has been removed.

Yet the disease still has breeding grounds, and outbreaks are just frequent enough that typhoid cannot be called rare. It is still highly dangerous, capable of spreading rapidly and nearly always fatal if not caught in time.

Lemons' expanding staff was busy settling in new offices in Independence in mid-July. The city had just hired its first full-time public health nurse, Mrs. Beryl Immer, an enthusiastic campaigner for public health programs.

Then the call came. It was as if Lemons, who two days earlier had completed the second year in his post, had been given some diabolical anniversary present.

For Mrs. Immer, who had been in the office only 12 days, the call was her first challenge.

The call came from the physician of a 17-year-old Independence resident.

(Continued on Page 20)

Drama in Typhoid Search

By Charles T. Powers
A member of The Star's staff, Powers was July 18 when the Independence public health department was notified of its first 1967 case of typhoid fever.

Typhoid fever was not new to Jerry Lemons, director of the Independence health department, but it was always frustrating. In his two years with the 4-year-old department, five cases of typhoid had been reported.

The source of the disease had been located in only one of the cases, and at the end of last



OVER A MAP OF INDEPENDENCE, Mrs. Beryl Immer and Jerry Lemons of the city health department recalled their search of the carrier of typhoid fever who infected two Independence residents with the disease this summer. They found that the cases this summer and two previous years were concentrated in one area of the city—(Kansas City Star photograph by Roy Inman).

The Kansas City Star
Aug 31, 1967

Typhoid Carrier Is Found

A TYPHOID carrier linked to two cases reported in Independence last month has been found, Jerry Lemons, Independence health director, said today.

Lemons attributed the success in finding the source to good co-operation between health agencies, physicians and individuals involved and the recent hiring of a staff nurse in the Independence health department.

The carrier, an elderly person working in a foot establishment, was removed from contact with food and directed to a physician's care.

Lemons said the individual had contacted typhoid more than 50 years ago and was a long-time employee of the establishment. He said the employee's unsanitary personal habits probably prevented an epidemic.



Jerry Lemons, . . . reports carrier in two typhoid cases is found.

ried woman, who had just moved here from Chicago, could only be connected to eating at two establishments.

Lemons said the first case was reported 12 days after Mrs. Beryl Immer was hired as a public health nurse, an enlargement in the city's health program. The probe involved work by health departments in Jackson County, Kansas City, the Missouri and Illinois health departments, and the Chicago health department.

More than 70 persons were tested for the disease. The carrier was located about three weeks after the cases were reported.

Lemons said that previously the Independence health department had no staff to follow through on such cases. The recommended number of nurses for a city of more than 100,000 is 20. The Jackson County health department has been providing services equivalent to three nurses.

Exhaustive Probe Into A Typhoid Outbreak

Health authorities in the area interviewed families for nearly two months recently seeking complete evidence of typhoid fever that broke out after a Church of God Independent Holiness meeting in Audrain County, Missouri.

The camp meet was August 1 through August 11 northwest of Mexico, Mo. Nearly 100 persons attended.

There were 22 confirmed typhoid fever cases among persons who attended the gathering. Of those, about three were hospitalized in Missouri, and 10 others were ill but not

The Kansas City Star
Oct 4, 1968

The Kansas City Star
Aug 23, 1967

A FORGOTTEN DISEASE RETURNS

Typhoid fever, historically a devastating illness, is spread through contaminated food and water. The disease has been blamed for major historical epidemics, from the plague of Athens in 430 BC to the widespread outbreaks that claimed the lives of American Civil War soldiers.

By the mid-20th century, improved sanitation and water treatment had nearly eliminated typhoid in the United States. But in Independence, Missouri, health officials suddenly found themselves tracking a disease they hadn't seen locally in decades.



INVESTIGATING THE OUTBREAK

In July 1967, two cases of typhoid were reported to the newly formed Independence Health Department. Recognizing the complexity of the investigation, the department called on the veteran staff of the Jackson County Health Department for assistance. One of the patients was a 17-year-old girl, and investigators began tracing her contacts and recent activities.

Since typhoid is typically spread through contaminated food, water, or unpasteurized milk, contact tracers focused on where the girl had been in the two weeks before falling ill. One notable location emerged: a church camp in the Ozarks. However, since she had already shown symptoms while at camp, health officials determined she was infected before arriving—meaning the source of the infection was local.

Although the camp was not the outbreak's origin, hundreds of campers and staff were potentially exposed. Jackson County Public Health Nurse Florence Brunson, along with local physicians, responded immediately. In just days, more than 600 booster vaccinations were administered to prevent further spread.

Shortly after, a second case was reported—a young woman who had just moved to Independence from Chicago. Given the incubation period of typhoid, investigators determined she had likely contracted the disease either during her travel or shortly after arriving in Jackson County.

PREVENTING A WIDER EPIDEMIC

With both cases pointing to a local source, health officials intensified their investigation. Ultimately, their contact tracing efforts revealed that both women had eaten at the same Independence restaurant. There, they discovered the unlikely culprit: a 70-year-old waitress who had unknowingly carried the typhoid bacteria for decades. She later revealed that she had contracted the illness 50 years earlier and, like some rare individuals, remained a lifelong carrier—capable of spreading the disease while showing no symptoms.

Thanks to the swift, coordinated response from Jackson County and Independence health officials, a potential epidemic was averted. Their rapid action, including mass vaccinations and diligent epidemiological work, underscored the essential role public health departments play in disease prevention and crisis response.

The 1967 typhoid outbreak served as a sobering reminder: even in an age of medical progress, vigilance and preparedness remain the cornerstones of protecting public health.

1970-

PUBLIC HEALTH CRISES *Meningitis, Swine Flu, & Measles*

1970

MAR • Grandview teen dies of meningitis.

1975

Development of hepatitis B vaccine.

1976

FEB • Several soldiers fall ill with a previously unrecognized swine flu at Fort Dix, NJ.

1976

OCT • JACOHD participates in federal swine flu mass vaccination program.

1976

OCT • Larry Hardison from Concordia, MO becomes the first confirmed victim of swine flu since the federal vaccination program began.

1977

Measles outbreak in EJC. JACOHD reports 200-300 kids in Raytown and Blue Springs School Districts were impacted by the epidemic.

1979

World Health Organization (WHO) announces the eradication of smallpox worldwide and polio in the US.

MENINGITIS TRAGEDY: HOW A GRANDVIEW TEEN'S DEATH SPARKED A HEALTH CRISIS

In March 1970, a public health scare gripped Jackson County following the sudden death of a 16-year-old girl from Grandview due to a rare and fatal complication of meningitis. Her passing shocked the community and triggered an urgent response from local and state health officials.

Fearing an outbreak, the Grandview School District swiftly closed all schools, affecting more than 5,700 students. Though meningitis outbreaks were uncommon, they could be deadly, and the drastic decision to shut down schools reflected the seriousness of the situation.

Disease experts from the Jackson County Health Department quickly launched an investigation and traced the likely source of the infection to Fort Leonard Wood, a military training base in central Missouri. Just weeks before the girl's death, the base had been battling its own meningitis outbreak—reporting 51 active cases, 150 daily hospitalizations for upper respiratory infections, and four deaths.

A key detail emerged during the investigation: the girl's boyfriend was a soldier stationed at Fort Leonard Wood and had visited her days before she fell ill. This connection underscored how infectious diseases can travel rapidly and unexpectedly, emphasizing the importance of swift public health interventions. The quick actions of school officials and health agencies likely prevented further cases in the Grandview community.

DEATH SHUTS SCHOOLS

Officials Close Classes in Grandview Today After the Fatal Illness of a Student Causes Fear of Meningitis Outbreak

LINK TO FORT

Victim Had Been Visited by Boyfriend From Ft. Leonard Wood

The death early yesterday of a 16-year-old Grandview girl from a rare side effect generally associated with meningitis prompted the Grandview school board to close all district schools today. Students will be notified by news media if the closing is extended to Monday.

The district has 5,700 students in five elementary schools, two junior highs and the senior high school.

Kathy Ann Oslier, daughter of Mr. and Mrs. James W. Oslier, 13810 Belmont street, Grandview died about 6:20 o'clock yesterday at the Research Medical center. The family physician listed the cause as an "overwhelming infection."

The Kansas City Times
Mar 20, 1970

★ ★ ★
6 THE KANSAS CITY TIMES
Friday, March 20, 1970

SHUT SCHOOLS AFTER ILLNESS

(Continued From Page 1.)

came ill about noon Wednesday. School officials called her parents, who later took her to Research.

"When we learned the illness had been diagnosed as meningococcemia, we called a board meeting yesterday afternoon," Harrison said.

"After consulting with state and county health officials it was decided that school should be closed Friday in order that we might take the necessary steps to protect our children. We have no direct evidence of a connection between this illness and the Army outbreak, but we have been in consultation with Ft. Leonard Wood officials."

Oslier, father of the girl, was given a 4-day leave of absence from his job as bookbinding foreman of Finishing Enterprise, Inc., said Miss Sharon Dicken, personnel director of the Overland Park firm.

Mrs. Ella Hemmen, industrial nurse for the Johnson County health department, visited the 300-employee firm yesterday morning and advised officials there that any employee suffering from a sore throat, nausea and headaches should report to a physician immediately.

"There's no reason for a panic right now," Miss Dicken said. "We've been advised of what to do in case anyone else contracts the disease."

The family physician, who declined use of her name, emphasized that no diagnosis of meningitis was positive.

Unsure of Cause
"It will be this morning before we are sure what the germ involved is," she said. "Any one of a number of bacteria could have caused the fulminating infection."

The physician said the girl first complained of a sore throat Monday. She was suffering nausea, fever and chills when she was sent home at noon Wednesday.

The doctor described meningitis symptoms as a sore throat, headaches, nausea, fever, chills and stiffness of the neck. It can be contracted only by direct contact with an infected person, but the disease can be transmitted by a "carrier" who does not con-



Kathy Ann Oslier

program at the senior high school and was a member of Future Homemakers of America. She was a member of the Coronation of Our Lady Catholic church, Grandview.

Also surviving are three brothers, Phillip E. Oslier, Michael D. Oslier and Mark Oslier, all of the home; the paternal grandmother, Mrs. William J. Oslier, Lee's Summe and the maternal grandparents, Mr. and Mrs. E. F. Phillips, Springfield, Mo.

Services will be held at 9 o'clock Saturday at the church; burial in Mount Olivet cemetery. The rosary will be said at 8:30 o'clock tonight at the George-Grandview chapel. The family suggests contributions to the Grandview Community Teachers association scholarship fund.

Expect No Epidemic

(Continued From Page 1.)

coccal bacteria may be present in the girl's body, she died of an ailment called Waterhouse-Friderichsen syndrome.

This syndrome is considered rare and is associated with meningitis. In the syndrome the adrenal glands are destroyed. These are tiny but important glands next to the kidneys. They are responsible for making hormones that control the body's salt and water balance, among other functions.

Dr. Paul Young, director of education at Research, said more laboratory studies were being done to determine if the girl indeed had meningitis.

Meanwhile, Dr. Young said, all Research employees that had any contact with the girl have been given antibiotics to help prevent them from contracting the infection.

The public was cautioned not to panic by Dr. Edwin Wicks, director of the Kansas

tioned persons that such information could be misinterpreted by the public as an outbreak when in fact the other forms of the disease are much less severe, and not of the kind that causes epidemics.

Dr. Singleton said that if any cases of meningitis appeared in the Grandview area within the next five days he would consider that an outbreak.

Bacteria Are Common

Dr. Wicks said that any cases reported for the same period in Kansas City might indicate an outbreak here. However, he said, the forms of bacteria that cause meningitis are common and found in the noses and mouths of a large majority of the population.

Why these common bacteria cause no symptoms in some persons, sore throats and upper respiratory infection in others, and full-blown meningitis in others is still not fully understood, Dr. Wicks said.

It is reported that a soldier from Ft. Leonard Wood, where a number of meningitis cases have occurred, visited the girl this last weekend at home.

The girl complained to her mother of a sore throat and coughing Monday, Tuesday and Wednesday. These are the first symptoms of many ailments, including meningitis, Dr. Singleton said.

However since meningitis is suspected in the girl's death, Dr. Singleton advised that all persons, particularly children, see a physician if they develop sore throats, coughing and severe headaches.

Symptoms of Illness

Meningitis also is ushered in by vomiting, high fever, rapidly developing confusion, delirium and coma.

The neck and back may become stiff, and a person may suffer convulsions.

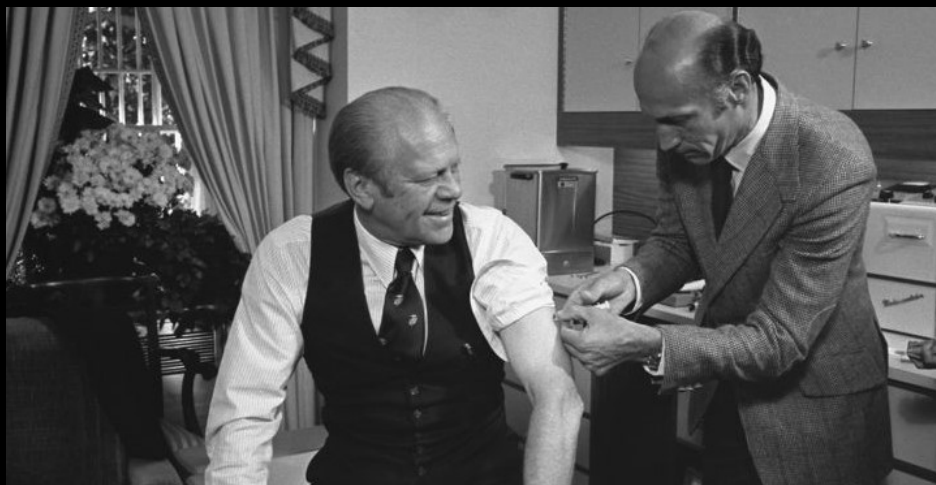
In infants the infection may remain masked for days. That is why Dr. Singleton and Dr. Wicks advised that any infant with high fever, sudden changes in behavior and no other signs of disease should be taken to a physician.

The meningococcal form of meningitis has been responsible for several irregular epidemics in the more densely populated areas of the country. Such epidemics usually occur in the winter and spring.

(ADVERTISEMENT)

HEMORRHOIDS?

M.P.O. has what the leading remedy doesn't have: hospital-proven Bacteracine.



President Ford receives his swine flu vaccine, 1976.

1976: THE SWINE FLU PANIC IN MISSOURI

Early in 1976, a different public health threat swept across the country—swine flu. The scare began at Fort Dix, a military base in New Jersey, where a soldier died after contracting an H1N1 influenza strain similar to the virus responsible for the deadly 1918 pandemic. Fearing a repeat of that catastrophe, federal officials sounded the alarm.

In Missouri, concern intensified when a man in Concordia became the first confirmed human case of H1N1 following the Fort Dix outbreak. With Concordia located near Jackson County, local health departments sprang into action. Hundreds of residents were tested, and the Centers for Disease Control and Prevention (CDC) dispatched three investigators and a federal physician to the state.

In response, President Gerald Ford's administration launched a nationwide campaign aiming to vaccinate the entire U.S. population. More than 40 million people received the vaccine. But the effort faltered when reports linked the vaccine to Guillain-Barré syndrome, a rare neurological disorder. As public confidence waned and no pandemic emerged, the campaign was suspended in December 1976.

Though controversial, the swine flu response shaped future approaches to pandemic preparedness. It remains a pivotal case study in balancing urgency, communication, and safety in public health decision-making.



President Ford holds a press conference announcing the nationwide campaign to vaccinate the entire U.S. population, 1976.



H1N1 blood draw, 1976.

1977: MEASLES SPURS STATEWIDE CHANGES

Just one year after the swine flu scare, Jackson County faced another infectious disease challenge—this time, measles. In February 1977, outbreaks were reported in Blue Springs and Raytown schools. Within weeks, the virus had crossed state lines, spreading into Johnson County, Kansas.

Local health officials acted quickly, organizing mass immunization efforts and vaccinating hundreds of children. The surge in cases caught the attention of Missouri state leaders, prompting the enactment of a strict new immunization policy later that year. The law prohibited children from attending school for more than a month without documented proof of vaccination against polio, diphtheria, pertussis, tetanus, and measles.

The policy was so effective and widely embraced that Missouri had to borrow additional vaccines from neighboring states to meet demand. It became a model for school immunization laws nationwide.

LESSONS FROM THE PAST

The public health crises of the 1970s in Jackson County—meningitis, swine flu, and measles—offer enduring lessons in the importance of vigilance, science-based decision-making, and the power of vaccination. Each incident underscored the need for rapid response, clear communication, and coordinated public health infrastructure. These lessons continue to shape local and national efforts to protect communities from emerging health threats.

TOP The Kansas City Star,
Dec 12, 1976

Area Flu Shots Hit 44 Per Cent

The total percentage of adults immunized against swine flu is approaching the halfway mark on the Missouri side of the metropolitan area, according to statistics released by the Missouri Division of Health.

Information collected from Jackson, Clay, Platte, Cass and Ray counties shows that as of Dec. 1 about 44 per cent of persons 18 years of age or older have received their shots. Officials said that total included the 61 per cent immunization rate for persons 65 years and older.

Statistics for the entire metropolitan area are incomplete because of a lack of specific information from the Kansas City, Kansas-Wyandotte County Health Department.

Johnson County officials, however, report that 32 per cent of the adult population there has been inoculated, including 51 per cent of persons 65 years and older. Wyandotte County officials said about 21,000 persons have received shots. A breakdown by county in Missouri:

	65 and older	18 and older
Jackson	62%	46%
Clay	66	52
Platte	31	16
Cass	54	29
Ray	54	34

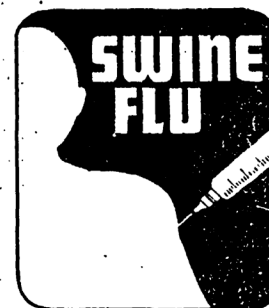
Inoculation program officials also report that, as a result of new recommendations from the Center for Disease Control in Atlanta, chronically ill children six months to three years old may now get the shots for swine flu at the Kansas City Health Department clinics.

Free swine-flu inoculation clinics are being held in most parts of the metropolitan area this week for persons 18 years and older. The exception is Platte County, where immunizations no longer are being given.

The immunizations are recommended for anyone who has not received another immunization within the past two weeks and who does not have a fever.

Persons who are allergic to chickens or chicken eggs also should not receive the vaccine.

Health officials also note that persons under 25 years old should



receive a booster shot a month after the initial immunization.

The Kansas City immunization program has announced that its weekend mass public clinics will end today. A listing of the public schools where the inoculations are to be given is contained in the information below.

If you have any questions about the swine flu immunization program in the Kansas City-area, you may call 274-1834, which is the swine flu hot line at the Kansas City Health Department. Johnson County also has a swine-flu hot line at 432-9090.

Persons wishing other general information about the swine flu and how to protect against it may call TEL-MED, at 421-2585, and ask for swine-flu tapes No. 1 and No. 2.

Here is a listing of swine-flu immunization clinic times and places for the coming week:

Kansas City

Avila College—9 a.m. to 4 p.m. tomorrow, Goppert Theater lobby, 11910 Wornall.

University of Missouri-Kansas City—9 a.m. to 4 p.m., Tuesday, Pierson Hall, 50th and Cherry.

Nazarene Theological Seminary—9 to 11 a.m., Wednesday, 1700 Meyer.

Kansas City Health Department—9 a.m. to 4 p.m. tomorrow through Friday, 1423 E. Linwood.

Wayne Miner Neighborhood Health Center—9:30 a.m. to 5 p.m. tomorrow through Friday, and 9 a.m. to 1 p.m. Saturday, 825 Euclid.

Model Cities Health Center—9 a.m. to 5 p.m. tomorrow through Saturday, 2310 E. Linwood.

Public School Clinics

Each is from 10 a.m. to 4 p.m. today. The schools and their addresses: Nowlin Junior High School, 2800 S. Hardy, Independence; Martin Luther King, Jr., Junior High School, 4201 Indiana, Center South Junior High School, 326 E. 103rd, and Ruskin Senior High School, 11100 Blue Ridge Blvd.

Jackson County

Jackson County Health Department—9 a.m. to noon and 1 to 3 p.m. tomorrow and Wednesday, 313 S. Liberty, Independence.

Tom Ullman Elementary School—4 to 8 p.m. Tuesday, 19th and Main, Blue Springs.

Grandview City Hall—4 to 8 p.m. Friday, 1114 Main, Grandview.

Wyandotte County

Kansas City, Kansas-Wyandotte County Health Department—8:30 a.m. to 9 p.m. tomorrow and from 8:30 a.m. to 5 p.m. Tuesday through Friday, 619 Ann, Kansas City, Kansas.

Johnson County

Northeast Johnson County Courthouse—9 to 11 a.m. and 1 to 4 p.m., Tuesday through Friday, Lamar and Martway, Mission.

County Health Department Clinic—9 to 11 a.m. and 1 to 4 p.m., Tuesday through Friday, 113 S. Kansas, Olathe.

County Health Department Clinic—9 to 11 a.m. and 1 to 4 p.m. Wednesday, 119 E. 2nd, De Soto.

Prairie Village Center—11 a.m. to 1 p.m., Monday, 2900 W. 79th, Prairie Village.

Soroptimist Community Center—9 a.m. to 11:30 a.m., Tuesday, 6219 Martway, Mission.

Westwood Plaza Building—8 a.m. to 11 a.m., Wednesday, Suite 200, 1900 W. 47th Place, Westwood.

Edgerton City Hall—1 to 2 p.m., Wednesday, Edgerton.

Village United Presbyterian Church—9 a.m. to noon, Thursday, 6641 Mission Road, Prairie Village.

Spring Hill Multi-Service Center—9 to 11 a.m. Saturday in the senior center, Spring Hill.

Clay County

Clay County Health Department—10 a.m. to 4 p.m. tomorrow, Wednesday and Friday, and 2 to 8 p.m. Tuesday and Thursday, 1940 West M-152, Liberty.

North Kansas City Fire Station—2 to 8 p.m. Wednesday, 1828 Swift.

Gladstone Community Center—2 to 8 p.m. Wednesday, 69th and North Holmes.

Schools Plan to Enforce Child Vaccination Laws

By Andrew E. Yamaguchi

Alarmed by lower-than-acceptable immunization levels and last spring's measles outbreak in Johnson County, school and health officials here say they intend to enforce laws requiring every school child to be immunized or be exempted from immunization for the six common childhood diseases—

Health officials in Wyandotte and Johnson counties have set up a series of free clinics to circulate in the area. Call the county health departments for times and places.

More than a year ago James E. Dorn, director of the Missouri Bureau of Immunizable Diseases, recognized

that Americans were not as concerned about immunizations as they should be. "In Africa the women would walk so miles carrying their children on their backs to the vaccination station," he was quoted as saying in December, 1976. "The trip took two days. Here we have people who won't even walk across the street."

TOP The Kansas City Times,
Aug 26, 1977

1980—

28

THE AIDS EPIDEMIC & A COMMUNITY'S RESPONSE

The AIDS (acquired immunodeficiency syndrome) epidemic of the 1980s stands as one of the most devastating public health crises in modern history. Caused by the human immunodeficiency virus (HIV), the disease was first identified in 1981 when clusters of rare illnesses—such as Kaposi's sarcoma and pneumocystis pneumonia—appeared among young gay men in major U.S. cities.

At the time, little was understood about the virus, and the unknowns fueled widespread fear and misinformation. Beyond confusion, however, the crisis was shaped by stigma and discrimination. Because early cases primarily affected gay men, the epidemic was not only misunderstood—it was largely ignored. Federal funding and attention were slow to materialize, and national media offered little coverage in the early years. By the time AIDS was finally taken seriously, the disease had already spread across the country.





TOP AIDS awareness
activism, 1989. *University
of Missouri Kansas City*

1981

JUL • Two overhead walkways at the Hyatt Regency hotel in KC collapse, killing 113. Medical students and TMC personnel on call attend to the injured and dying.

1981

DEC • Researchers identify a new viral disease, Acquired Immune Deficiency Syndrome (AIDS).

1982

OCT 14 • KCMO Health Department reports the first AIDS case in KC.

1983

JUL • KCMO Health Department reports 4 AIDS cases in KC.

1985

French researchers announce formulation of a drug that inhibits the AIDS virus.

1988

DEC • Measles outbreak reported in Blue Springs. 2,371 students are vaccinated by the end of the month.

Science

Disease afflicting homosexuals reported in KC

By Tom Rainsack
A Member of the Staff

A new and deadly disease that attacks the body's immune system and has mainly afflicted homosexuals on both coasts has started to make inroads into the Midwest.

The only Kansas City area case was diagnosed in August in Overland Park. The victim, a 34-year-old man, is undergoing treatment in Houston for acquired immune deficiency syndrome.

Dr. Nabih Abdou, an immunologist and professor of medicine at the University of Kansas Medical Center, said that in the last 11 months he had examined four persons with the disease: the Overland Park man and patients from rural western Missouri, Topeka and Salina, Kan. They are the only victims who have been examined in the Kansas City area, he said. Hospitals in St. Louis and Wichita have reported one case in each city.

Deadly statistics of mysterious disease

Reported cases and mortality rates of acquired immune deficiency syndrome, by half-year of diagnosis,* 1979-1982, in the U.S.

Half-year of diagnosis	Cases	Deaths	Mortality rate (%)
1979 1st half	1	1	100
2nd half	6	5	83
1980 1st half	17	13	76
2nd half	26	22	85
1981 1st half	66	46	70
2nd half	141	79	56
1982 1st half	249	67	27
July 1-Oct. 7	128		
Total	634		

Tests at Suburban Medical Center revealed Kaposi's sarcoma on the man's forearm, a rare tumor often associated with the disease. The man is being treated with the cancer-fighting drug, interferon, at the University of Texas M.D. Anderson Hospital and Tumor Institute.

Because many victims are homosexual, a stigma has become attached to the disease, sometimes delaying diagnosis, Dr. Ewalt said.

Dr. Ewalt was in Kansas City recently to address a national conference on hemophilia at the Hyatt Regency hotel. Four cases of the disease have been reported among the nation's 20,000 hemophiliacs, those with a hereditary condition in which one of the normal blood-clotting factors is absent, causing prolonged bleeding from even minor cuts. That number of cases of acquired immune deficiency syndrome suggests that hemophiliacs are more susceptible.

30

AIDS case every 2 days Missouri reports a sharp rise in rate

By Diana Dawson
staff writer

Missouri has averaged nearly one new AIDS case every two days this year, a much higher rate than last year, officials report.

"This would be part of our predicted increase," said Dr. Robert Harmon, director of the Missouri Department of Health. "That's about the rate we expected."

Thirty cases of acquired immune deficiency syndrome were reported in Missouri from Jan. 1 through Friday.

The state expects 160 new cases this year, up from 92 new cases in 1986. Since reporting began in 1982, a total of 209 AIDS cases have been reported.

Throughout the state, officials are working to handle the increasing number of AIDS cases and to prevent the epidemic from worsening. Plans

this to be completely effective, we'd have to have 100 percent education and attitude change. That's not going to happen."

Most of the people currently reported with AIDS, Harmon said, were infected two to three years ago. That was before tests were available to screen the nation's blood supply and to identify exposure to the virus.

The Missouri Department of Health now is spending about \$500,000 a year for AIDS education, counseling and free blood tests at 12 sites throughout the state.

Harmon said the state soon will routinely offer AIDS testing at clinics for prenatal care, sexually transmitted diseases and family planning. In addition, Missouri will expand its outreach program to drug-abuse clinics, jails, prisons and the streets.

"When a person has a positive test, we'll ask them to identify their sexual

AIDS IN THE JACKSON COUNTY COMMUNITY

Locally, the first case of AIDS in the region was reported by the Kansas City Health Department in October 1982. Within a year, that number had grown to six. By the end of 1987, Missouri's AIDS case count was climbing nearly three times faster than the national average. Kansas City led the state in confirmed diagnoses, with Missouri averaging nearly one new case of AIDS each day. By November 1987, 342 Missourians had been diagnosed—and 54% had died.

Part of the increase was attributed to better tracking and diagnosis. In response, the Jackson County Health Department began offering free HIV testing and partnered with the state health department, local hospitals, and labs to expand access. To help combat stigma, three anonymous testing sites were established across Missouri—in Kansas City, St. Louis, and Springfield.

As the epidemic evolved, it became clear that HIV/AIDS was not limited to any one population. New cases emerged among intravenous drug users, hemophiliacs, sex workers, and recipients of blood transfusions. By the late 1980s, millions were infected worldwide, but no effective treatment had yet emerged.

In 1987, Dr. Robert Harmon, then director of the Missouri Department of Health, emphasized the scale of the challenge: "For this to be completely effective, we'd have to have 100 percent education and attitude change."

That change began—slowly but meaningfully. In 1988, Kansas City emerged as a national leader in teen-focused AIDS education. The Good Samaritan Project, the metro area's primary AIDS support organization, launched a groundbreaking toll-free hotline called Teens TAP. Staffed by 50 trained teenage volunteers, the hotline offered information and peer support to callers across the country. In its first four hours alone, the hotline fielded nearly 50 calls from 16 different states—underscoring the immense demand for accessible, youth-led education.

A PUBLIC HEALTH RECKONING

By the end of the decade, hundreds of thousands had died from AIDS in the United States, with untold more affected globally. The delayed national response—shaped by stigma, fear, and neglect—allowed the epidemic to grow unchecked during its critical early years.

The AIDS crisis taught a hard but lasting lesson: public health cannot afford to overlook any community. When fear, prejudice, or misinformation delay action, lives are lost. Thanks to grassroots activism, scientific progress, and increased awareness, the groundwork was eventually laid for improved treatment and prevention. But the early years remain a stark reminder of the consequences when public health fails to respond swiftly and equitably.

Area news

AIDS cases increase sharply in Missouri

By Cathy Karlin Zahner
The Star's medical writer

The number of AIDS cases in Missouri is increasing at a rate almost triple that of the national average, according to state health officials.

A total of 198 AIDS cases were reported in Missouri this year as of Nov. 27, an increase of 118 percent over the 91 cases for all of 1986, said Missouri Department of Health spokesman Mark Roebuck. That compares with a national average increase of about 40 percent so far this year over the total for all of 1986, he said.

"We would not say there is

cause for alarm, but we definitely need to be aware of the problem and how to prevent the spread of the AIDS virus," Roebuck said. "Missouri is just beginning to catch up with larger states in terms of incidence of AIDS."

Kansas health officials cite an increase of about 10 percent this year, with 42 cases compared with a total of 38 for all of 1986.

Compared with other states, Missouri "ranks about in the middle" for the number of AIDS cases and for the incidence of AIDS among the population, he said.

Health department officials say one reason for Missouri's rate of increase is the depart-

ment's improved ability to track AIDS cases, largely because hospitals and laboratories are now required to report persons infected with the virus as well as those suffering from the full-blown AIDS disease.

Another factor is an increase in the spread of AIDS, Roebuck said.

"One of the things we're examining is what is the role of education of the public and high-risk groups," he said. "On the surface it appears states with high levels of public education are having a real effect in lowering the rate of increase from one year to the next. We're just beginning to really gear up educational efforts."

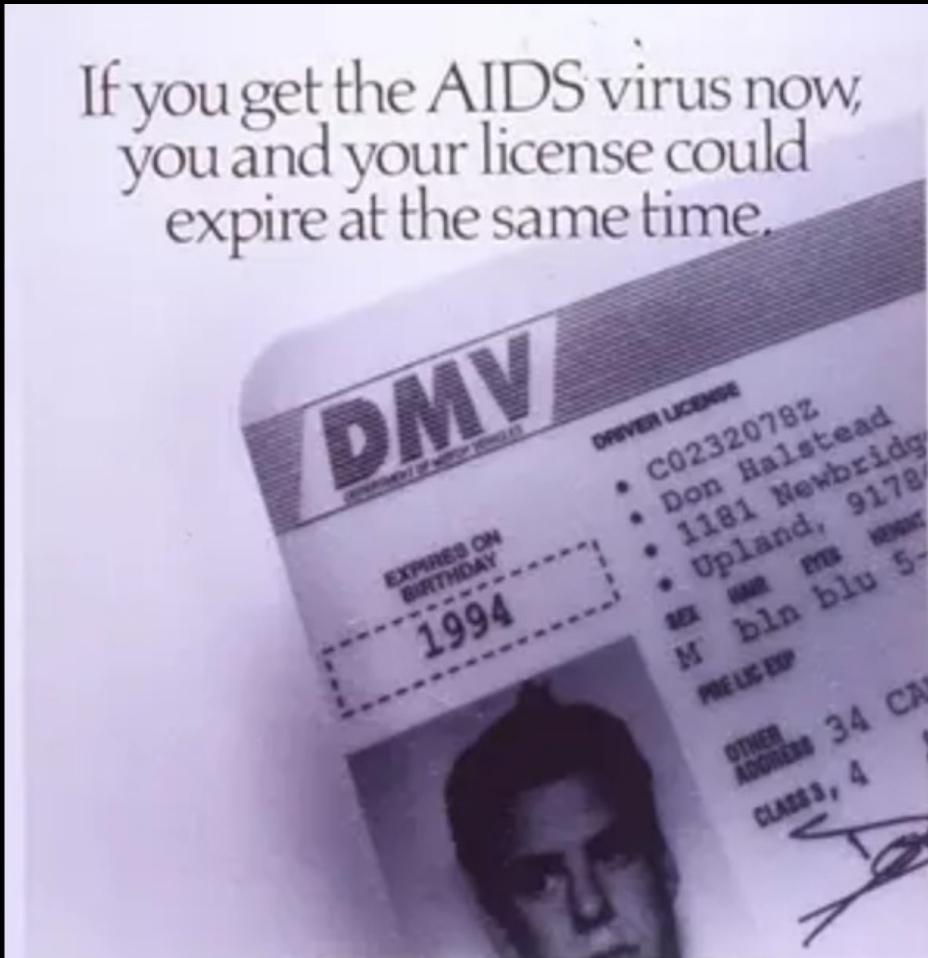
In Kansas City this year 82 AIDS cases have been reported as of Nov. 27, and a total of 145 cases have been reported in Kansas City since 1982. Those figures outstrip the number of AIDS cases reported in St. Louis and St. Louis County, which has reported 62 cases this year and a total of 135 cases since 1982.

Since the AIDS virus can remain inactive for five years or more before causing illness, authorities said, the number of new cases could reflect the rate of infection several years ago.

Some material for this story was supplied by The Associated Press.

KANSAS CITY ANSWERS THE CALL

Despite the challenges, local public health leaders took bold steps to respond. Health departments expanded testing and education, and early prevention programs began taking root. Schools became involved as well—some seventh-grade classrooms introduced lessons on HIV/AIDS, marking a shift toward proactive youth education.



CLOCKWISE FROM TOP RIGHT

AIDS awareness campaign materials. *National Library of Medicine*

AIDS activism, 1989. *University of Missouri Kansas City*

AIDS research, 1987. *National Library of Medicine*

AIDS awareness campaign materials. *National Library of Medicine*

LEFT PAGE

The Kansas City Star,
Oct 14, 1982

The Kansas City Star,
Mar 11, 1987

The Kansas City Star,
Dec 1, 1987





1917 Postcard depicting the Amoco Oil Company refinery in Sugar Creek, MO. The site was an active petroleum refinery from 1904 to 1982, then transitioned to serve as a pipeline and processing facility. *Kansas City Public Library*

1990

DEC • Six cases of hepatitis A reported in Cass County after an outbreak at a restaurant, with cases spreading up to Jackson County.

1991

JAN • Officials confirm hepatitis A epidemic spread to Jackson County with 29 confirmed cases and 40 suspected cases reported.

1992

MAR • JACOHD celebrates 50 years of the Well Baby Clinic.

1992

Ross Marine named JACOHD Health Director.



1993

AUG • Congress passes the Omnibus Budget Reconciliation Act (OBRA) creating the Vaccines for Children program.

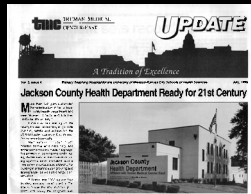
1993

OCT 29 • First Lady Hillary Rodham Clinton visits Truman Medical Center to participate in a roundtable discussion with health officials.

1990-

INVESTIGATING ENVIRONMENTAL HEALTH RISKS *in* SUGAR CREEK

In the 1990s, concerns about potential environmental health risks in Sugar Creek, Missouri, prompted significant investigations by the Jackson County Health Department and state health officials. Residents—particularly those living near the site of the former Amoco Oil Co. refinery—feared a possible connection between pollution and a rise in serious illnesses like brain cancer and multiple sclerosis (MS). In response, health authorities launched studies aimed at assessing these concerns and bringing answers to the community.



1998

Bill Schmidt, MPH named JACOHD Health Director.

1999

DHSS releases study showing residents near the former Amoco Oil Co. refinery in Sugar Creek may have a greater-than-expected risk of developing brain cancer.



Aerial image of the Amoco refinery in the 90s. *Kansas City Public Library*

BRAIN CANCER INVESTIGATION

In the late '90s, the Missouri Department of Health studied brain cancer cases within ZIP codes 64053 and 64054—areas that include parts of Independence and Sugar Creek. A study analyzing data from 1985 to 1997 uncovered a concerning pattern: 15 cases of brain cancer were reported—more than double the seven cases expected based on population averages.

Public attention quickly turned to the former Amoco refinery, which had operated along the Missouri River from 1904 to 1982. Over time, 40 lawsuits were filed alleging that leaks, spills, and discharges from the refinery allowed hazardous chemicals—including benzene, a known human carcinogen—to contaminate the land and water surrounding Sugar Creek. In lawsuits filed in Jackson County Circuit Court, plaintiffs claimed that BP Corp. (which acquired Amoco in 1998) “intentionally dumped or discharged and otherwise allowed enormous quantities of petroleum and other hazardous pollutants to escape.”

Community concern was fueled by residents like Bud and Barbara Chappell, who contacted state and federal health officials in 1998. Their outreach led to renewed investigation into possible cancer clusters in the area. Although researchers ultimately concluded that the evidence did not confirm a statistically significant cancer cluster, uncertainty remained. Barbara Chappell voiced the question on many residents’ minds: “What I want to know is whether we should live here or not.”

In response to growing community concern, Amoco offered to buy out approximately 130 properties in the affected area, paying owners 154% of fair market value plus \$5,000 in relocation expenses. Many residents also joined a class-action lawsuit to address the long-term impacts of refinery-related pollution.

MULTIPLE SCLEROSIS STUDY

Toward the end of the decade, the Jackson County Health Department began investigating another health concern: the possible elevated rate of multiple sclerosis (MS) in Sugar Creek. The department secured over \$90,000 in federal funding to launch the first year of an MS study in collaboration with Truman Medical Center, the University of Kansas Medical Center, and the federal Agency for Toxic Substances and Disease Registry.

Preliminary findings raised concerns: 10 reported cases of MS were identified in a town of roughly 4,000 residents—equivalent to one case per 400 people, compared to the national average of one in 670. The study, conducted between 1998 and 2001, focused on identifying and analyzing MS cases in Sugar Creek and neighboring Independence. Ultimately, researchers concluded that while the rate appeared elevated, the number of cases was not statistically higher than national levels.



LEFT Amoco refinery in Sugar Creek, MO. Kansas City Public Library

Prevalence of multiple sclerosis in a residential area bordering an oil refinery

J.S. Neuberger, DrPH; S.G. Lynch, MD; M.L. Sutton, MS; S.B. Hall, PhD; C. Feng, PhD; and W.R. Schmidt, MPH, PA-C

Abstract—Background: Community concerns about a potential excess of multiple sclerosis (MS) prompted this study. **Objective:** To determine the period prevalence of MS in a community bordering a closed oil refinery and a control community. **Methods:** Cases seen by a neurologist during 1998 to 2001 were obtained from area neurologists and hospital discharge data. Population data were obtained from the year 2000 US Census. Patient data were abstracted by a trained abstractor onto a standardized report form. A consulting neurologist reviewed the form and made a final diagnosis using the Poser criteria plus the category of presumed. Age-adjusted prevalence rates and rates of agreement were calculated. **Results:** The direct age-adjusted period prevalence for both sexes and all races for the entire study area was 113 per 100,000 (95% CI = 93 to 136). For white subjects only, the prevalence was 123 per 100,000 (95% CI = 102 to 147). With use of an indirect method of age adjustment, the number of observed cases in the community bordering the refinery was similar to the number of cases expected (standardized morbidity ratio = 130.8, 95% CI = 62.3 to 199.3), based on rates from the comparison area. The agreement between the treating neurologist (for definite plus probable cases) and the consulting neurologist (for definite plus probable plus presumed cases) was good ($\kappa = 0.5733$). **Conclusions:** The prevalence of multiple sclerosis (MS) for this area was generally consistent with prevalence estimates calculated in previous studies in other areas. No significant excess was seen in the exposed area. MS was more prevalent in females than in males. The overall agreement between the consulting and treating neurologist was good.

NEUROLOGY 2004;63:1796–1802

LEFT Final paper published on the prevalence of MS in the Sugar Creek area.

THE LEGACY OF HEALTH RESEARCH

The investigations into brain cancer and MS in Sugar Creek during the 1990s highlight the essential role of public health in responding to environmental risks and community concerns. Though definitive causation was never established, the research brought increased attention to issues of environmental accountability, industrial pollution, and the importance of community health monitoring.

Today, the legacy of these efforts underscores the value of scientific inquiry, transparency, and sustained public health vigilance. For communities like Sugar Creek, the lessons learned continue to guide responses to environmental and health challenges—and ensure that the voices of concerned residents remain central to public health action.



2001

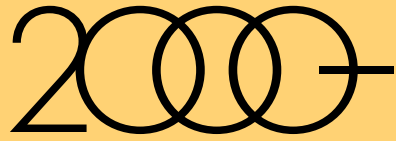
JAN • JACOHD & local health departments finish creating a federally funded bioterrorism response plan to identify and contain the spread of an infectious outbreak.

2001

Dr. Paula Livingston named JACOHD Health Director.

2001

SEP 11 • Coordinated terrorist attacks hijack commercial flights to strike significant locations in the U.S.



NEW PUBLIC HEALTH CHALLENGES

Terrorism, Mosquitoes, & Pandemics

37

9/11 SPARKS BIOTERRORISM CONCERNS

In early 2001, the idea of a biological attack devastating Kansas City seemed remote. Yet behind the scenes, local health officials were preparing for just such a possibility. Thanks in part to a federally funded bioterrorism response initiative, Jackson County Health Department joined seven neighboring counties—Caldwell, Cass, Clay, Clinton, Lafayette, Platte, and Ray—in forming the Health Alert Network. The group focused on identifying and containing infectious outbreaks before they could spread.

Just months later, those preparations were put to the test. The terrorist attacks of September 11, 2001, shook the nation's sense of safety. In the weeks that followed, a new threat emerged—anthrax. Letters containing anthrax spores were mailed to media outlets and government offices,

infecting 22 people and killing five. Public health agencies found themselves on the front lines of a rapidly evolving crisis. The emergency response infrastructure developed for outbreak detection was now being used to investigate suspicious substances, respond to public fear, and establish new protocols for bioterrorism threats.

Kansas City's City Hall was evacuated on September 11 due to security concerns surrounding high-rise government buildings—and again two days later during a bomb scare. Police blocked off downtown streets for several days, and local health departments were placed on high alert. By October, local media outlets began turning to the Jackson County Health Department for guidance as anthrax fears escalated. In response, the department distributed safety protocols to area newsrooms after an NBC

employee in New York tested positive for anthrax.

The experience underscored the critical role of public health in emergency preparedness and response. It also strengthened long-term collaboration between health departments and law enforcement, reinforcing the idea that public health must be ready for the unexpected.



ALL PHOTOS Anthrax response drills, from tabletop to full-scale exercises, were held nationwide to bolster bioterror preparedness.

2001

SEP • JACOHD activates its dead bird surveillance program in response to the continuing westward spread of the West Nile virus.

2001

OCT • JACOHD and other agencies fine-tune bioterrorism response plan.

2001

OCT • JACOHD provides safety precautions for local media agencies (Independence Examiner) following anthrax scares at media agencies.

2002

West Nile virus confirmed in dead birds in Jackson County.

2003

APR • JACOHD releases its West Nile Virus Coordinated Response Plan.

AUG • First human cases of West Nile reported in Jackson County.

2006

AUG • 2 county residents die of West Nile.

2009

Jim Kelly named JACOHD Health Director.

MAY • H1N1 confirmed in Jackson County.

Nov • JACOHD holds a H1N1 vaccine clinic in Lee's Summit.



LEFT West Nile virus carrying mosquitoes under a microscope



LEFT A public health professional studies mosquitoes carrying West Nile virus under a microscope



LEFT An employee sprays larvicide to curb the growth of West Nile virus carrying mosquito populations

2002: WEST NILE VIRUS IN JACKSON COUNTY

In 2002, the United States experienced its most severe outbreak of West Nile virus since the disease first appeared domestically in 1999. The virus spread rapidly across the country, hitting the Midwest and South particularly hard. Missouri reported 168 cases and eight related deaths that year—the highest in the state's history.

Transmitted by mosquitoes, West Nile virus often causes no symptoms, but in severe cases it can lead to life-threatening neuroinvasive diseases like encephalitis or meningitis. Older adults and people with compromised immune systems are especially vulnerable.

In Jackson County, the Health Department worked with local hospitals and physician offices to establish sentinel surveillance sites. These facilities were on alert to identify and report cases of West Nile and other mosquito-borne illnesses.

By 2003, local health departments across the Kansas City metro began treating public lakes and ponds with larvicide in an effort to stop mosquito populations before they grew out of control. One particularly innovative initiative—Operation Tire Toss—targeted mosquito breeding grounds by removing thousands of discarded tires from area ditches and dumps.

In spite of these efforts, the threat persisted throughout the decade. In 2006, two Jackson County residents with underlying health conditions died from the virus. In response, the Health Department renewed public education campaigns encouraging residents to use insect repellent, wear protective clothing, and eliminate standing water near their homes.

The West Nile outbreak highlighted the importance of disease surveillance, laboratory testing capacity, and early intervention in controlling vector-borne diseases.

2009: H1N1 MAKES A COMEBACK

In 2009, a new strain of influenza—H1N1, commonly known as “swine flu”—emerged in the United States and quickly spread around the globe. By June, the World Health Organization declared it the first influenza pandemic in over 40 years.

On May 13, Missouri reported its first few H1N1 cases, including one in Jackson County and another in Kansas City. Less than a week later, the state recorded its first death: a 44-year-old man from St. Louis County. Unlike most seasonal flu strains, H1N1 disproportionately affected younger populations, from children to young adults. Many older adults had some immunity due to past exposure to similar viruses.

A vaccine was developed at unprecedented speed. In August, Children’s Mercy Hospital was selected as one of just five U.S. sites to conduct pediatric vaccine trials. A total of 120 children were enrolled to assess the vaccine’s safety and effectiveness.

By November, the H1N1 vaccine was in the hands of the Jackson County Health Department. The department organized and held a public vaccine clinic in Lee’s Summit to ensure that residents had access to the immunization.

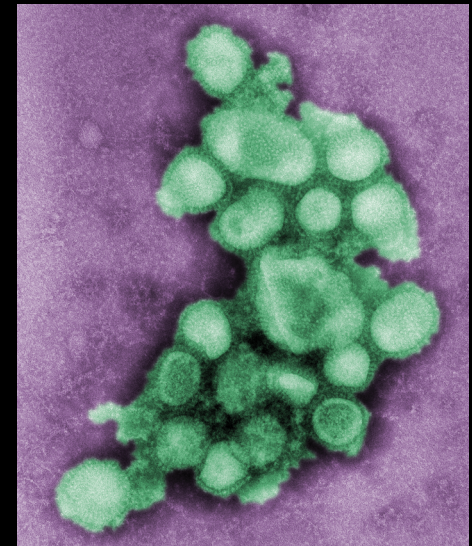
In August 2010, the WHO declared the pandemic officially over. H1N1 continues to circulate as part of the seasonal flu landscape, and the current annual flu vaccine includes protection against this strain.



LEFT A child receives the H1N1 vaccine as a nasal spray.

BELOW LEFT A public health worker prepares to administer a H1N1 vaccine.

BELOW RIGHT The H1N1 virus under a microscope.



Record-breaking flooding in
Levasy, MO. *Matt Evans*

2010

WHO approves a vaccine called MenAfriVac to fight meningitis A. Because of the vaccine, the disease has been reduced to the point that there are no epidemic-like outbreaks.

2011

Researchers find that treating HIV early with antiretroviral medications decreases a person's risk of transmitting the virus to others.

2014

Ebola begins to spread in West Africa, a region that had never experienced the disease and was completely unfamiliar with it. It was the largest outbreak in history.

2015

Bridgette Casey, MPH (married name Shaffer as of 2018) named JACOHD Health Director.

2016

Drug overdose deaths rise sharply with more than 60,000 Americans dying that year alone.

2017

MAR 6 • An EF3 tornado strikes Oak Grove, MO. JACOHD helps provide resources, including tetanus shots to first responders and the community.

2017

OCT 26 • The United States declares the opioid crisis a public health emergency.

2018

OCT • JACOHD reports 2 West Nile virus deaths.

2019

JUN 1 • A levee that serves Eastern Jackson County breached causing parts of Levasy to flood and

2010

NATURAL DISASTER & ADDICTION STRIKE

The 2010s brought a wave of significant public health challenges to Eastern Jackson County. Natural disasters tested the region's resilience, while the rising tide of addiction reshaped the landscape of health services. From devastating storms to a national opioid crisis, the Jackson County Health Department stood at the forefront of response, recovery, and prevention.



2017: OAK GROVE TORNADO

On the evening of March 6, 2017, a powerful EF3 tornado tore through Oak Grove and unincorporated areas of Jackson County. The nighttime storm caused extensive damage—destroying 480 homes and injuring more than a dozen people. Fortunately, no fatalities occurred, but the recovery ahead was immense.

In the immediate aftermath, the Jackson County Health Department mobilized quickly, coordinating with emergency partners to protect public health and support the community.

Vaccination Efforts

Administered 75 free Tdap vaccinations to emergency responders and volunteers to prevent the spread of tetanus and other illnesses.

Environmental Health Inspections

Inspected emergency shelters and all affected food establishments to ensure safety and compliance with health standards.

Public Messaging

Issued guidance to residents on food safety following power outages, helping prevent foodborne illness.

These efforts underscored the critical role of public health during and after a disaster, providing both immediate care and long-term protection for the community.

LEFT PAGE Scenes of devastation following the Oak Grove, MO tornado.
Jackson County Public Health

CENTER RIGHT JACOHD on scene in Oak Grove supporting emergency partners. *Jackson County Public Health*

RIGHT PAGE Views of flooding across Levasy, MO.
Jackson County Sheriff's Office

CENTER RIGHT Flood victims gather for JACOHD informational session.
Jackson County Public Health



2019: LEVASY FLOODING

The spring of 2019 brought record-breaking flooding across the Midwest, including one of the most destructive events in Eastern Jackson County's history. On June 1, a levee breach along the Missouri River inundated the small town of Levasy, submerging 2,800 acres and forcing dozens of families to evacuate. Floodwaters exceeded even the historic levels of the 1993 floods.

Once again, the Jackson County Health Department was a vital part of the emergency response.



43

Emergency Coordination

Collaborated with local, county, and state emergency management to provide shelter, food, and essential resources for displaced residents.

Shelter Operations

Managed a shelter that served as the Health Department's primary operations hub throughout the flood response.



Community Safety

Hosted an informational session with health experts to educate residents on flood-related health risks, including contamination and infectious disease exposure.



The department's coordinated response ensured residents received timely support and accurate information, helping the community begin the road to recovery.

THE OPIOID EPIDEMIC

A New Public Health Emergency

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While natural disasters dominated headlines, another crisis quietly escalated: opioid addiction. By the late 2010s, the opioid epidemic had become one of the most devastating public health emergencies in U.S. history—affecting families, straining health systems, and claiming thousands of lives.

A GROWING CRISIS

In 2016, the U.S. Department of Health and Human Services (HHS) reported more than 42,000 opioid overdose deaths. By October 2017, the crisis had grown so dire that HHS formally declared it a nationwide public health emergency.

JACKSON COUNTY'S RESPONSE

In 2017, Jackson County joined St. Louis in launching a prescription drug monitoring program (PDMP) to help track and curb painkiller abuse. At the time, Missouri was the only state without a statewide tracking system—a gap that health advocates and law enforcement had long sought to close.

Local estimates indicated that approximately 26,000 Jackson County residents were struggling with addiction to controlled substances.

As the epidemic worsened, Jackson County joined several municipalities in taking legal action. In July 2018, they filed a federal lawsuit against major opioid manufacturers and distributors, accusing them of misleading the public about the addictive nature of opioids and failing to implement safeguards against misuse. The lawsuit described the crisis as “the worst man-made epidemic in modern medical history.”

Between 2013 and 2017, at least 308 opioid-related deaths were reported in Jackson County—though officials suspect the true toll is even higher due to under-reporting. The crisis also placed immense pressure on hospitals, emergency responders, law enforcement, and child welfare services.

TURNING THE TIDE

As part of a historic national settlement, Jackson County was awarded \$13 million in opioid relief funds. The Health Department was entrusted with allocating a portion of the funds toward treatment, prevention, and education initiatives.

One of the most impactful programs launched in the aftermath provides free Narcan (naloxone)—a medication that can reverse opioid overdoses—along with public training on how to recognize and respond to an overdose. These efforts have saved lives and strengthened community awareness.

Although the Health Department has provided the county with an opioid response plan based on collective action, no funds have been allocated at this time. As the opioid crisis continues to evolve, the Health Department remains committed to addressing addiction through a public health lens—expanding education, improving access to care, and supporting residents on their path to recovery.

In 2021, after a decade of debate, Missouri Governor Mike Parson signed Senate Bill 63 into law, establishing a statewide PDMP. The program was officially launched in December 2023.

THE FOUR WAVES OF THE OPIOID EPIDEMIC

The opioid crisis has unfolded in four distinct but overlapping waves:

1 **1990s →**
PRESCRIPTION PAINKILLERS
A surge in prescribing opioids for chronic pain led to widespread misuse and dependence.

2 **2010 →**
HEROIN RESURGENCE
As access to prescription opioids tightened, many people turned to heroin, leading to a rise in overdose deaths.

3 **MID-2010s →**
FENTANYL CRISIS
Illicit fentanyl—50 times more potent than heroin—fueled a dramatic spike in fatalities.

4 **2020s →**
POLYSUBSTANCE USE
A new phase characterized by fentanyl-laced drugs, rising methamphetamine use, and the emergence of dangerous additives like xylazine.



**MAR 11**

After more than 118,000 cases in 114 countries and 4,291 deaths, the WHO declares COVID-19 a pandemic.

MAR 17

JACOHD reports the first case of coronavirus in the county, a woman in her 80s.

MAR 20

JACOHD Health Director Shaffer announces the first death in the county related to COVID-19. EJC case count rises to a total of 8.

MAR 24

Leaders in Kansas City, Jackson, Johnson and Wyandotte counties issue stay-at-home orders.

JUN

Mass protests ripple across the country in response to the death of George Floyd. Participants are urged to get tested.

JUN

A private donor provides funding for JACOHD to purchase COVID-19 tests, allowing testing to begin before county funding arrives.

JUN 29

JACOHD Health Director Shaffer tells county legislators the Health Department will require people to wear face masks in public due to COVID-19.



NAVIGATING UNCERTAINTY *during a* GLOBAL PANDEMIC

AUG

School districts plan to return kids to class in phases based on JACOHD recommendation.

NOV

Twenty residents at a Lee's Summit nursing home die from a COVID-19 outbreak that has infected more than 100.

DEC 14

TMC nurse Sarah Kiehl becomes the first person in Kansas City to get the COVID-19 Vaccine.

DEC

Independence re-establishes its own health department.





In early 2020, as COVID-19 rapidly spread across the globe, the Jackson County Health Department knew it would only be a matter of time before the virus reached the community.

// Watching the news every night and seeing what was happening in other countries, it felt like a ticking time bomb—when is it going to be here?" recalled Health Director Bridgette Shaffer.

That moment came on March 17, 2020, when Jackson County confirmed its first case: a woman in her 80s. Just three days later, Shaffer stood before the public to announce the county's first death. The pandemic had officially arrived—and so had the urgency.



ABOVE JACOHD Health Director Bridgette Shaffer announces the first COVID-19 death in Jackson County, MO, Mar 17, 2020. *Jackson County Public Health.*

THE EARLY DAYS: PREPAREDNESS AMID CHAOS

From the beginning, JACOHD emphasized preparation. “It was not an if, but a when,” said Shaffer. Despite the planning, the speed at which the pandemic evolved left little time to process decisions. “Things were moving very fast,” she recalled. Within days of that first death in the county, regional leaders—including those from Jackson County—gathered at Union Station for a joint press conference. The group stood in front of local media, all six feet apart, and issued stay-at-home orders. The directive was clear: residents were to remain home unless performing essential activities, and businesses deemed non-essential were required to close.

“While the health order was necessary, its rollout created a lot of confusion—even within our own Health Department,” Shaffer said. “Local leaders and health directors, including myself, were making decisions that affected our teams and the very next day we would be flooded with questions from the community: Does this apply? Does it not? There just wasn’t clear federal, state, or local guidance to help people understand where they fit. It was overwhelming.”

The Health Department was tasked with the duty of establishing structures to respond to it all—questions from the public, questions from local leaders, and questions from employees within.

There were many unknowns at the start of the pandemic. How did COVID-19 spread? What was the mortality rate of the disease? What were the long-term impacts? The Health Department was struggling with all of these. On top of that, testing for the virus was seriously flawed in those first few months. The CDC was slated to roll out its own test kits—its lab had designed and built them in record time. The problem: the kits were failing 33 percent of the time. JACOHD had no way to identify cases effectively. The only hope was to slow down the virus before it could—and would—completely overtax the county’s health care system.

Insufficient funding for public health programs has been a long-standing problem. The COVID-19 crisis illuminated weaknesses in both national and local public health infrastructure, including antiquated data systems, insufficient public health laboratory capacity, an under-resourced public health workforce, and the need for improved public health communications.

When COVID-19 became a full-scale pandemic, the Health Department had just 30 employees. Shaffer needed manpower. And the ones working there were putting in 60- to 80-hour workweeks—giving COVID-19 tests, conducting disease investigations, contact tracing, answering the public’s questions, and taking their complaints.

Within just a few short months, Shaffer doubled the size of the Health Department,

but there was little funding for this rapid expansion. Jackson County received \$122.6 million in federal CARES Act funding in 2020 to address the COVID-19 pandemic. It was not until May 2020 that the County passed an ordinance appropriating just \$1.5 million of those funds to allow the Health Department to hire personnel, lease office space, and acquire equipment necessary for contact tracing and investigation in connection with the fight against COVID-19. In total, the Jackson County Health Department received \$11,029,304.16 in CARES funding.



CHALLENGES AND BACKLASH

As the months wore on, the department faced not only a public health crisis—but public resistance. Mask mandates, meant to prevent hospital overcrowding and reduce economic fallout, were met with hostility.

“Our department recieved death threats, protests were held outside our building, and there were even threats of demonstrations at my home,” Shaffer said. “Protecting

staff safety and security quickly became a critical part of our response.”

Despite the backlash, JACOHD moved forward. In late June 2020, the county issued a mask mandate. The goal was clear: avoid another full shutdown by controlling spread through less disruptive measures. “The economic impacts on the business community were great,” Shaffer said. “So we thought, if we can use masks to lessen some of that, let’s do it.”

Many in the public continued to be unhappy with the Health Department, and the small but dedicated team bore the weight of the crisis. Reflecting on it now, Shaffer says, “They handled it well, but at the same time, we only have 10 staff or so from pre-COVID. Only 10 of them have stayed... thank God for them.”

A YEAR OF LOSS AND RESILIENCE

Uncertainty defined COVID-19’s first year. “Just when things would get better, a new variant would emerge,” said Shaffer.

In November 2020, tragedy struck a long-term care facility in Lee’s Summit. A COVID-19 outbreak there led to 20 deaths and over 150 infections—a grim reminder of how vulnerable the community remained.

But hope was on the horizon. By December 2020, vaccines began arriving in Jackson County. After nearly a year of loss, exhaustion, and relentless work, the Health Department and the community it served finally had a path forward.



LEFT JACOHD nurses, community health workers, and clinical staff masked up and on the front lines of the pandemic response. *Jackson County Public Health*



LEFT The Health Department distributed free masks along with instructions for proper use. *Jackson County Public Health*

2021: A TURNING POINT

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THE COVID-19 VACCINE AND JACKSON COUNTY'S EFFORTS TO PROTECT THE COMMUNITY

When the first dose of the COVID-19 vaccine arrived in Kansas City in December 2020, it marked a turning point—not just for public health, but for the entire community. The atmosphere shifted almost overnight. Before the vaccine, public health officials faced a barrage of frustration and anger from residents grappling with the uncertainty and disruption of the pandemic. But once doses became available, the tone changed—people became eager, hopeful, and ready to protect themselves and their loved ones.

“People stopped calling, being upset and started asking how to get vaccinated,” said Kristin Schlenk, Community Engagement and Policy Division Manager at JACOHD.

THE FIRST DOSES ARRIVE

On December 14, 2020, Truman Medical Center nurse Sarah Kiehl became the first person in the Kansas City metro to receive the COVID-19 vaccine, marking the beginning of Missouri's rollout. By January 2021, Missouri had entered its first phase of distribution, prioritizing front-line health care workers, nursing home residents, and staff. Jackson County residents eager to get vaccinated were encouraged to sign up through an online survey to determine eligibility and schedule appointments.

Meanwhile, those Health Department workers who had worked long hours for the past year, investigating the virus that had turned the world upside down, were starting to get their own doses as well. “There's light at the end,” reflected Schlenk. “We were going to make it.”





LEFT A JACOHD PRN gives a COVID-19 vaccine in the early days of vaccination.

HIGH DEMAND, LOW STOCK, LITTLE STAFF

While the vaccine was in the metro, demand was high and stock at local health departments was low. Hundreds were calling JACOHD each day requesting shots. Residents in rural communities were driving hours away for appointments—while tens of thousands of doses sat waiting to be distributed through a slow-moving federal long-term care program.

Health experts later found part of the problem was that the state bypassed its 115 local health departments in its initial vaccine rollout plans. Instead, Missouri officials largely outsourced the work to hospitals, consultants, and federal programs, reasoning they had the workforce and facilities to deliver high numbers of vaccines. Meanwhile, local health departments, which typically reach the most vulnerable populations not connected to traditional health systems, were each initially left to divvy up about 8% of the state's vaccine supply. Missouri's rocky vaccine rollout left the state among the lowest nationwide in vaccinated residents.

Even once the vaccines were available, there was still a major problem: there was not enough staff to administer them. Missouri public health staffing was falling, and public health spending per Missourian was just \$50 per year – one of the bottom 10 states in the nation.

When the pandemic struck, Missouri health departments had only 408 employees trained to give vaccinations, according to a report released by #HealthierMO, a group advocating for better public health in the state. That meant if only those staffers had given vaccines, they would each need to vaccinate some 15,000 people – in many cases, administering two shots. In even the most efficient scenario, with each person taking five minutes to vaccinate, that would amount to more than seven months to reach just one shot per person.

Luckily, the Jackson County Health Department was quickly able to add agency nurses to staff their clinics.



Truman Medical Center nurse Sarah Kiehl becomes the first person in the Kansas City metro to receive the COVID-19 vaccine.
University Health

MASS VACCINATION EFFORTS TAKE SHAPE

Once the vaccine was finally in the hands of Jackson County Health Department employees, staff went to work. Clinics were set up at nursing homes, churches, businesses, parks—even abandoned facilities. One of the largest sites was at John Knox Village in Lee's Summit. For months, people lined up, as one by one nurses administered hundreds of thousands of doses. "It was a good morale shift for staff who had survived the first wave," said Schlenk. Almost all hands at JACOHD were brought in to work the clinics.

By March 2021—one year into the pandemic—the Health Department was leading large-scale vaccination efforts, including a major event at Arrowhead Stadium. The massive effort brought together the Missouri National Guard, Truman Medical Center, and other state and county agencies. Over two days, 3,695 people received the single-dose Johnson & Johnson vaccine - representing a significant step forward in protecting the health of the region.

Throughout the spring, vaccine eligibility expanded. On March 26th, Phase 2 of Missouri's vaccine rollout opened doses to higher education employees, restaurant and construction workers, manufacturing employees, and individuals at higher risk of contracting the virus. By that April, Governor Mike Parson announced vaccines were available to all eligible Missourians.

ACROSS A public health worker organizes supplies for the Arrowhead vaccine clinic. *University Health*

TOP TMC Executive Chief Clinical Officer Dr. Mark Steele addresses the media at the Arrowhead vaccination clinic. *University Health*

CENTER Public health workers prepare COVID-19 vaccines. *University Health*

BOTTOM Thousands of cars line up at Truman Sports Complex as drivers await their COVID-19 vaccinations. *University Health*





JAN

As a new subvariant of COVID-19 hits the KC metro, Missouri enters phase one of vaccine distribution, vaccinating front-line health care workers and nursing home residents and staff.

JAN 6

JACOHD gives its first COVID-19 vaccine.

MAR 19-20

JACOHD leads a COVID-19 mass vaccination clinic at Arrowhead Stadium.

MAR 26

Phase two of Missourians become eligible for COVID-19 vaccines.

APR 9

MO Governor Mike Parson opens COVID-19 vaccination to all eligible Missourians.

MAY

Jackson County allows COVID-19 health orders requiring masks in indoor businesses and public places to expire.

JUN

Governor Parson announces support of a bill curbing the power of local health departments and governments to close businesses, schools and churches during health emergencies.

AUG 12

COVID-19 death toll in Missouri reaches 10,000, according to the state health department's coronavirus dashboard.




tdgphoto A million thanks to @jacksoncountyhd for getting this whole #COVIDvaccine thing like a total c...



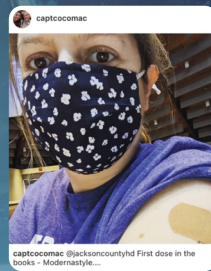
holly_battrum Yes! Both doses are now complete!
@jacksoncountyhd thank you!! #sighofrelief #encha...



Thank you all, 
you guys are
doing great!



muzzysmuscles grateful, thrilled, & excited to hug my dang nieces & 90 year old grandpa 🥰🥰...



captcocmac @jacksoncountyhd First dose in the books - Modernstyle...



mrn93 Dose 2!



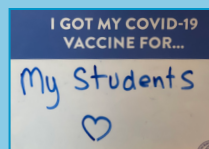
287,038
Inpatient and ER
hospitalizations
in Missouri from
2020 to 2022

DHSS

10,175,658

COVID-19 vaccines
administered in
Missouri from
2020 to 2022

DHSS



SHIFTING POLICIES AND EMERGING CHALLENGES

In May 2021, with vaccination rates rising, Jackson County allowed its COVID-19 health orders to expire—including indoor mask mandates. However, the summer months brought new challenges as the highly contagious Delta variant spread across the state. In July, Jackson County followed the lead of California and New York City, requiring employees to either provide proof of vaccination or undergo weekly testing. At the same time, the state issued a “hot spot advisory” for several counties in the Lake of the Ozarks region, where vaccination rates remained critically low.

A COMMUNITY’S RESILIENCE

Despite progress, Missouri reached a grim milestone on August 12, 2021, as COVID-19 deaths surpassed 10,000. In the 16 months since Shaffer announced the first death in the county, 517 Jackson County residents had lost their lives. The numbers highlighted the continued impact of the virus.

Through it all, the Jackson County Health Department remained steadfast in its mission. “The weight of the decisions that we were making... I felt that every day. I’m confident our team did the best they could with the resources they had,” reflected Shaffer. “We were going with the best guidance we had at the time, but it was changing, and it wasn’t perfect.”

Of all the health directors who stood together at the first joint press conference in March 2020 to announce metro-wide stay-at-home orders, Shaffer is the only person to remain in her role as the leader of a health department as of 2025.



2023: A NEW ERA *Introducing Jackson County Public Health*



By 2023, the public perception of COVID-19 had shifted. While the virus had continued to spread and mutate, healthcare professionals were now equipped with knowledge and a variety of tools to prevent its worst outcomes, including updated vaccines and antiviral treatments for those at high risk of hospitalization.

For public health professionals, concerns around future public health risks (such as long-haul covid) lingered. But the days of aiming to eliminate the virus were over: like other seasonal illnesses, COVID-19 was now regarded as a permanent part of the health landscape.

From this transition came a new JACOHD challenge and opportunity — re-establishing their teams' physical presence in the community.

"COVID-19 represented a tremendous loss of life, of hospitalization, of economic and personal impacts—it also represented a wake-up call," said Ray Dlugolecki,

Assistant Health Director. "Our infrastructure was not positioned to respond well to any crisis. It spurred action to correct our organizational structure."

The needs and population of Jackson County had changed dramatically since the building opened in 1934, the same year Harry Truman was elected to the U.S. Senate. By 2021, the Independence facility could no longer comfortably accommodate the department's staff or clients; many staff had to work from other locations due to lack of space. Furthermore, the City of Independence had re-established its own health department in 2020, prompting the Health Department to reassess how to best serve the remaining communities within its jurisdiction.

In 2023, after years of planning, the department officially entered a new chapter. After 98 years in Independence, it relocated to Lee's Summit and adopted a new name: Jackson County Public Health (JCPH).



The new centralized facility allowed JCPH to provide more accessible and higher-quality services for Eastern Jackson County, including upgraded, ADA-compliant clinic rooms better suited for both patients and staff. It also houses Jackson County's Environmental Health Department, creating a comprehensive hub for public health under one roof.

The change also brought new opportunities, from connecting with the community to collaborating easily across the department.

It was fortunate timing: the need for community resources and services was greater than ever. The pandemic had deeply impacted county residents' health and access to care, while also burning out veteran public health workers. Entire teams had left the Health Department, taking institutional knowledge and community relationships with them.

After the move to Lee's Summit, new hires worked to restart programs from scratch, re-establish community relationships, and resume paused services. This was no small task, but being able to support their teammates in-person and attend community events again gave JCPH staff a solid foundation to build from. It would be a long road to recovering what was lost during the pandemic, but they weren't walking it alone.



ABOVE, FROM LEFT

The new home of Jackson County Public Health in Lee's Summit, MO.

Installation of the new JCPH logo.

JCPH employees greet guests during an open house event.

Employees pose outside of the new Mobile Service Unit, which brings JCPH programs and services into the community.

LEFT The new and improved waiting room at the Lee's Summit clinic offers free books in multiple languages and sensory accommodations for children.

2025: RESILIENCE & RECALIBRATION

60

As Jackson County Public Health marks its 100th year, 2025 has served as a reminder of both the challenges that continue to shape the department's work and the deep commitment that drives it forward. 2025 has tested JCPH's resilience, adaptability, and shared dedication to the health and well-being of the community.

Shifts in federal public health policy brought changes to how local health departments operate across the country. As national priorities evolved, funding for prevention-focused efforts became less stable. Like many jurisdictions, Jackson County experienced the loss of long-standing federal and state grant programs that supported vital work in epidemiology, communicable disease control, and research.

These changes required tough decisions—but also created space for growth and innovation. In response, the department restructured internal teams to better meet emerging needs, expanded partnerships with local organizations, and released

a new strategic plan focused on securing sustainable funding. JCPH leaned into collaborative, equity-centered approaches to address the complex public health issues facing the community.

Despite financial and operational pressures, the department remained steadfast. From tracking one of the largest measles outbreaks in recent history, to supporting the growing needs related to the opioid crisis, housing instability, and food insecurity, JCPH continued to respond with determination and care. The Health Department expanded community outreach, recognizing that trust, accessibility, and transparency are essential in building a healthier future for all.

The challenges of 2025 reaffirmed the importance of public health. Looking to the next century, the lessons of this year will guide how JCPH leads, partners, and serves. The core values of public health—adaptability, compassion, and connection—remain at the heart of its work.

JAN • JCPH marks a century of service in Jackson County

MAR 25 • JCPH is made aware of cuts to federal funding, immediately losing access to approx. \$1.1 million.

JUL • JCPH receives Project Public Health Ready (PPHR) recognition from NACCHO.

SEP • JCPH earns national accreditation from the Public Health Accreditation Board (PHAB).

LOCAL



Trump cuts trigger layoffs at area health department

LEFT Assistant Health Director Ray Dlugolecki, MPH poses for a Kansas City Star article detailing staff and funding cuts to the Health Department. *The Kansas City Star*, Apr 9 2025



LEFT JCPH's free Narcan dispenser in Raytown, MO. Courtesy of Missouri Historical Society.

EARNING NATIONAL ACCREDITATION

A CENTURY OF SERVICE RECOGNIZED

In 2025, Jackson County Public Health marked a century of unwavering dedication to the community by achieving a remarkable milestone: national accreditation from the Public Health Accreditation Board (PHAB). At the time, only seven of Missouri's 115 local health agencies held this distinction. The honor affirms JCPH's longstanding commitment to public health excellence and its mission to improve the well-being of all Jackson County residents.

A LEGACY OF PUBLIC HEALTH EXCELLENCE

Earning accreditation is a powerful way to honor JCPH's century-long legacy of service. As Jackson County grows and evolves, residents can take pride in knowing their health department meets the highest national standards—continually striving for innovation, equity, and excellence in public health.

Founded a century ago with a mission to protect and serve the community, JCPH remains true to that original promise. This achievement marks not the end of a journey, but the continuation of one—a pledge to uphold public health excellence for generations to come.

A JOURNEY TOWARD EXCELLENCE

PHAB accreditation is more than a badge of honor. It directly strengthens public health outcomes and enhances how JCPH serves the community:

Enhanced Quality and Performance

Accreditation validates JCPH's commitment to evidence-based practices, ensuring programs remain efficient, effective, and relevant.

Greater Accountability and Transparency

By tracking outcomes in alignment with national standards, JCPH reinforces transparency in how it allocates resources and makes decisions.

Stronger Community Partnerships

Accreditation affirms JCPH's role as a trusted public health leader, improving service, value, and credibility with community stakeholders.

Increased Funding Opportunities

Many grants prioritize accredited agencies, expanding access to financial support for local health initiatives.

Improved Emergency Preparedness

The accreditation process ensures JCPH is well-prepared to respond to public health emergencies—from outbreaks to natural disasters—safeguarding residents across the county.



PROJECT PUBLIC HEALTH READY(PPHR)

In July, JCPH received recognition from the National Association of County and City Health Officials (NACCHO). It is a criteria-based training and recognition program that assesses local health department capacity and capability to plan for, respond to, and recover from public health emergencies. JCPH is one of only two health departments in Missouri to be currently recognized for excellence in preparedness through PPHR. Only about 10% of public health agencies nationwide receive this recognition.





the next
100 YEARS

INCIDENT
COMMANDER

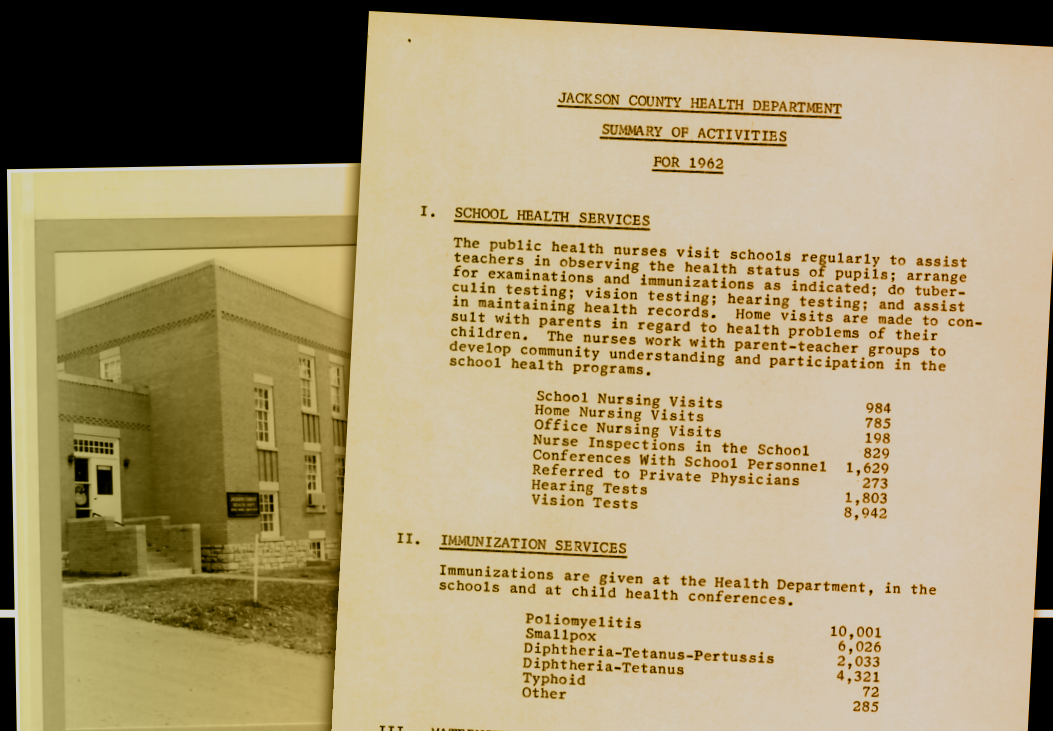
healthy + strong!

JACKSON
COUNTY

For a full century, Jackson County Public Health has been a steady force in the community—adapting its mission to meet the needs of each era. What began with door-to-door vaccinations and sanitation campaigns has grown into a broad commitment to ensuring everyone has the opportunity to live a healthy life.

In the early 2000s, our focus widened from individual services to the deeper conditions that shape health—like housing, education, income, and access to nutritious food. By improving how we collect, analyze, and share data, we help decision-makers, organizations, and residents better understand what's driving poor health—and how to change it. These insights lead to policies and investments that reach far beyond health care and improve life for entire communities.

As we celebrate 100 years, we move forward with vigilance, creativity, and collaboration. Grounded in the lessons of the past and working alongside partners across every field, we're ready to meet the challenges ahead—and to keep momentum toward a healthier Jackson County for all people.



AFTERWORD

Health Misinformation in 2025 and Beyond

MEGHAN SENNE, MPH
HEALTH POLICY COORDINATOR
JACKSON COUNTY PUBLIC HEALTH

Over the five years since the pandemic, trust in our public health systems has waned. The beginning of the pandemic brought a lot of challenges- diagnostic testing didn't exist, we knew very little about how the virus spread, and treating severe COVID-19 infections was a learning curve. As a result the CDC, and state and local health departments, had to quickly change recommendations as we learned more about the virus. These changing recommendations caused confusion and fear, and the public started looking elsewhere for answers. Social media sites became the place they turned to.

The advance of the internet age and social media has changed how we communicate and how we get information. Prior to widespread internet access, individuals primarily got their health information from a health care provider, or consulted family members or friends. Health information impacting their community would

MISINFORMATION

information that is false, partially inaccurate, or misleading; often shared unintentionally.

DISINFORMATION

a claim that is false and spread intentionally; shared by someone who knows the information is false, potentially to gain influence or make a profit.

Because the intentions of those sharing information online are not always clear, this brief will focus on misinformation generally.

SNAKE OIL LINIMENT

THE STRONGEST AND BEST LINIMENT KNOWN FOR PAIN AND LAMENESS.

USED EXTERNAL ONLY

FOR

RHEUMATISM
NEURALGIA
SCIATICA
LAME BACK
LUMBAGO
CONTRACTED CORDS
TOOTHACHE
SPRAINS
SWELLINGS
ETC.



— FOR —

FROST BITES
CHILL BLAINS
BRUISES
SORE THROAT
BITES OF
ANIMALS
INSECTS AND
REPTILES.

GOOD FOR
MAN AND BEAST

IT GIVES
IMMEDIATE
RELIEF.

IS GOOD
FOR
EVERYTHING
A LINIMENT
OUGHT
TO BE
GOOD FOR

Manufactured by
CLARK STANLEY
Snake Oil Liniment
Company
Providence, R. I.

Clark Stanley's Snake Oil Liniment

Is for sale by all druggists. If your druggist fails to have it, tell him he can get it for you from any wholesale druggists or it will be sent to you to any part of the United States or Canada upon the receipt of fifty cents in stamps by addressing the

Clark Stanley Snake Oil Liniment Co.

PROVIDENCE, R. I.

have been delivered by the local newspaper or the evening news. Today, the majority of Americans look for health information online.¹

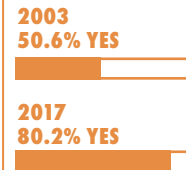
The challenge with today's online world is the large amount of inaccurate health information from non-credible sources, and the speed at which this information can travel. **Information, whether published online, in print, or shared verbally, that is incorrect or misleading, is called misinformation.** Misinformation can be shared unintentionally, as an honest mistake, a rumor, due to conflicting reports, or when someone doesn't have the whole story.^{2,3} The internet, and social media sites in particular, which allow users to generate and share their own content with little to no oversight, is ripe with misinformation of all forms. Of particular concern for the public health field, however, is the recent increase in health misinformation on social media sites such as Instagram, X (formerly Twitter), Facebook, Tiktok, and YouTube.

Misinformation is not a new phenomenon, and has existed since at least the invention of the printing press, if not before then. In fact, the term "fake news" can be traced as far back as 1925, when an article in Harper's Magazine cautioned of news-wires allowing misinformation to disseminate "rapidly." The author, who worked for The Associated Press, warned "the swift transmission of news is in itself a source of unprecedented danger."⁴

Health misinformation has similarly been around since the late 19th century, if not earlier. The original "snake oil salesman," Clark Stanley, appeared at the 1893 World Exposition in Chicago where he bottled "Stanley's Snake Oil" in front of a crowd after killing a live rattlesnake and boiling it. He sold his so-called snake oil as a cure for joint pain and rheumatism. The claim was based off the real anti-inflammatory effects of the oil from Chinese water snakes. Stanley's rattlesnake oil, however, likely had no real health benefit. Stanley continued selling his snake oil until 1917 when federal investigators seized a shipment and analyzed its contents to find it contained mineral oil, beef fat, red pepper, turpentine, and no snake oil at all.⁵

Today's snake oil salesmen can be found on Instagram and other social media sites. The global wellness industry is now worth an estimated \$6.3 trillion, four times larger than the global pharmaceutical industry.⁶ Influencer marketing, where individuals market products directly to their social media followers is estimated to be a \$14 billion industry.⁷ While many health and wellness influencers aim to share helpful advice and personal experiences, some also promote wellness trends or dietary supplements that may lack scientific backing or regulatory oversight. In some cases this can lead to the spread of incomplete or inaccurate health information, whether intentional or not.^{8,9,10} Some individuals may

In the past 12 months, have you looked for health or medical information for yourself while using the Internet?²⁸



even use misleading or exaggerated claims to sell a product or earn commission.¹¹ And although misinformation is not exclusive to influencer marketing, its growth has made it harder for consumers to distinguish between credible health advice and content designed to drive sales or engagement. The result is an online wellness industry that is not unlike the early 20th century marketplace where Stanley's snake oil and other dubious "cure-alls" were widely available with little oversight.

This modern-day version, however, is supercharged by the speed and scale of digital communication. Studies have found that false or misleading claims spread faster than factual ones. In addition, information (and misinformation) that elicits fear, disgust, surprise or other strong emotions spreads faster than information that elicits more neutral or positive emotions.^{12,13,14}

The health misinformation circulating on social media tends to focus on a few themes: vaccinations, nutrition and diets, noncommunicable diseases, especially cancer, as well as infectious diseases such as Zika, Ebola, and of course COVID-19.¹⁵ The challenge with health misinformation in particular, is the risk that social media users who are exposed to health misinformation may delay seeking effective treatment for health issues, or forgo effective prevention or treatment all together.¹⁶ While the true extent of this problem is difficult to measure, there are reports of

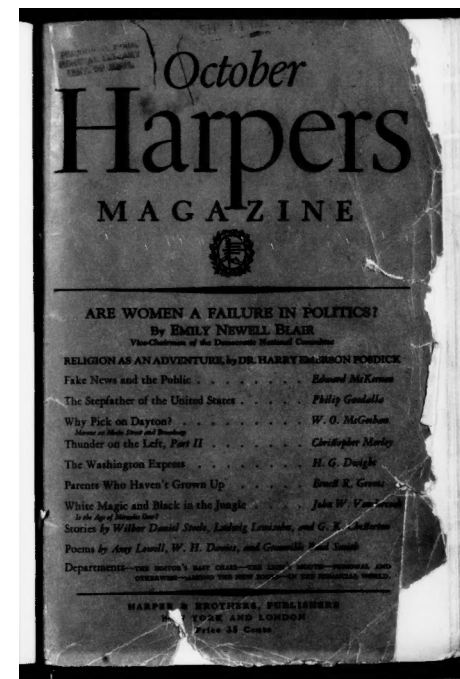
patients forgoing effective cancer treatments for unproven remedies,^{17,18} women stopping their hormonal contraception due to fear of unsubstantiated risks,¹⁹ parents forgoing effective vaccines for their children,^{20,21} and during the COVID-19 pandemic, of patients taking unproven and potentially harmful drugs (ivermectin) rather than seeking effective treatment for a COVID-19 infection.^{16,17}

Additionally, many of the health claims circulating on social media are focused on individual choices rather than collective action. They range from the seemingly harmless—“eliminate food dyes from your diet,” “add this supplement to your routine,” “avoid this ingredient”—to the dangerously misleading: “as long as you eat healthy and exercise, your immune system will fight infections without vaccines,” or “I don’t need fluoride in my drinking water, I have access to dental care.” The common thread is a belief that the self-sufficient person can manage their health all on their own, that they don’t need a healthy community to thrive.

And even if these viral claims were true, this mindset ignores the reality that many of the underlying causes of poor health outcomes are beyond individual control. These are broad-scale, structural issues that cannot be solved in isolation. Even more treacherous, these claims often erode trust in the very systems that were created to protect us. Unfounded claims about food

additives cast doubt on food safety systems. Misinformation about fluoride undermines public water infrastructure. Anti-vaccine rhetoric weakens our biosecurity and pandemic preparedness. There are ways that all of these systems can improve, of course, but the fearmongering and sensationalist claims that circulate on social media seem to support abandoning these systems altogether while shifting all the burden onto individuals.

The combination of influencer marketing, growing distrust in governmental agencies, and viral social media misinformation has put public health professionals in an unprecedented position. The wellness trends circulating on social media today range from misleading claims to outright disinformation. The consequences of these trends span from wasting money on unproven supplements to forgoing effective treatments for preventable or manageable health issues, sometimes at the cost of severe illness or death. At the core of this problem is a growing cultural mindset that individual effort alone is enough to achieve optimal health. But this mentality is fundamentally at odds with public health, which is grounded in community, cooperation, and collective responsibility. We’ve made a lot of progress over the last 100 years. One thing hasn’t changed: Americans have always relied on each other to survive. Thriving in the 21st century will require a renewed commitment to our collective well-being.



HOW CAN YOU IDENTIFY HEALTH MISINFORMATION ONLINE?

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CHECK FOR CREDENTIALS

Look for verifiable professional affiliations, recognized degrees from accredited institutions (DO, MD, PhD), or licensing information for the person sharing the information.

BE WARY OF QUICK FIXES OR “HACKS”

If the claim seems too good to be true, it likely is. Check credible sources (your doctor, local public health agencies, university websites) to see if there is a consensus.

LOOK OUT FOR EMOTIONAL APPEALS AND POLARIZING LANGUAGE

Misleading health claims will often evoke strong emotional reactions, like fear or outrage, to get attention.

TRACK DOWN THE ORIGINAL SOURCE

Common forms of misinformation use out of context information, cherry-picked statistics, or misleading graphs or visuals. When possible, find the original source of the information to check if key details were omitted or altered.

HOW CAN YOU COMBAT THE SPREAD OF MISINFORMATION ONLINE?

SOCIAL MEDIA PROMPTS

While social media companies have mostly moved away from fact-checking on their platforms, one study showed that a simple prompt warning of the prevalence of “fake news” on social media was effective at reducing the sharing of false news. Another study found that encouraging users to “intervene” by flagging content as misleading or harmful was also effective at reducing the sharing of “false and potentially harmful” content.^{24,25}

FOLLOW THE EUROPEAN UNION’S LEAD

The European Union adopted the Digital Services Act and Digital Market Act in 2022, which regulate online platforms such as social media sites. The goal is to prevent harmful online activity and prevent the spread of disinformation.

RAPID FUNDING FOR HEALTH RISK COMMUNICATIONS DURING PUBLIC HEALTH EMERGENCIES

The COVID-19 pandemic was a prime example of how misinformation and disinformation can quickly take over during a challenging health emergency. Public health agencies need help quickly increasing the volume of accurate information during a health emergency.

INVEST IN SPREADING QUALITY HEALTH INFORMATION OFFLINE

Studies show that art – books, movies, paintings, and other media can be an impactful avenue for telling stories and unlearning misinformation and other unhelpful mindsets. Nontraditional messaging, like strategic storytelling, that centers the lived experience of the audience can be key to overcoming preconceived beliefs or biases.^{2,26}

WHAT CAN PUBLIC HEALTH DO TO ADDRESS MISINFORMATION?

Despite the public health backlash following the COVID-19 pandemic, recent surveys have shown that local health departments are still a trusted source of information in their communities.²⁶

SHARE CREDIBLE INFORMATION

Public health professionals have to get their message out early and often. Sharing timely information on public health news, outbreaks, and other important info on the same social media channels (as well as traditional media channels) where misinformation spreads rampantly is a good starting point.

PARTNER WITH COMMUNITY MESSENGERS

Public health professionals need a network of trusted messengers – local news, church leaders, or other local community leaders who can reach audiences that traditional public health communications don’t reach.

GET TRAINING AND RESOURCES

A number of organizations and online resources are available for public health practitioners to learn how and when to respond to misinformation:

- FrameWorks Institute: frameworksinstitute.org
- Public Health Communications Collaborative: publichealthcollaborative.org
- Johns Hopkins Center for Health Security – Practical Playbook for Addressing Health Misinformation: <https://centerforhealthsecurity.org/2024/center-launches-new-practice-oriented-playbook-for-addressing-health-misinformation>
- Infodemiology: infodemiology.com

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REFERENCES

100 Years of Health: A Century of Service in Jackson County, 1925-2025 is a compilation of stories about Jackson County Public Health, presented through the lens of contemporary news coverage and archival sources.

News accounts were sourced from online archives available at www.newsbank.com, including

The Kansas City Star
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Kansas City Journal
The New York Times.

Centers for Disease Control and Prevention (CDC). (1995). Update: Outbreak of Ebola viral hemorrhagic fever—Zaire, 1995. *Morbidity and Mortality Weekly Report*, 44(19), 381–382. <https://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>

Colgrove, J. (2007). Immunity for the people: The challenge of achieving high vaccine coverage in American history. *Public Health Reports*, 122(2), 248–257. <https://doi.org/10.1177/003335490712200215>

Neuberger, J. S., Lynch, S. G., Sutton, M. L., Hall, S. B., Feng, C., & Schmidt, W. R. (2004). Prevalence of multiple sclerosis in a residential area bordering an oil refinery. *Neurology*, 63(10), 1796–1802.

Truman Medical Center Charitable Foundation. (1995). *Hospital Hill: An illustrated account of the Truman Medical Center and other public healthcare institutions* (1st ed.). Truman Medical Center Charitable Foundation. ISBN 0932845711 / 978-0932845719

LIFE EXPECTANCY REFERENCES

- 72 <https://health.mo.gov/data/lifeexpectancy/>

[https://babel.hathitrust.org/cgi/
pt?id=uiug.30112051445036&seq=15](https://babel.hathitrust.org/cgi/pt?id=uiug.30112051445036&seq=15)

[https://wonder.cdc.gov/wonder/help/populations/
population-projections/MethodsTable2.xls](https://wonder.cdc.gov/wonder/help/populations/population-projections/MethodsTable2.xls)

<https://health.mo.gov/data/lifeexpectancy/>

Human Mortality Database (2024)

UN, World Population Prospects (2024)

Zijdeman et al. (2014)

James C. Riley (2005)

with minor processing by Our World in Data

AFTERWORD REFERENCES

1. National Cancer Institute. (2017). Health Information National Trends Survey (HINTS). National Institutes of Health. <https://hints.cancer.gov/view-questions/question-detail.aspx?qid=757>
2. Sorrentino, S., Urban, E., Halpin, S., Stenhouse, A., & McCabe, K. (2023). Navigating misinformation guide. Odd Duck. <https://oddduck.io/wp-content/uploads/2023/07/Misinformed.pdf>
3. Public Health Communications Collaborative. (2024). The public health communicators guide to misinformation. <https://publichealthcollaborative.org/wp-content/uploads/2024/11/The-Public-Health-Communicators-Guide-to-Misinformation.pdf>
4. McKernon, E. (1925). Fake news and the public. Harper's Magazine, 151(905), 528-536. https://archive.org/details/sim_harpers-magazine_1925-10_151_905/page/528/mode/2up
5. Friedman, J. (2024, October). How snake oil became a symbol of fraud and deception. Smithsonian Magazine. <https://www.smithsonianmag.com/innovation/how-snake-oil-became-a-symbol-of-fraud-and-deception-180985300/>
6. Global Wellness Institute. (2024, November). The global wellness economy reaches a new peak of \$6.3 trillion – and is forecast to hit \$9 trillion by 2028. <https://globalwellnessinstitute.org/press-room/press-releases/the-global-wellness-economy-reaches-a-new-peak-of-6-3-trillion-and-is-forecast-to-hit-9-trillion-by-2028/>
7. Klein, J.J., & Schweikart, J.D. (2022, May). Does regulating dietary supplements as food in a world of social media influencers promote public safety? AMA Journal of Ethics, 24(5). doi 10.1001/amajethics.2022.396.
8. Feters Maloy, A., & De Vynck, G. (2021, September). How wellness influencers are fueling the anti-vaccine movement. The Washington Post. <https://www.washingtonpost.com/technology/2021/09/12/wellness-influencers-vaccine-misinformation/>

9. Reilly, L. (2024, November). Majority of social media influencers don't verify information before sharing it, study finds. CNN.
10. Youmshajekian, L. (2023, November). How a weight-loss trend on TikTok might encourage eating disorders. *The Scientific American*. <https://www.scientificamerican.com/article/how-a-weight-loss-trend-on-tiktok-might-encourage-eating-disorders/>
11. Moran, R.E., Swan, A.L., & Agajanian, T. (2024, January). Vaccine misinformation for profit: Conspiratorial wellness influencers and the monetization of alternative health. *International Journal of Communication*, 18. <https://ijoc.org/index.php/ijoc/article/view/21128>
12. Swire-Thompson, B., & Lazer, D. (2020, April). Public health and online misinformation: challenges and recommendations. *Annual Review of Public Health*, 42, 433-451. <https://doi.org/10.1146/annurev-publhealth-040119-094127>
13. Chou, W.S., Gaysynsky, A., & Cappella, J. (2020, October). Where we go from here: Health misinformation on social media. *American Journal of Public Health*, 110(S3), 273-275. <https://doi.org/10.2105/AJPH.2020.305905>
14. Vosoughi, S., Roy, D., Aral, S. (2018, March). The spread of true and false news online. *Science*, 359, 1146-1151. <https://doi.org/10.1126/science.aap9559>
15. Suarez-Lledo, V., & Alvarex-Galvez, J. (2021, January). Prevalence of health misinformation on social media: Systematic review. *Journal of Medical Internet Research*, 23(1). <https://doi.org/10.2196/17187>
16. Osude, N., O'Brien, E., Bosworth, H. (2024, July). The search for the missing link between health misinformation & health disparities. *Patient Education and Counseling*, 129. <https://doi.org/10.1016/j.pec.2024.108386>
17. Blum, D. (2025, March). What ivermectin can (and can't) do. *The New York Times*. <https://www.nytimes.com/2025/03/31/well/ivermectin-cancer-covid.html>
18. Johnson, S.B., Park, H.S., Gross, C.P., & Yu, J.B. (2017, August). Use of alternative medicine for cancer and its impact on survival. *Journal of the National Cancer Institute*, 110(1). <https://doi.org/10.1093/jnci/djx145>
19. Weber, L., & Malhi, S. (2024, March). Women are getting off birth control amid misinformation explosion. *The Washington Post*. <https://www.washingtonpost.com/health/2024/03/21/stopping-birth-control-misinformation/>
20. Santhanam, L. (2024, February). Measles cases are rising in the U.S. Here's why misinformation about the vaccine persists today. PBS. <https://www.pbs.org/newshour/health/measles-cases-are-rising-in-the-u-s-heres-why-misinformation-about-the-vaccine-persists-today>
21. Romer, D., Winneg, K.M., Jamieson, P.E., Brensigner, C., & Jamieson, K.H. (2022, October). Misinformation about vaccine safety and uptake of COVID-19 vaccines among adults and 5-11 year-olds in the United States. *Vaccine*, 40, 45. <https://doi.org/10.1016/j.vaccine.2022.09.046>
22. Vohra-Miller, S. [@unambiguousscience], Simoes, S. [@critikid], [@this.is.mallory]. (2025, February 15). "Wellness scammer red flags." Instagram. <https://www.instagram.com/p/DGGVHoqJhEd/?igsh=MTZ3OG94ZWJha291Zw==>
23. Blum, D. (2024, March). Health misinformation is evolving. Here's how to spot it. *The New York Times*. <https://www.nytimes.com/2024/03/16/well/health-misinformation.html>
24. Guriev, S., Henry, E., Marquis, T., Zhuravskaya, E. (2023, December). Evaluating anti-misinformation policies on social media. Centre for Economic Policy Research. <https://cepr.org/voxeu/columns/evaluating-anti-misinformation-policies-social-media>
25. Lazard, A., Queen, T.L., Pulido, M., Lake, S., Nicolla, S., Tan, H., Charlot, M., Smitherman, A.B., Dasgupta, N. (2025, March). Social media prompts to encourage intervening with cancer treatment misinformation. *Social Science & Medicine*, 372. <https://doi.org/10.1016/j.socscimed.2025.117950>
26. Griffith, D.M., & Semlow, A.R. (2020). Art, anti-racism, and health equity: "Don't ask me why, ask me how!" *Ethnicity and Disease*, 30(3), 373-380. doi:10.18865/ed.30.3.373
27. Votaw, S. (2025, January). Missourians trust public health – Here's what that means for the future. Missouri Public Health Institute. <https://mophi.org/missourians-trust-public-health/>
28. National Cancer Institute. (2017). Health Information National Trends Survey (HINTS). National Institutes of Health. <https://hints.cancer.gov/view-questions/question-detail.aspx?qid=757>

