

Building Bridges to Prevent Measles in Kansas

Kansas Public Health Association

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Presenters

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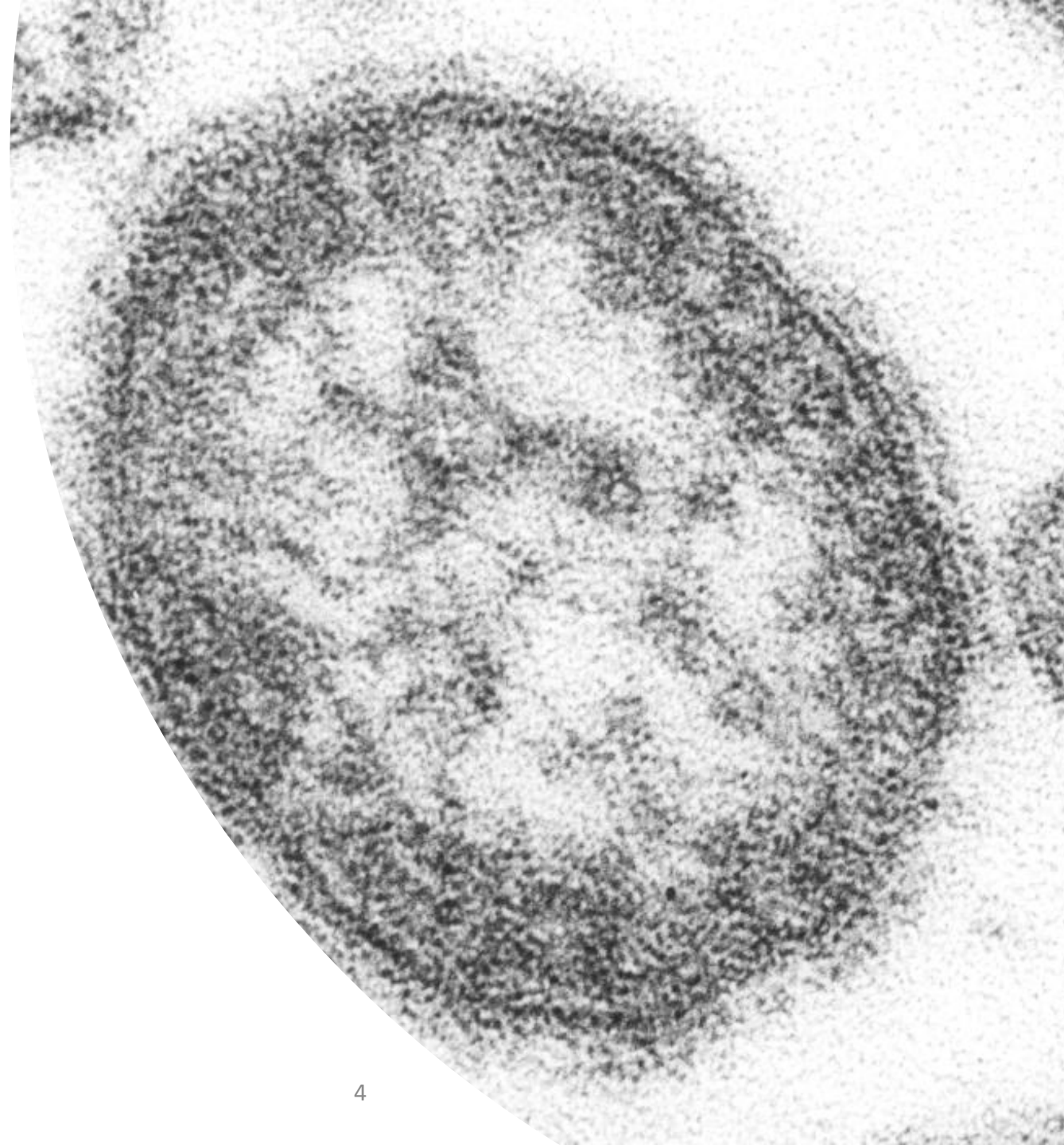


Background and Historical Context



About Measles

- First described in the 9th century
- 1757: Infectious nature demonstrated
- 1912: Nationally notifiable in U.S.
- ~6,000 deaths per year in first decade of reporting



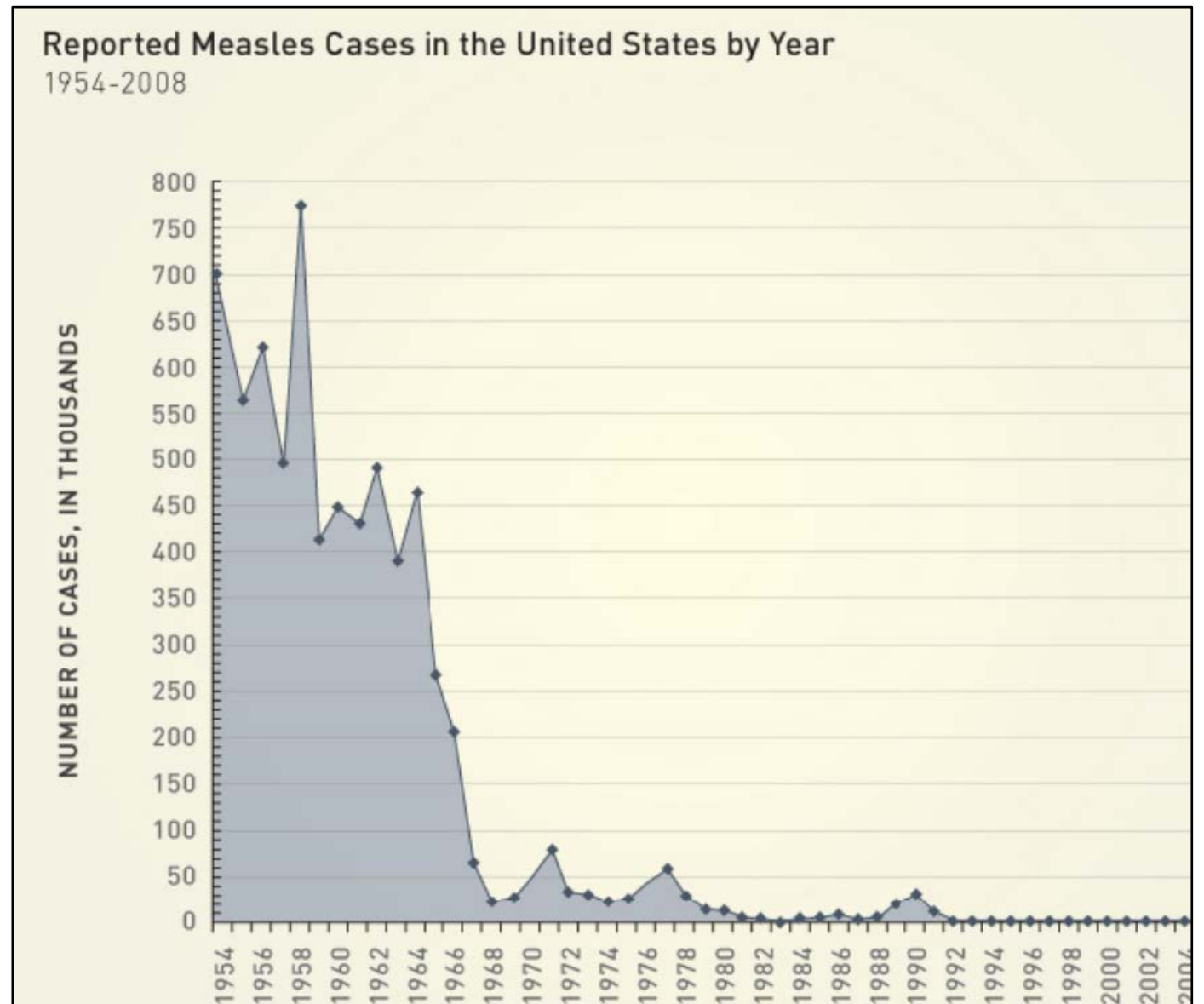
About Measles

- Highly infectious
- Airborne transmission
- Communicable 4 days before to 4 days after rash onset
- Complications in 30% of cases
- Hospitalization: 1 in 4 cases
- Encephalitis: 1 per 1,000 cases
- Death: 1-2 per 1,000 cases



Pre-Vaccine Era

- Nearly all children got measles
- 3 to 4 million cases per year
- 400 to 500 deaths
- 48,000 people hospitalized
- 1,000 suffered encephalitis



Source: *History of Vaccines* (The College of Physicians of Philadelphia)

Measles Vaccine

- 1954: Measles virus first isolated
- 1963: Edmonston B strain vaccine licensed
- 1968: Moraten strain (“More Attenuated Enders”) vaccine licensed
- Currently available as combination with mumps and rubella (MMR) or MMR plus varicella (MMRV)



Current Measles Vaccine Recommendations

- First dose of MMR at 12-15 months
 - CDC recommends varicella be given separately
- Second dose at 4-6 years
 - CDC recommends MMRV over separate injections of MMR and varicella

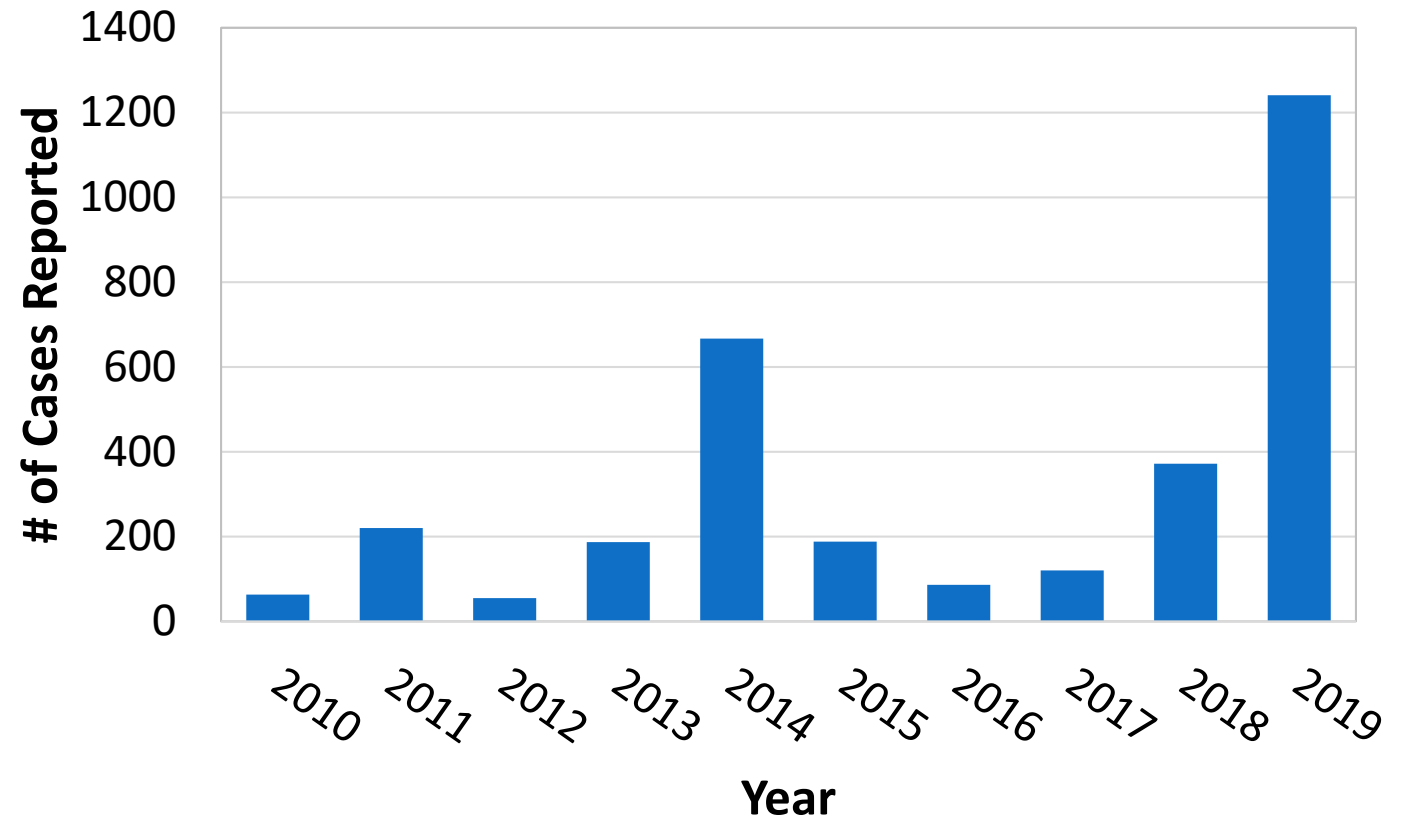




Contemporary Epidemiology

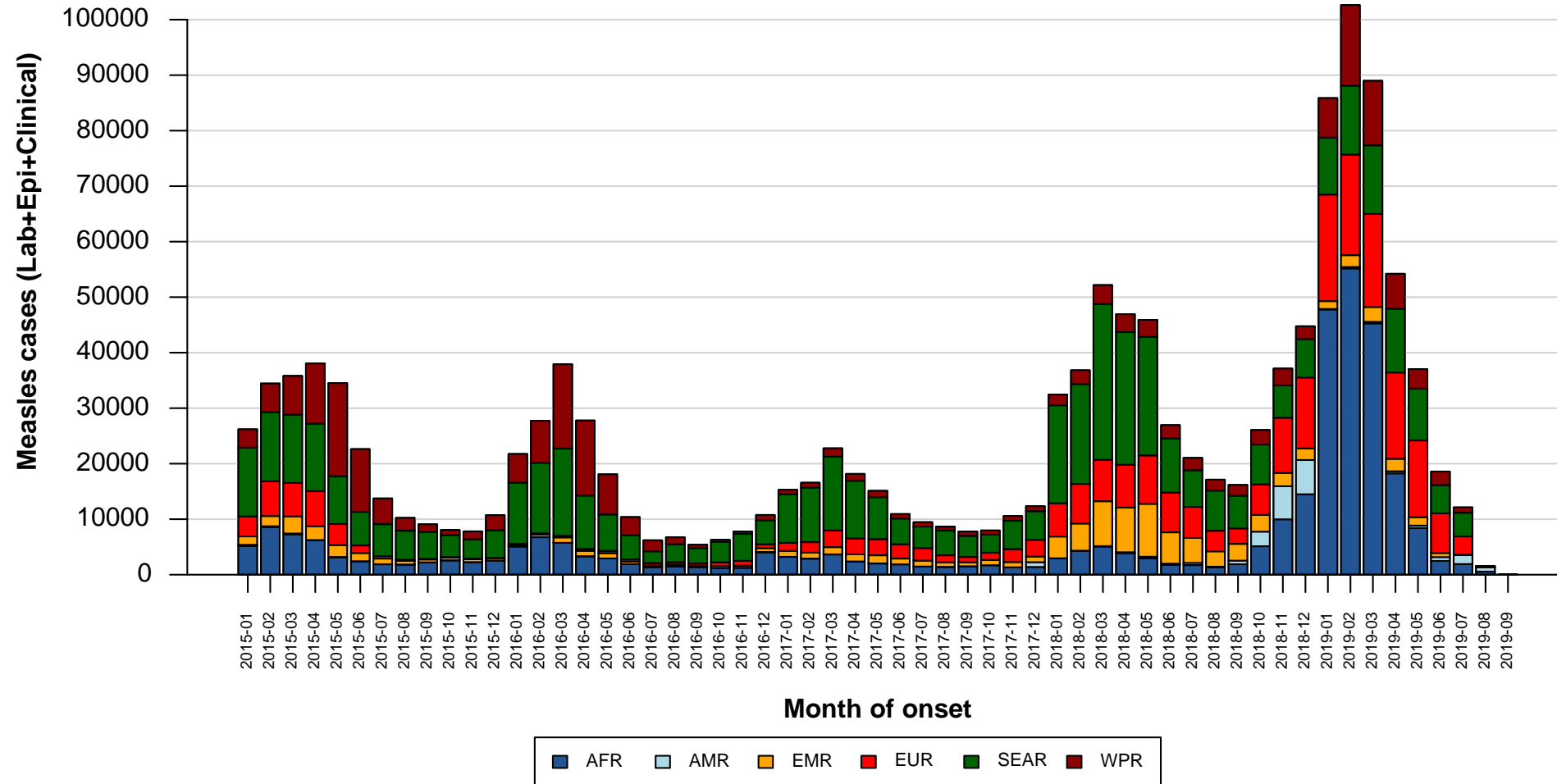
- Eliminated from U.S. in 2000
- Travelers have continued to bring measles into U.S. from other countries
- 2019: Highest number of cases since 1992 (n=1,241 as of 19 Sept.)

Number of Measles Cases Reported by Year, U.S., 2010-2019

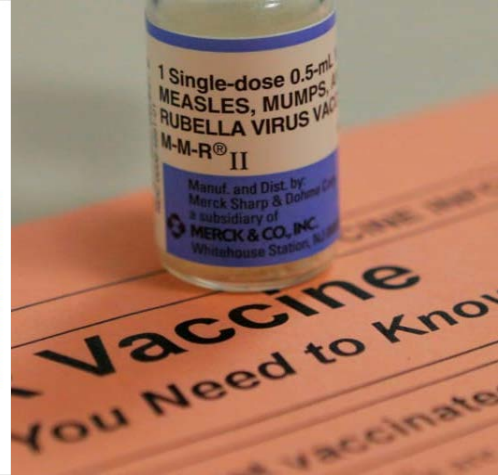
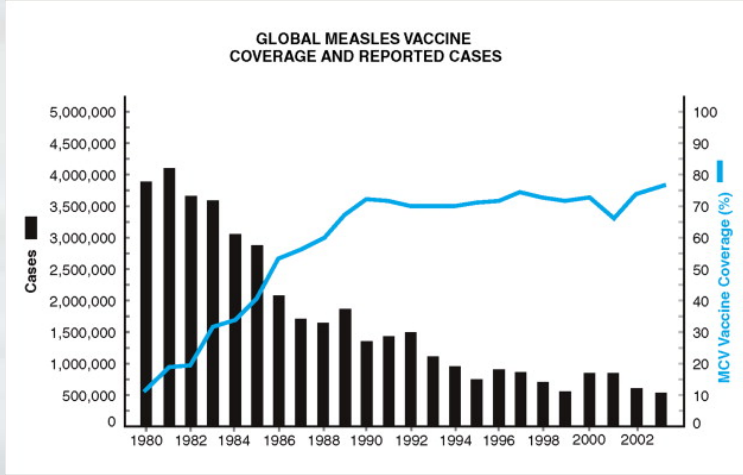
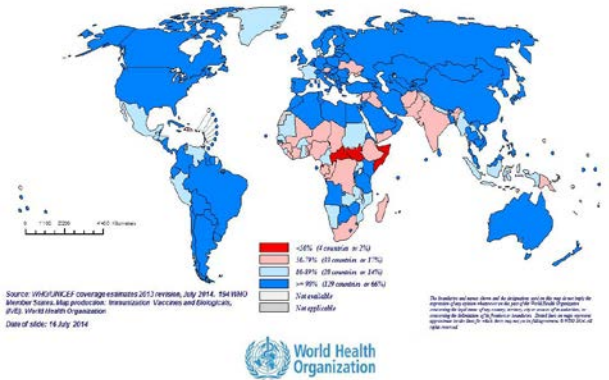


Source: Centers for Disease Control and Prevention, 2019

Measles case distribution by month and WHO Region (2015-2019)



Immunization coverage with measles containing vaccines in infants, 2013



Vaccination Coverage



Annual Kindergarten Immunization Survey



Letter Sent to Schools



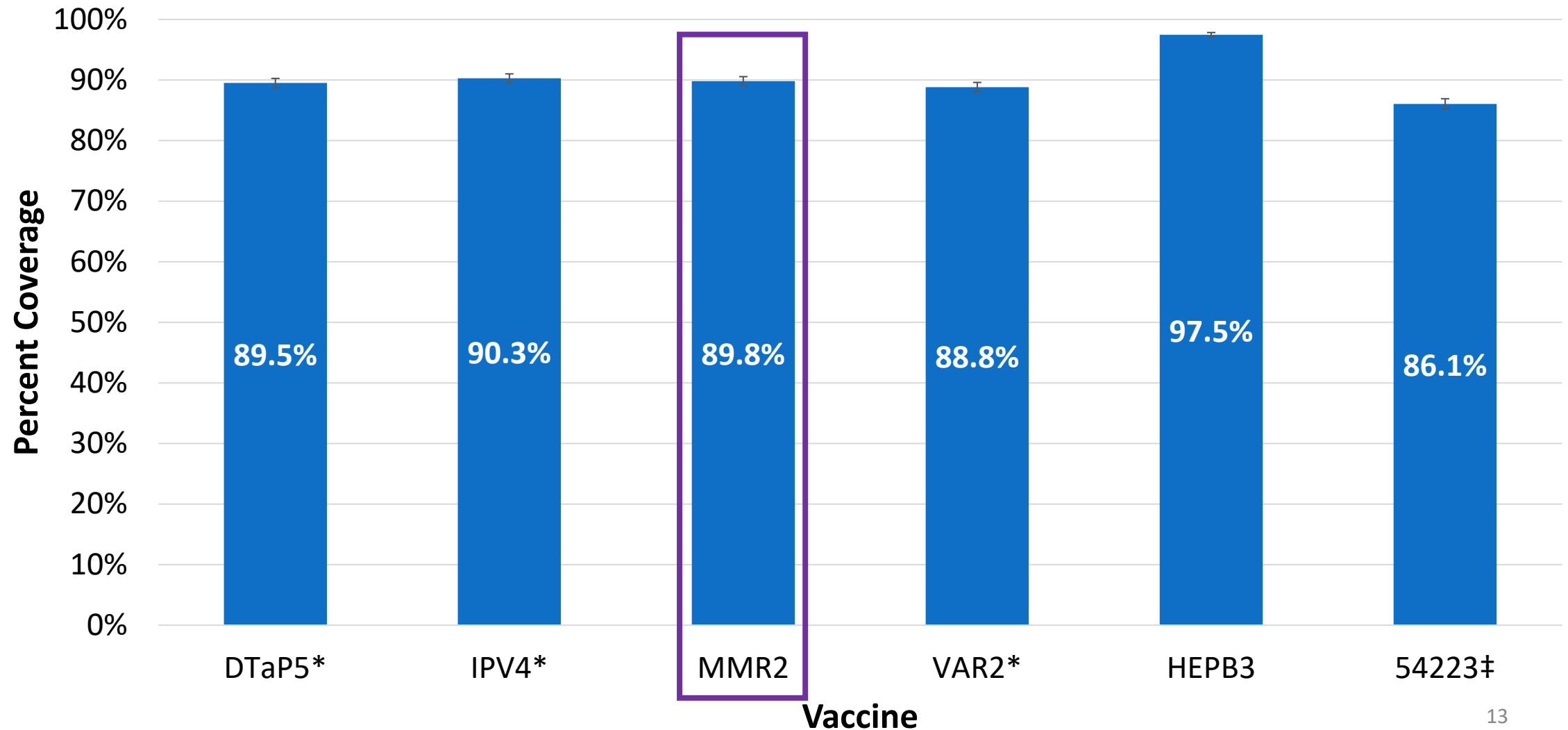
Schools Complete Survey Send Records to KDHE



Record Data Cleaned and Analyzed

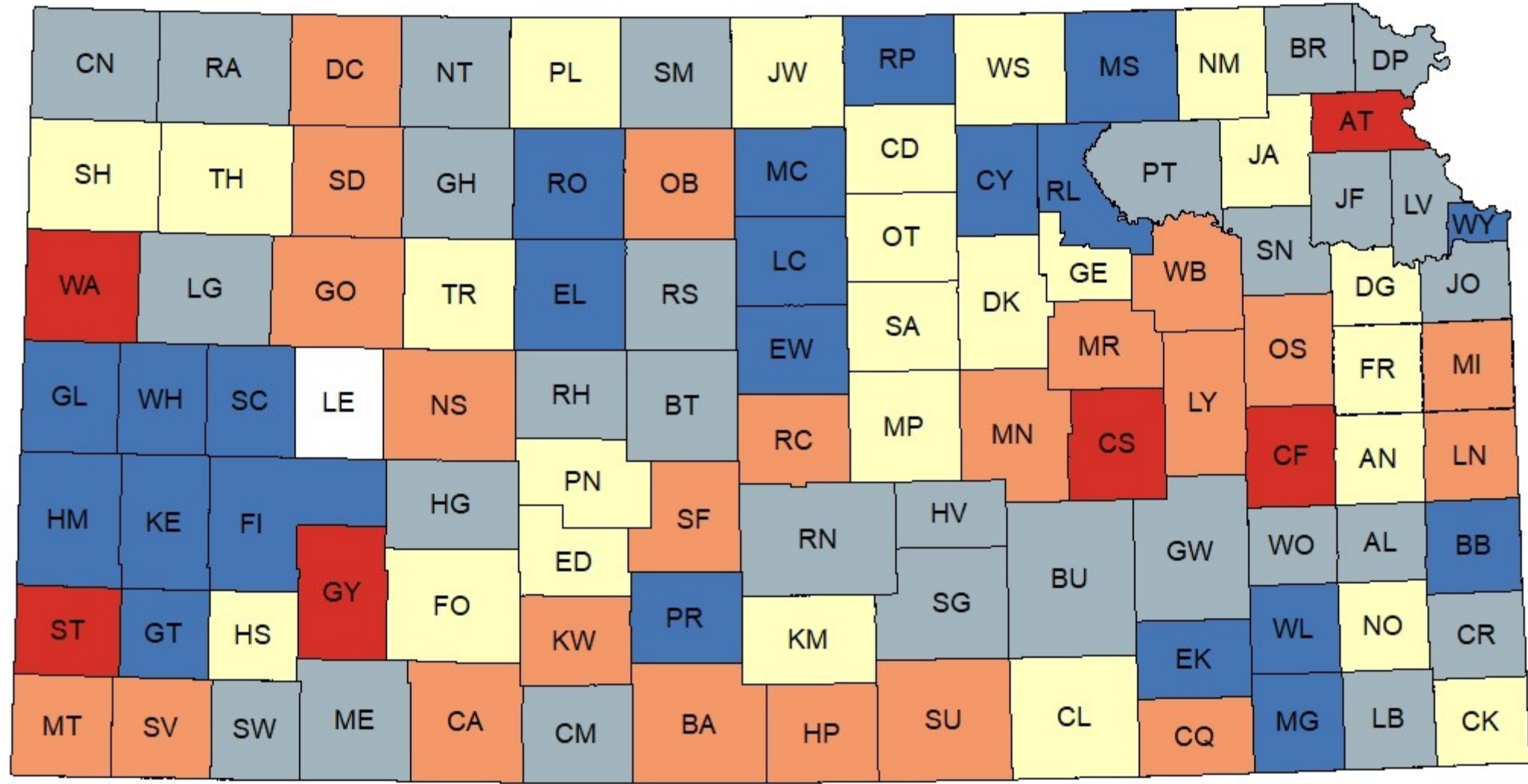


Preliminary 2018-19 Kindergarten Vaccination Coverage – Kansas



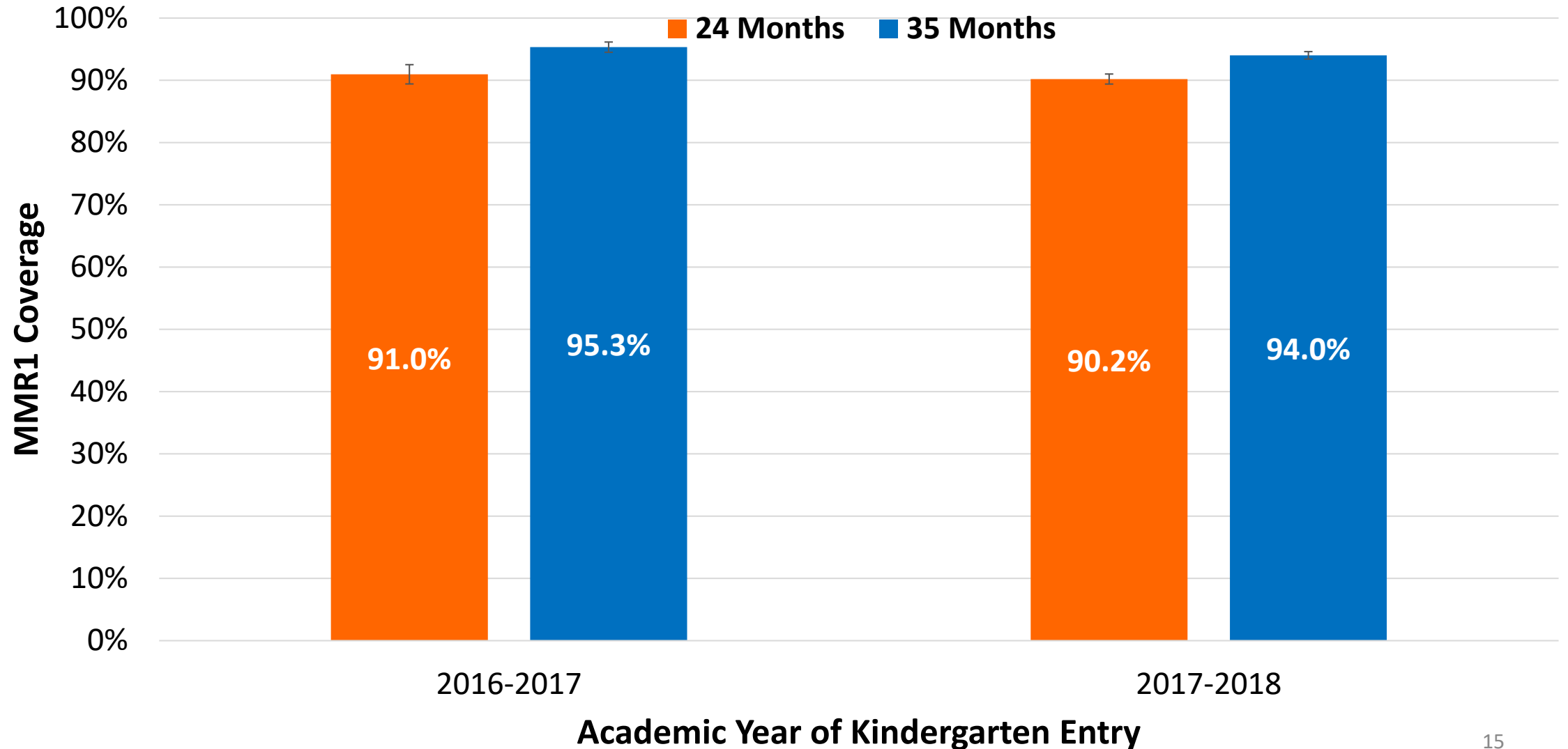
‡Complete series for all five required vaccinations

Preliminary 2018-19 MMR2 Coverage by County



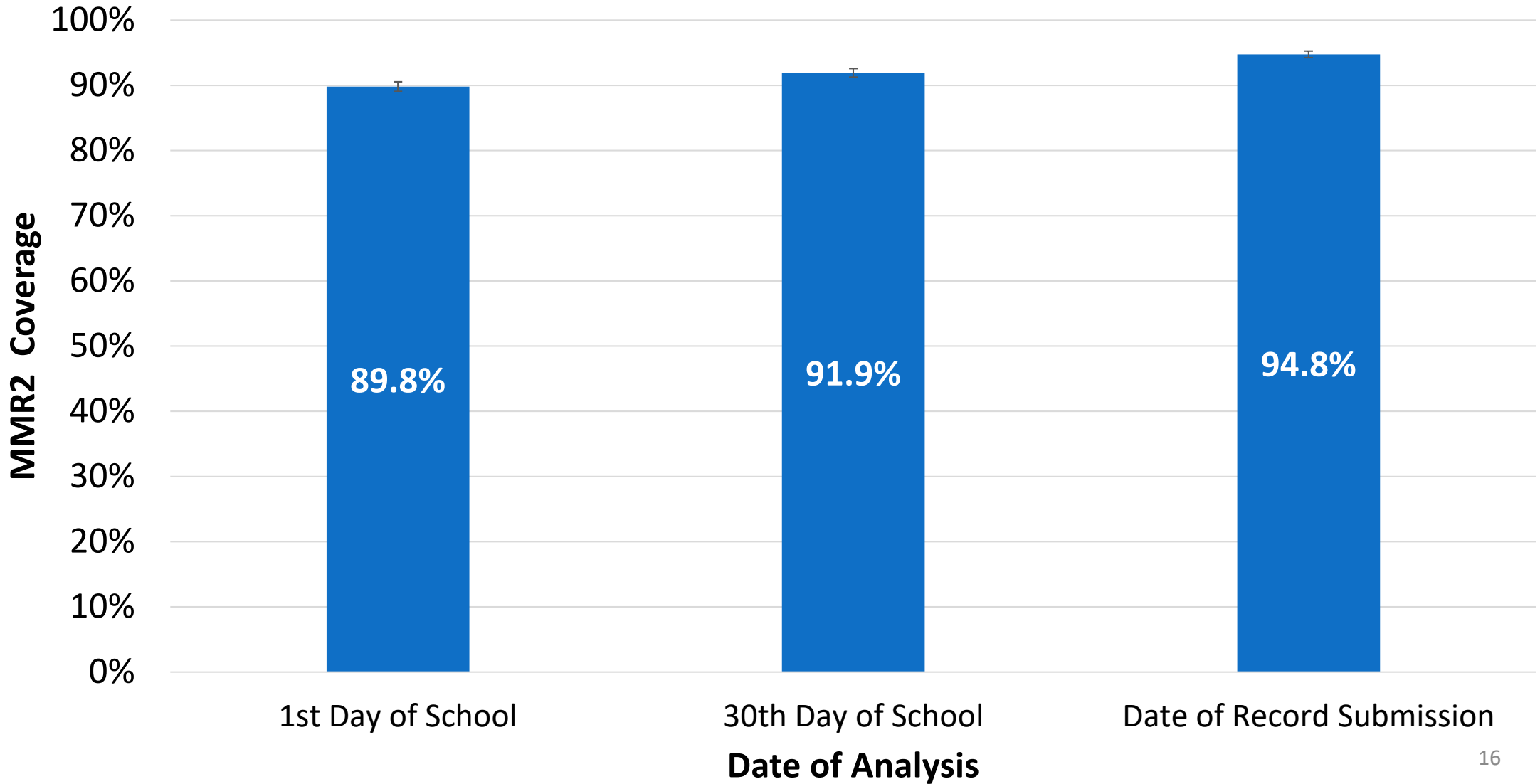
Legend: No Data Available Less than 75.0% 75.0% to 85.0% 85.0% to 90.0% 90.0% to 95.0% Greater than 95.0%

Retrospective MMR1 Coverage by Age Level – Kansas

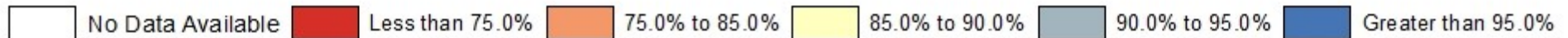
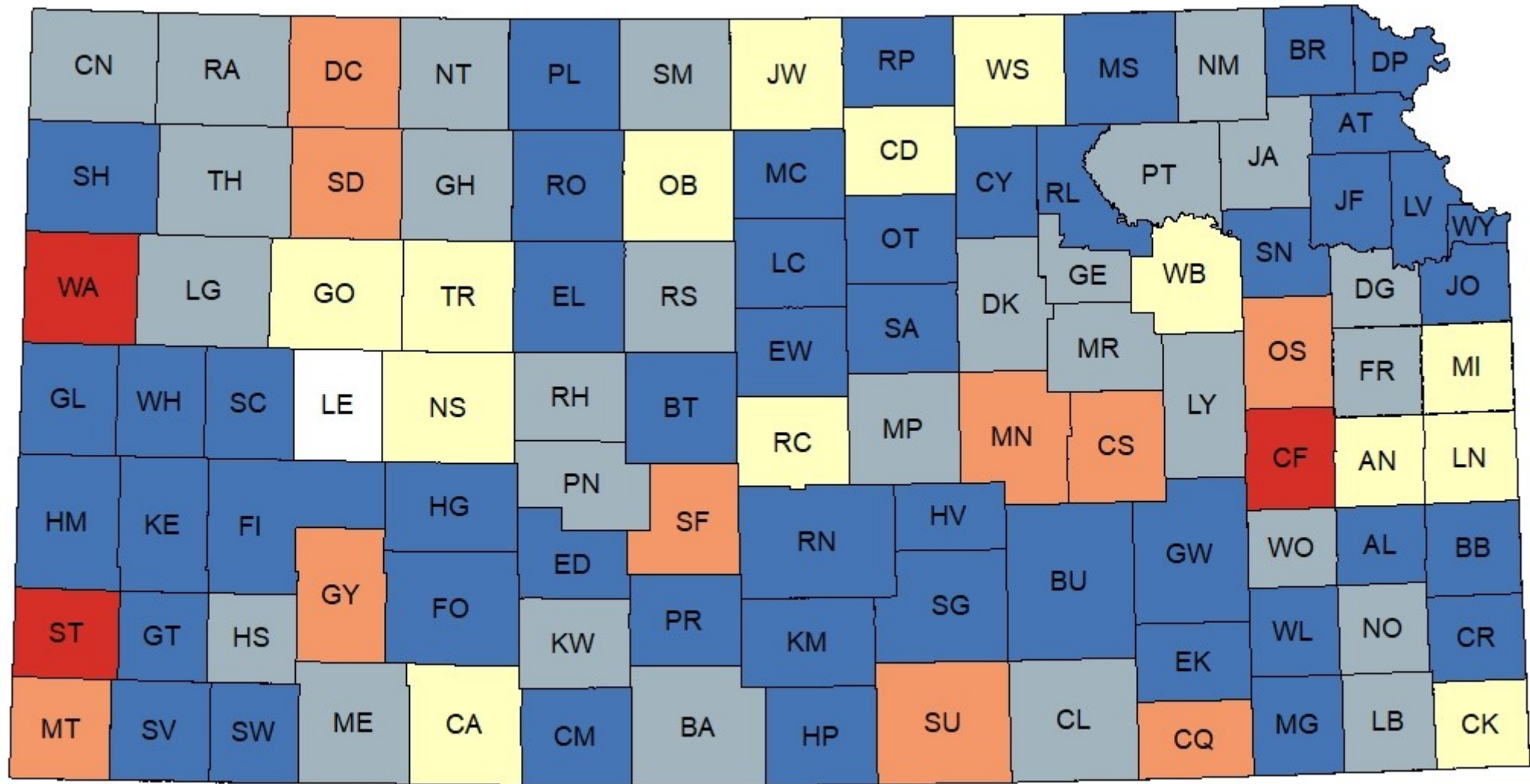




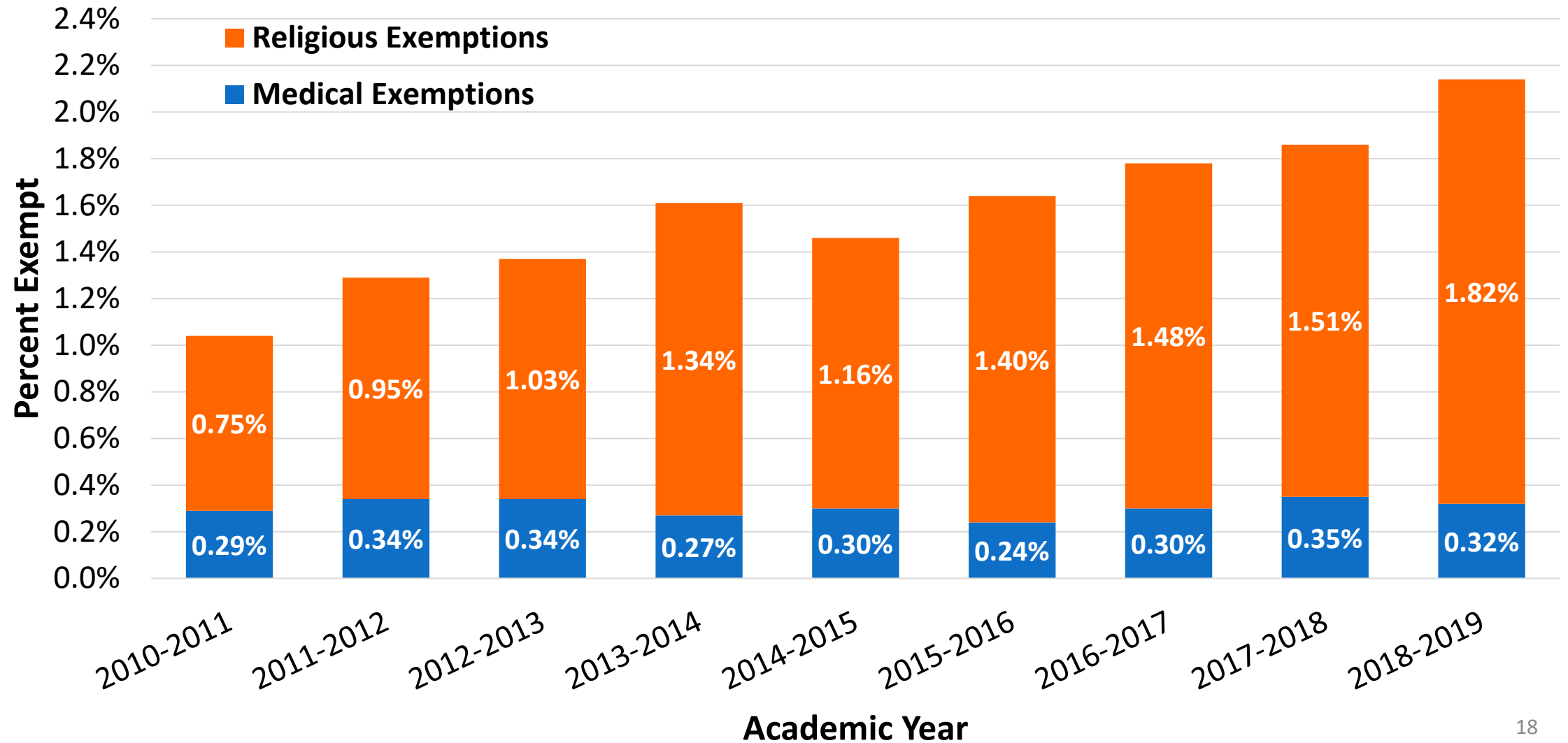
Preliminary 2018-19 MMR2 Coverage within First Semester of School



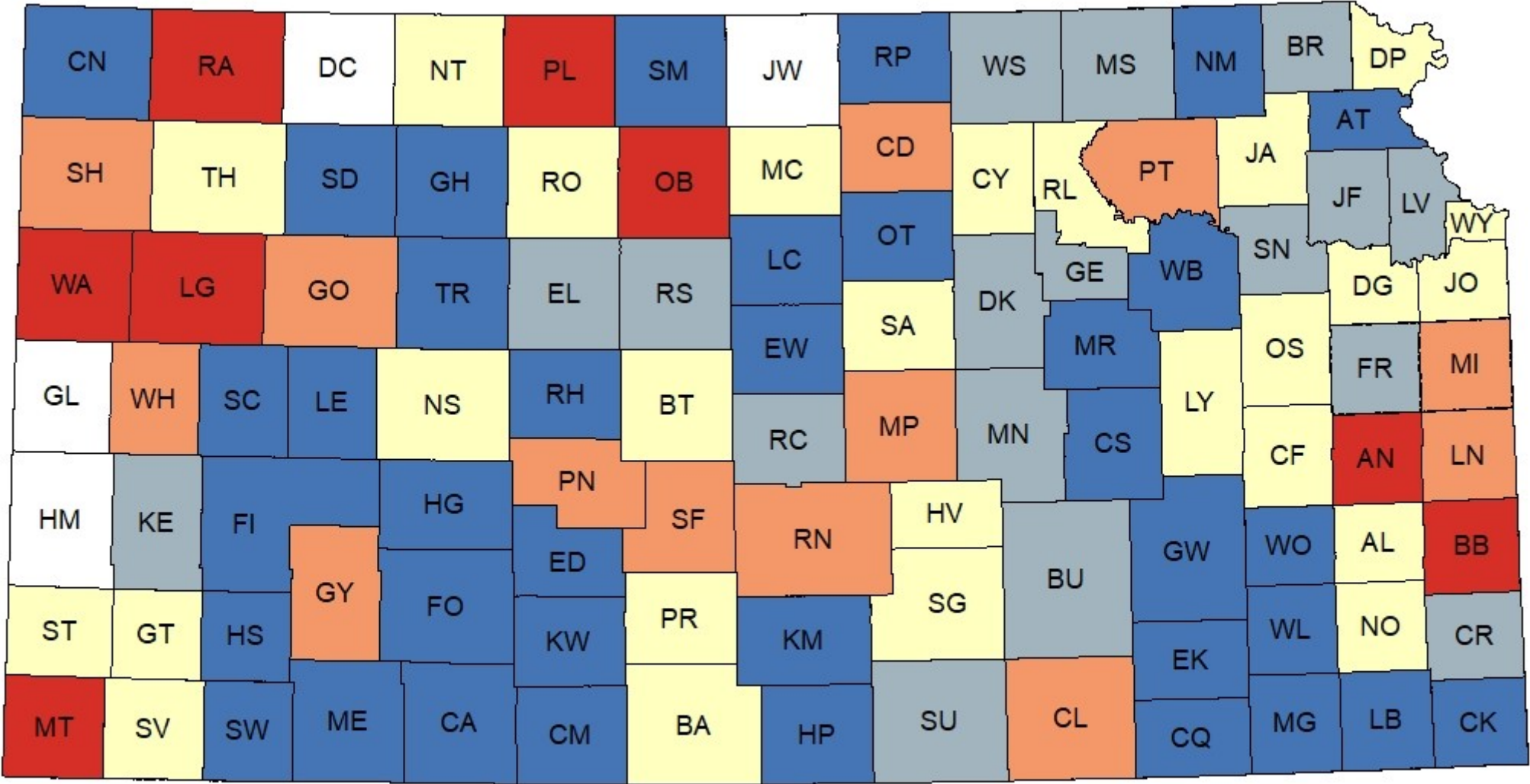
Preliminary 2018-19 MMR2 Coverage by County at Record Submission



Vaccine Exemption Rate among Kindergarteners by Academic Year – Kansas



Preliminary 2018-19 Religious Exemption Rates



Legend: No Data Available (White), Less than 0.75% (Blue), 0.75% to 1.5% (Light Gray), 1.5% to 3.0% (Yellow), 3.0% to 5.0% (Orange), Over 5.0% (Red)



KANSAS CERTIFICATE OF IMMUNIZATIONS (KCI)


This record is part of the student's permanent record and shall be transferred from one school to another as defined in Section 72-6262 (d) of the Kansas School Immunization Law (amended 1994.)

Student Name: _____

Birthdate (MM/DD/YYYY): _____ SEX: [] MALE [] FEMALE Race: _____ Ethnicity: _____ County: _____

VACCINE	RECORD THE MONTH, DAY, AND YEAR THAT EACH DOSE OF VACCINE WAS RECEIVED						
	1st	2nd	3rd	4th	5th	6th	7th
DTaP/DT/Td/Tdap (Diphtheria, Tetanus, Pertussis) Required for school entry. Single Tdap required for entry to 7th grade. <small>State Type</small>							
Polio Required for school entry.							
HEP B (Hepatitis B) Required for school entry.							
Varicella (Chickenpox) Required for school entry.							
MMR (Measles, Mumps, and Rubella combined) Required for school entry.							
Influenza (Flu) Recommended annually for ages 6 months of age and older. Not required for school entry.							
HIB (Haemophilus Influenzae Type B) Required < 5 years of age for preschool or child care operated by a school.							
PCV (Pneumococcal Conjugate) Required < 5 years of age for preschool or child care operated by a school.							

Policy Issues

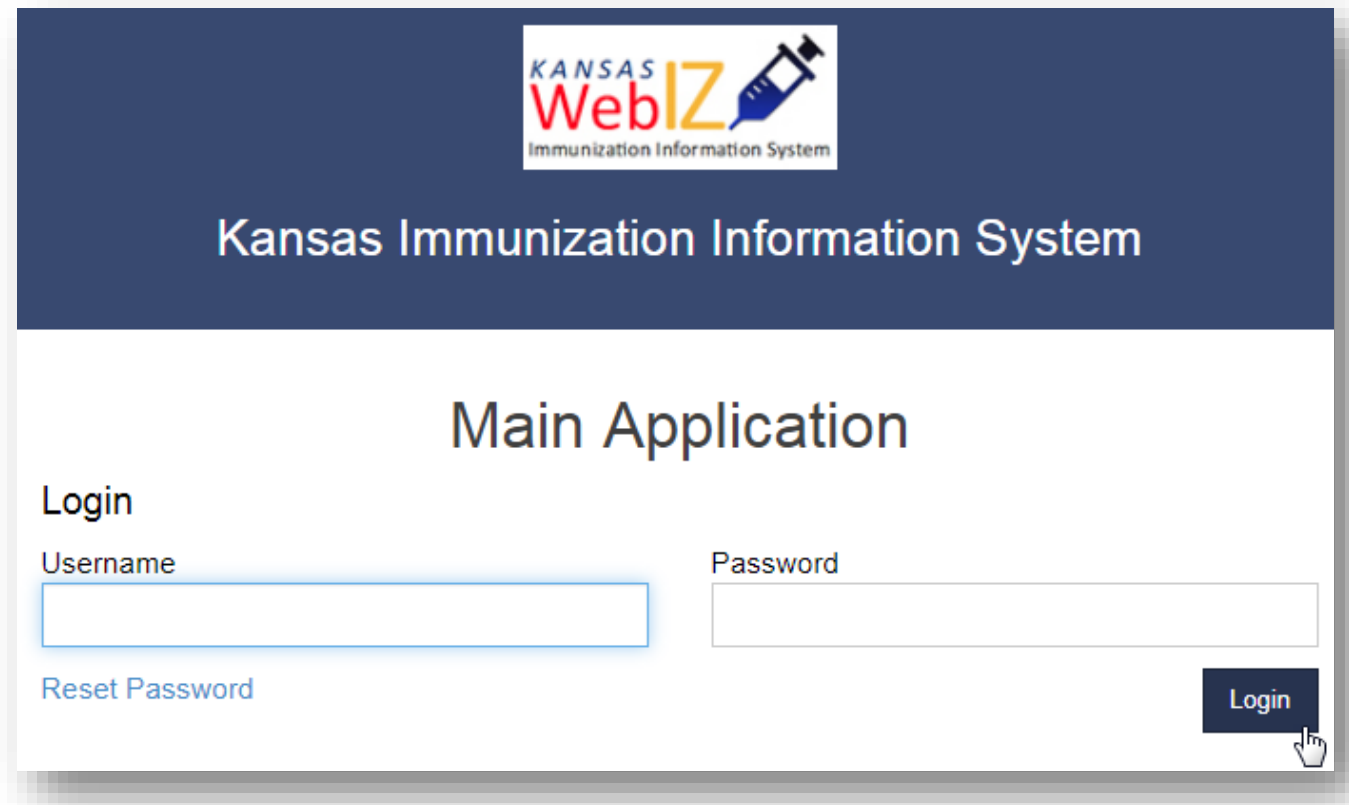


Childcare and School Vaccination Requirements

- State law requires children in childcare and school (K-12) to be vaccinated
- Specific diseases / vaccines specified by KDHE via administrative regulation
- Exemptions for medical contraindications or religious beliefs
- Unvaccinated children may be excluded

KSWebIZ Reporting Requirements

- KSWebIZ – web-based statewide immunization registry for life span
- K.S.A. 65-2886a
 - Persons authorized to administer vaccines required to report to KSWebIZ on or after July 1, 2020



KANSAS WebIZ
Immunization Information System

Kansas Immunization Information System

Main Application

Login

Username

Password

[Reset Password](#)



Pharmacists Scope of Practice

- 2010: Kansas law changed to allow pharmacists to administer influenza vaccine to children 6 years and older
- 2017: Law was expanded to allow all other vaccines to those 12 years and older
- Law requires reporting vaccination to primary care provider and KSWebIZ (or other state registry)

Case and Outbreak Investigation, Prevention and Control

Measles Rapid Assessment Form for the Local Investigator
 (Please refer to the Disease Investigation Guideline for additional guidance.)

Activity History For 21 Days Before Rash Onset and 4 Days After Rash Onset

Day	Date	Activities
-21		
-20		
-19		
-18		
-17		
-16		
-15		
-14		
-13		
-12		
-11		
-10		
-9		
-8		
-7		
-6		
-5		
-4		
-3		
-2		
-1		
0 <small>(rash onset)</small>		
1		
2		
3		
4		

POSSIBLE EXPOSURE PERIOD *

INFECTIOUS PERIOD

* Rash usually 2-4 days after prodrome of fever, malaise, cough & coryza. Incubation period: 7-18 days before fever onset.

Investigation

- Case assessment
 - Places where they could have exposed others while infectious
 - Places where they could have been exposed
- Contact assessment
 - Vaccination/disease history
 - MMR administration
 - IG administration

Investigation

- Coordination
 - Involves many partners:
 - Health department/s
 - Laboratories
 - Hospitals, doctor's offices
 - Public places of exposure
- Communication
 - Isolation and quarantine
 - Targeted or public notification if necessary





Control of Cases

- Home isolation for 4 days following onset of rash
- Airborne precautions for 4 days following onset of rash if hospitalized



Control of Contacts

- Become age-appropriately vaccinated within 72 hours
- Exclusions from attending or working in health care, child or adult day care, or school for 21 days



Immunize Kansas Coalition

About IKC

Group of Kansas providers, health department officials, researchers, educators, and others interested in **working together to improve vaccination rates and protect all Kansans from vaccine preventable diseases.**



The screenshot shows the website for the Immunize Kansas Coalition. At the top left is the IKC logo. To its right is the text 'IMMUNIZE KANSAS COALITION'. Further right are social media links for '#KansasFightsFlu', 'Share Your Story', 'HPV', 'Tdap', 'Meningococcal', and 'in'. Below this is a navigation bar with links for 'Home', 'Info For...', 'Vaccines', 'Diseases', 'Resources', 'Data', and 'About IKC'. The main content area features a large image of a healthcare professional interacting with a family. Below the image is the text: 'OUR PURPOSE: Working together to protect all Kansans from vaccine preventable diseases. Our goal is to focus on improving access to and rates of adolescent immunizations, paying special attention to HPV and meningococcal vaccination rates.' Below this is a blue banner with the text: 'Conference Materials including new Flash Drive online and HPV Vaccine Videos with IKC Chair'. The bottom section contains a video player with the title 'New! HPV Vaccine Videos with IKC Chair' and a video thumbnail showing a woman in a white lab coat. To the right of the video player is a social media post from 'Immunize Kansas Coalition' with 469 likes and a share button. Below the social media post is a flyer for a webinar titled '2018-2019 RECOMMENDATIONS FOR INFLUENZA PREVENTION AND TREATMENT IN CHILDREN'.



IKC Initiatives

- Adolescent Immunization Grant Awards
- Vaccine Toolkits
 - HPV
 - Meningococcal
 - Tdap
- Model School Exclusion Policy
- College/University Model Policy
under development
- #KansasFightsFlu



Call to Action



Prevention

- Assess your own vaccination status
- Assess your community's vaccination coverage
- Reach out to partners
- Raise awareness





Preparation

- Connect with partners
- Review your plans
- Plan an exercise



Measles and Measles Outbreak Resources

- CDC – Questions About Measles
[cdc.gov/measles/about/faqs.html](https://www.cdc.gov/measles/about/faqs.html)
- CDC – Measles Outbreak Toolkits
[cdc.gov/measles/toolkit](https://www.cdc.gov/measles/toolkit)
- KDHE – About Measles
[kdheks.gov/epi/measles](https://www.kdheks.gov/epi/measles)
- KDHE – Measles Disease Investigation Guidelines
[kdheks.gov/epi/Investigation_Guidelines/Measles_Disease_Investigation_Guideline.pdf](https://www.kdheks.gov/epi/Investigation_Guidelines/Measles_Disease_Investigation_Guideline.pdf)



Immunization Resources

- Immunize Kansas Coalition (*see **Info for Schools for Model Exclusion Policy***)

immunizekansascollection.org

- Children's Hospital of Philadelphia – Vaccine Education Center

chop.edu/centers-programs/vaccine-education-center

- Voices for Vaccines – Sign up for weekly emails that address the most current vaccine hesitancy concerns

voicesforvaccines.org/join-us





Questions?