MISSOURI DEPARTMENT OF
HEALTH &
SENIOR SERVICES

Bureau of Data Modernization and Interoperability (BDMI)

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Chief, BDMI

Bureau of Data Modernization and Interoperability Structure

- One-third of the data and informatics unit (along with BHCADD and OOE)

- BDMI comprises over 24 talented professionals including research and data analysts and epidemiologists, organized into four specialized teams led by Research and Data Analysis Managers, Public Health Program Managers, and Senior Public Health Specialists.

Sarah Finley	Becca Mickels	Angie McKee	Susan Dulle
Research and Data Analysis Manager, ShowMeVax & Docket	Research and Data Analysis Manager, ShowMe WorldCare (SMWC) & Interoperability Specialist	Public Health Program Manager, SMWC Data Systems	Senior Public Health Specialist, Health Systems Support

BDMI Mission and Purpose

To enhance the health of Missouri residents and visitors by modernizing public health data systems for improved interoperability, ensuring timely and accurate public health responses, reducing inefficiencies, and ultimately delivering actionable insights that inform policy decisions, guide public health programs, and support effective disease prevention and health promotion across the state

What is it?

Defining Data Modernization and Interoperability

***Data*: "'Oxygen' powering our public health system"[1]**

Modernization: Enhancing data systems to meet ever-evolving public health needs[1]

Interoperability: How well data systems talk to each other

In BDMI, our staff applies these concepts to two primary systems:

- **ShowMe WorldCare:** Missouri's comprehensive reportable conditions system

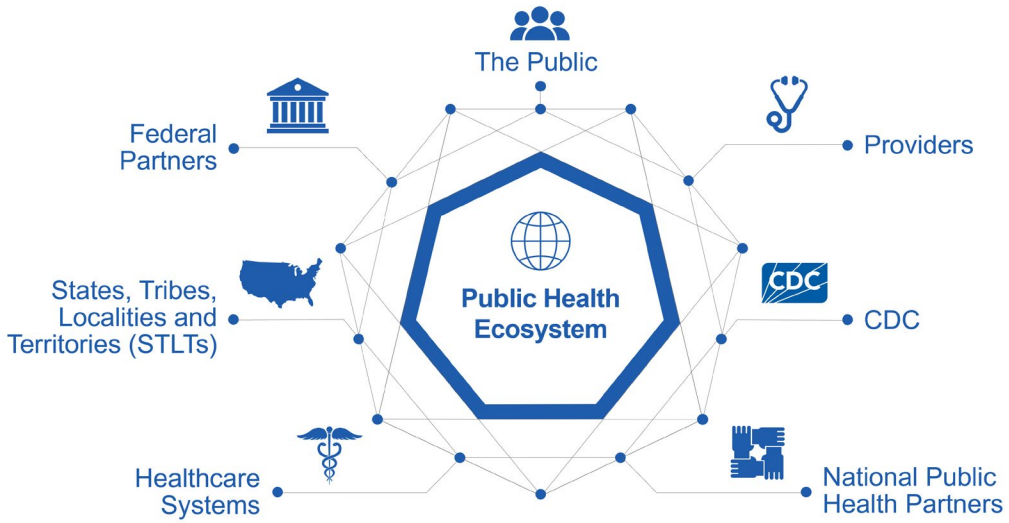
- **ShowMeVax:** Missouri's immunization information system (IIS)

1: What is Data Modernization? (CDC)

Diving into Details

What is interoperability?

***Interoperability*:**
The ability of diverse **data systems** and applications to **connect** and **communicate** → efficient and secure **data exchange** and information **sharing**.



In public health, interoperability…

- Strengthens collaboration
- Improves decision-making
- Reduces manual processes
- Increases data accuracy and timeliness
- Supports a faster, more coordinated public health response

Bureau of Data Modernization and Interoperability Core Functions

Health Applications

Works to replace outdated public health data systems with solutions that meet current national standards for interoperability and data exchange capabilities.

Systems:
ShowMe WorldCare
ShowMeVax

Electronic Reporting & Automation

Enhance existing public health data systems to manage a larger volume of electronic reporting effectively, while also automating processes wherever possible. Focusing on data validation will minimize manual corrections, ultimately boosting overall data quality.

Data Quality Improvement

Identify opportunities for data quality improvements and coordinate informatics-related services to deliver more reliable, effective, and efficient public health data.

Supporting Program Operations

Provide data and statistics to researchers, public health professionals, legislators, media, educators, and the public, complying with statutes, regulations, and policies regarding data confidentiality and usage.

Technical Assistance and Consultation

Improve program performance and operational efficiency to provide data-driven health information. By offering support and guidance to the end users of the SMV and SMWC systems, we ensure effective implementation of policies and procedures, which fosters a more robust and responsive health environment.

Success Stories

Stories made possible by BDMI

Modernizing Data Systems

CSTE Stories from the Field Article

Making Data More Available

Missouri's School Health Immunization Dashboard

Docket Health

Automating Report Generation

Missouri's work highlighted at the AIRA 2025 National Conference

Leading the way in modernization

Missouri's spotlight in ASTHO's Data Modernization Primer: Guide for State and Territorial Health Officials

What We Do

How does informatics apply to our current work?

Serve as a Liaison
Advocate for DCPH program needs to ITSD and system vendors

Project Management
For system changes and enhancements

Onboard Data Submitters
Guides healthcare providers and laboratories through the electronic submission of data

Facilitate Data Exchange
Between Missouri's public health systems and other state and federal partners

Provide Help Desk Services
For ShowMe WorldCare and ShowMeVax

Data Management
Through managing the ShowMe WorldCare data warehouse

Improve Data Quality
Through manual and automated data cleaning and monitoring

Data Dissemination
Through dashboards and by providing data to internal and external partners

Automation
Tuning manual processes into automatic solutions for faster data sharing and analysis

Data Infrastructure Modernization
Updating the systems, tools, and processes that collect, move, store, and manage data

... And much more!

Data Systems & Services

Main Systems & Services

System	What is it?	What does it do?	Why does it matter?

ShowMe WorldCare (SMWC) & Related Services	Reportable Conditions Surveillance System	• *System*:
		  • Registry / surveillance, contact tracing, case management, and cluster / outbreak tracking for:
		  • All communicable diseases
		  • All environmental conditions
		• *Services*:
		  • Onboarding for labs and providers
		  • Data warehouse
		  • Help desk
			• **227 conditions** live and **faster development** of emerging conditions
			• Over **700** end **users**
			• Over **95 percent** of **diseases reported electronically**
			• Electronic reporting **saves** an average of **142 staff hours per day**
			• Nearly **5,000 tickets** resolved through help desk

ShowMeVax (SMV)	Immunization Information System (IIS)	• Centralized & secure source for vaccination records • Supports health care providers, families, and citizens • Aids in public health planning	• Over **95 percent** of vaccinations **reported electronically** • Over **7,000 active providers** • Data used in **national dashboards**
Docket®	Consumer Access Portal	• Provides citizens secure access to their vaccination records • Easily accessible via phone or web browser • Sends reminders and alerts for vaccinations	• Over **14,000 unique users** since launch in July 2025 • Over **2,000 updates** made to ShowMeVax patient records for Docket® users

For more information, please visit the SMWC Information Page, the SMV Information Page, and the Docket® Information Page to learn more.

ShowMe WorldCare

Comprehensive Reportable Conditions System

- Cloud-based solution for communicable and environmental conditions
- Web-based main application
  - Registry / Surveillance system
  - Outbreak / Cluster tracking
  - Contact tracing
  - Case management
  - “Canned” reports
  - Electronic record ingestion / Spreadsheet imports
  - Outbound reporting to CDC
- Additional tools/resources
  - Data warehouse (cloud hosted)
  - Business intelligence portal for additional “canned” reports in development
  - ShowMe WorldCare Help Desk
  - ShowMe WorldCare Resources Website
  - In development to add 5 birth defects conditions and newborn bloodspot case management

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ShowMe WorldCare

ShowMe WorldCare

Electronic Ingestion

ELR

95%+ of disease incidents created electronically

430+ laboratories/providers submit results electronically

eCR

Currently ingesting for COVID-19, Mpox, and MIS-C conditions

Working toward adding more conditions

MODROP

Small providers can enter COVID-19 case information online (expanding to other conditions)

Reports ingested directly into system

ShowMe WorldCare

Interoperability

- ShowMeVax API
  - Allows SMWC users to click a button to load relevant vaccine information from the IIS
  - Available on many conditions including Anthrax, Cholera, COVID-19, MIS-C, Dengue, Diphtheria, Ebola/Marburg, Haemophilus Influenzae, Influenza, Invasive Pneumococcal Disease (IPD), Measles, Meningococcal, Mpox, Mumps, Pertussis, Polio, Rabies, Rubella/Congenital Rubella, Smallpox, Salmonella Typhi, Tetanus, Toxic Shock Syndrome, Varicella, Yellow Fever, Hepatitis B, and Tuberculosis
- NIOCCS API
  - Allows SMWC users to click a button to pull in industry/occupation codes from the federal database
  - Available on most conditions but especially helpful for occupation-related conditions

ShowMe WorldCare

By the Numbers

- Number of SMWC Conditions: 227
  - Some diseases may have multiple versions of the condition in SMWC. For example, Candida auris includes a generic condition (to ingest records before type may be known), a screening condition, and a clinical condition.
  - Missouri Reporting Rule
  - Missouri Reportable Conditions List
- Active full system users: 594 (as of 6/3/26)
- Active MODROP users: 152 (as of 6/3/26)
- Average manual entry staff hours saved per day: 142

ShowMeVax

Immunization Information System (IIS)

What is it?

ShowMeVax is a secure and confidential data system designed for effective tracking and administration of immunizations in Missouri.

Purpose

To maintain complete, accurate, and secure immunization records for residents and assist authorized users such as healthcare providers, childcare facilities, and schools in preventing vaccine-preventable diseases.

- **5224 facilities connected across Missouri**
- **16 states through IZ gateway**

Key Features of ShowMeVax

Immunization Information System (IIS)

Comprehensive System
- Vaccine ordering, administered dose reporting, and inventory tracking all in one platform.

Data Exchange
- Bidirectional electronic data exchange with electronic health record systems (EHRs).

Reporting Capabilities
- Immunization Coverage Rate Reports and Reminder/Recall Reports.

Innovative Technology
- “Recommender” feature forecasts vaccinations that are invalid, due, or overdue.

Official Documentation
- Generates immunization certificates for schools, childcare, camps, and colleges.

Patient Records Access
- Electronic querying for patients’ previous immunization records.

Docket

Consumer Access Portal

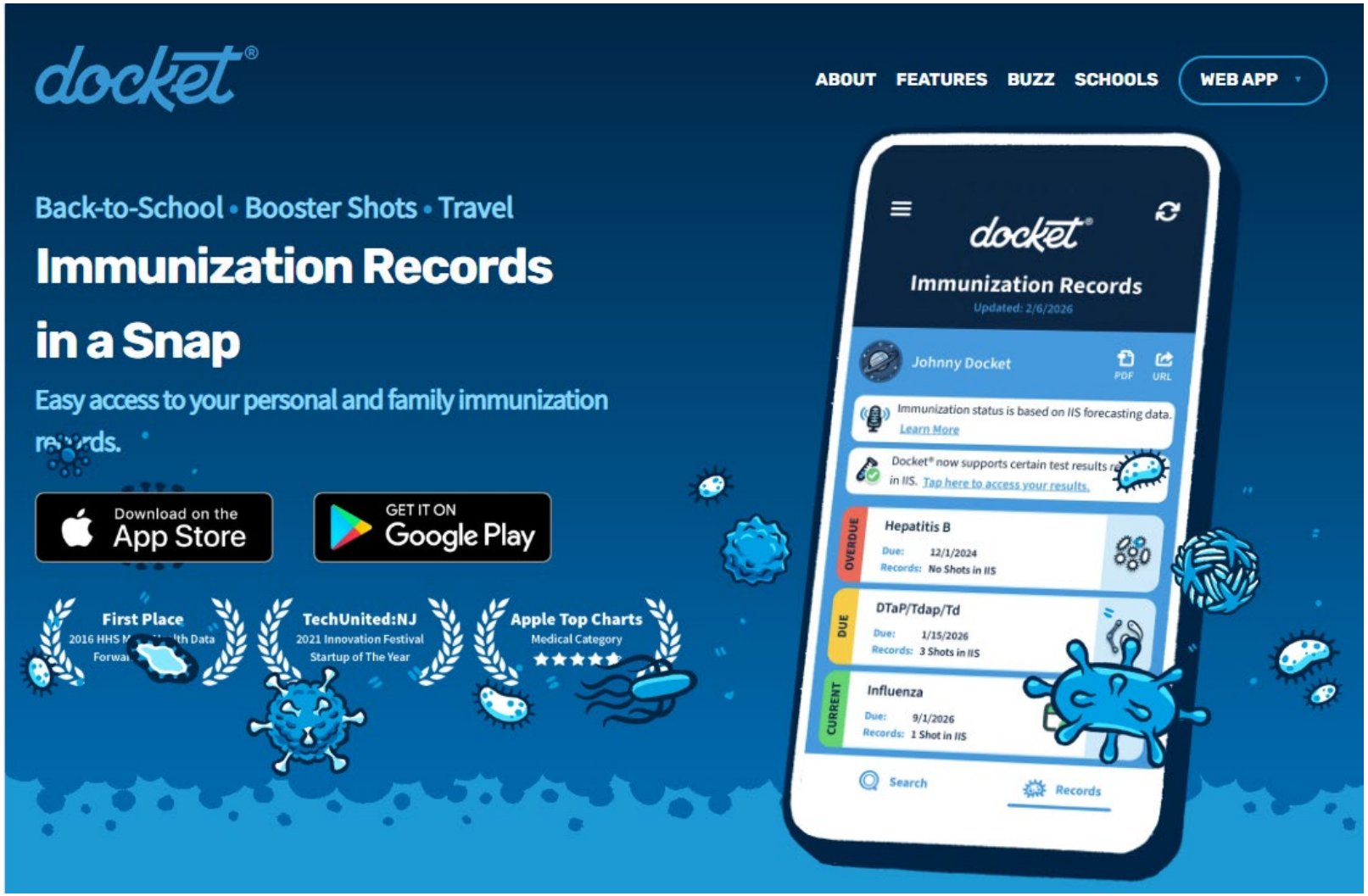
Residents of Missouri can use the free Docket app to view, manage, and share their personal and family immunization records directly from ShowMeVax, Missouri's statewide immunization system.

How to Access Your Records

1. Download the Docket app from the Apple App Store or Google Play Store.

2. Sign up using your email address, Apple account, or Google account.

3. Search for your records by entering your name, date of birth, and legal sex exactly as they appear in ShowMeVax.



What BDMI Represents Today

How we contribute to ensuring ‘optimal health and safety for all Missourians, in all communities, for life.’

BDMI is not just about technology or data exchange. We represent the **systems**, **processes**, **partnerships**, and **strategies** needed to make public health data more timely, accurate, connected, and useful.

- We **modernize** by improving the systems and workflows behind public health data
- We **promote interoperability** by connecting systems, partners, and programs
- We turn **data into insight** and **action**
- We **strengthen infrastructure** by modernizing the foundation for reliable data use.
- We **promote public health strategy** by aligning data capabilities with real public health needs

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QUESTIONS?

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