



# Medical Practices Need Data to Navigate Pandemic Impact

Identifying Methods for Medical Practices

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# Pre-Pandemic Challenges

- Competitive landscape in constant motion
- Stagnant reimbursement rates
- Shift to value-based care
- Resources stretched thin



# Pandemic's Impact on Medical Practice

Fewer Resources (Staff, Supply, Revenue)

Care Coordination with Health Systems Strained

Windfall of Telehealth Needs – 14.3% (2018)  
70.3% (2020)

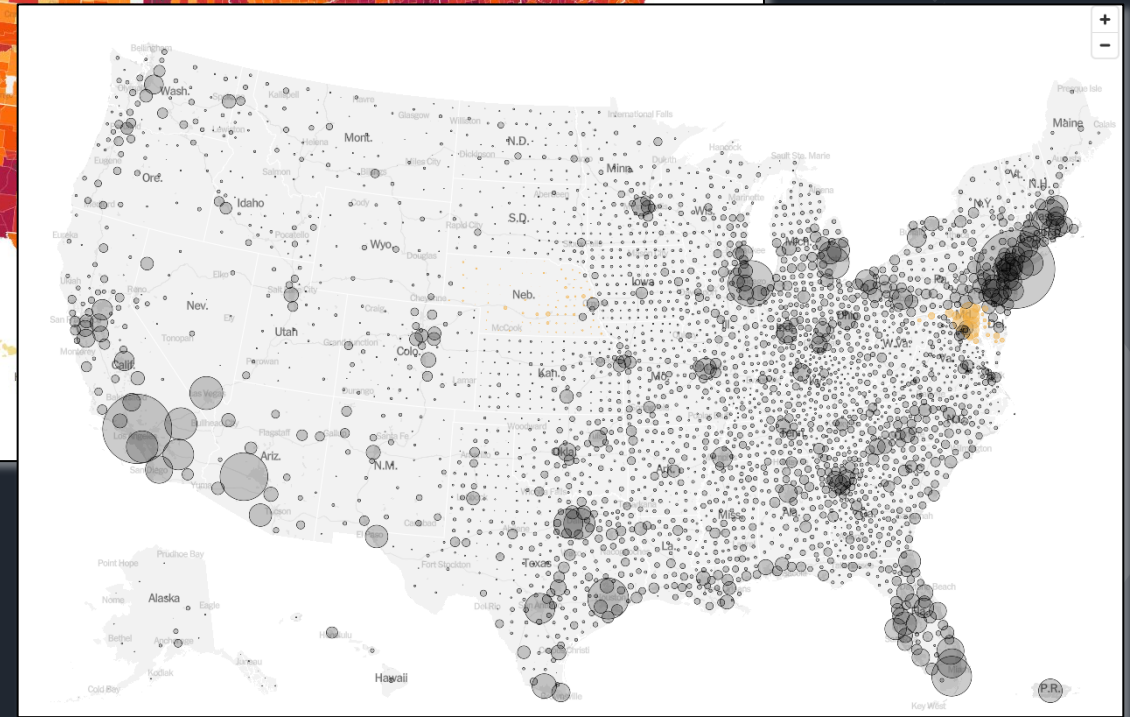
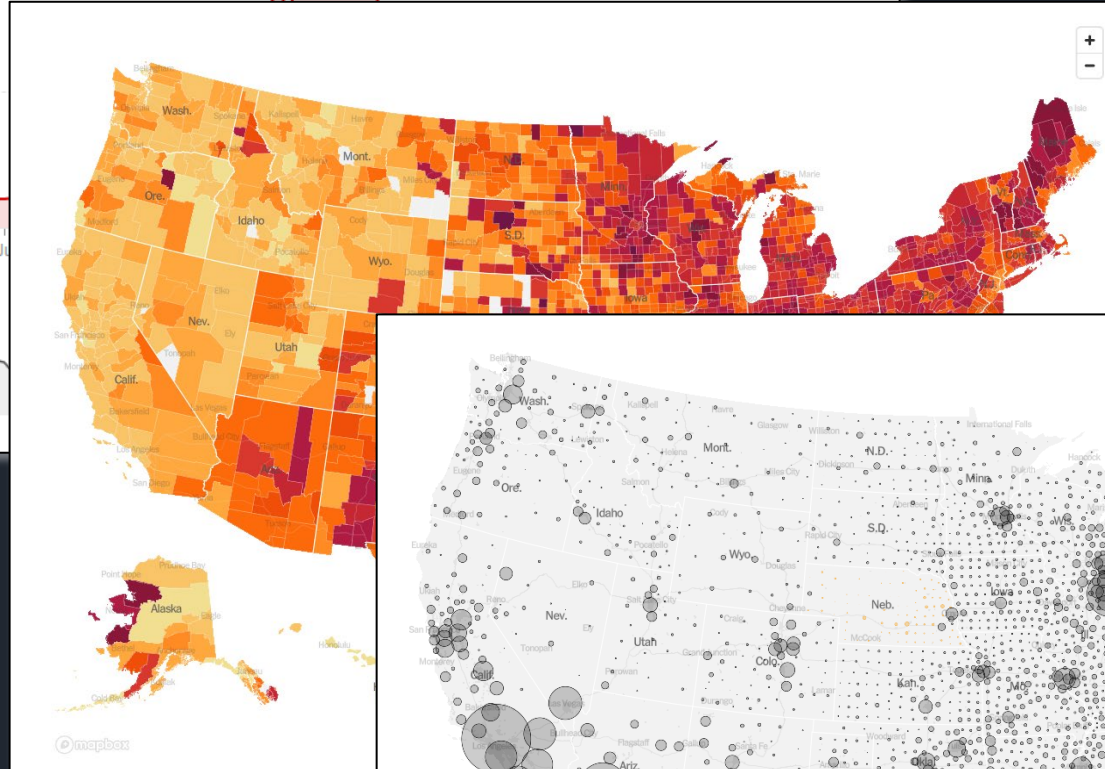
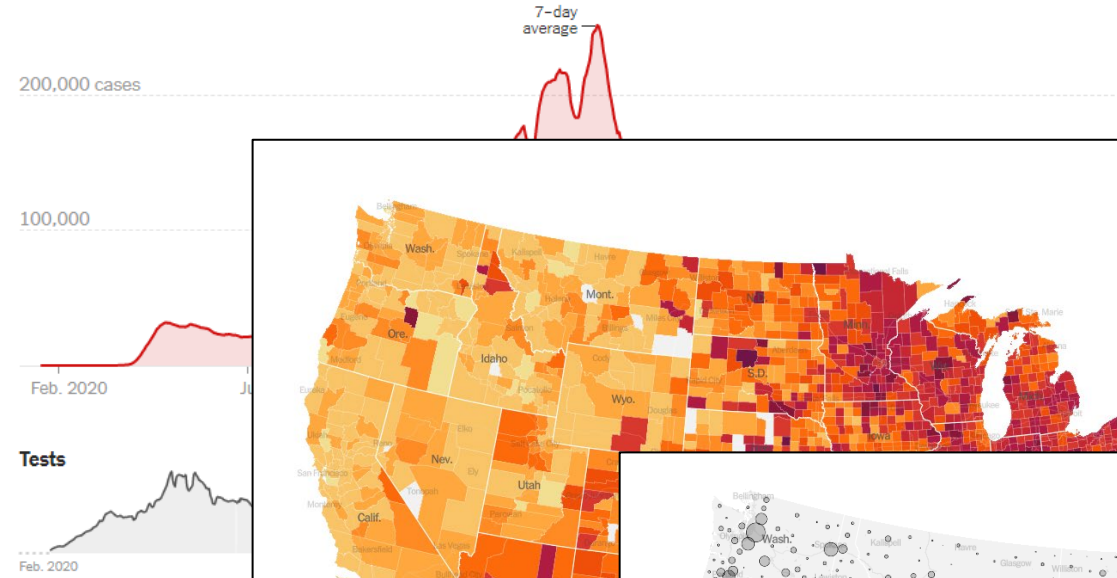
Delayed Primary Care Visits

Elective Procedures Paused

# Pandemic's Impact on Data

## New reported cases

All time Last 90 days



# Pandemic's Impact on Data

It is not just providers, but lawmakers and researchers who are turning to big data analytics and predictive models to help allocate resources, predict surges, improve patient care and outcomes and employ preventive measures.

This pandemic has resulted in an enormous surge of health data being recorded and manipulated allowing for bigger and better analytics.

Not only does the data help improve day-to-day operations and better patient care, but it can also help contain rising costs.

\*University of Pittsburgh School of Medicine 2021

# Readiness for New Technologies

- There are large gaps in readiness for some of the most critical new health care developments such as telemedicine, personalized medicine, and genetic screening.
- When asked to rate the effectiveness of their education to prepare them for these developments, only 18% of current medical students and residents surveyed said that their education was “very helpful,” while 44% of physicians surveyed said that their education was either “not very helpful” or “not helpful at all.”
- This gap can be closed by modernizing the appropriate curriculum and training programs so that both current and future physicians can effectively use and make the most of new technologies.



# Data-Driven Physician

Data should be used as an asset to help close the resource gap



Presents an opportunity to positively transform medicine and improve health outcomes by bringing new technologies and insights to the patient bedside.

# Providers are Adapting

- Nearly half of all physicians (47%) and three quarters of medical students (73%) are currently seeking out additional training to better prepare themselves for innovations in health care. These pursuits gravitate toward data-oriented subjects such as advanced statistics, genetic counseling, population health, and coding.
- Among physicians who are seeking additional training, 34% are pursuing classes in artificial intelligence.
- Nearly half of all physicians, students, and residents use a wearable health monitoring device. Among those who wear them, a majority say they use the data to inform their personal health care decisions (71% of physicians, 60% of students and residents).
- A majority of students and residents (78%) and physicians (80%) say that self-reported data from a patient's health app would be clinically valuable in supporting their care.





# Electronic Medical Record Challenges

EMR systems are input centric, designed to capture data from clinicians as patients receive care

Most EMR systems lack intuitive reporting functionality

Extracting information quickly from EMR systems can be a complex and manual process for Medical Practice office staff

Raw meta data from EMR can't provide operational insight without integration with other data sources

Compliance requirements when working with PHI data adds additional complexity

# Data Solution Basics

✓ EMR Database API

✓ Supporting Data Sources;  
Wearables

✓ Data Warehouse &  
Common Data Models

✓ BI Report & Visualization

✓ User Access to Dashboards

# Data Integration Process

✓ Data Warehouse &  
Common Data Models

- **Data aggregation** - from multiple sources and data cleansing to get quality data
- **Data transformation** in accordance with standardized formats
- **Data transportation** from the sources into data repositories and warehouses

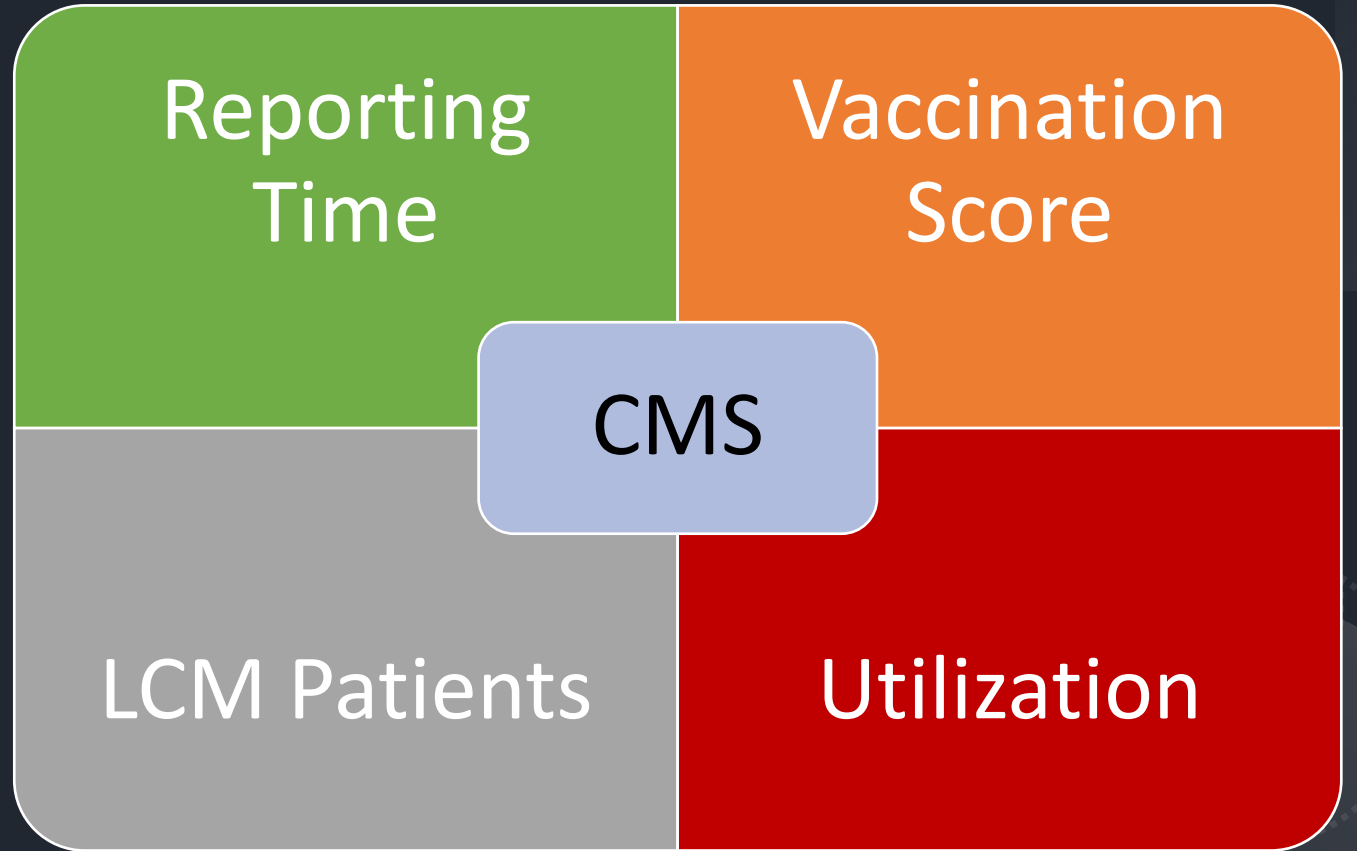
# Keys to Transforming Data into Analytics

Develop intuitive  
visualizations

Adding situational context  
to data

Confirm data sources &  
processes are sustainable

# CMS Reporting Requirements Provide Value - Today



# Data Governance & Culture

Prioritize Access to  
Current Data Sources

Engage All Practice  
Disciplines for Data

Transform Data into  
Actionable Insights &  
Performance Metrics

Procure Analytics Tool to  
Visualize and Implement  
Practice Goals

# Healthcare's Future is Data

- Evidence-based care
- Telemedicine
- Predictive Analytics
- Real-time Awareness

