Contact Tracing Technologies That Can Help Counties Slow the Spread of Covid-19

Webinar - July 14
Thank you to our Webinar Sponsor:
**Monitoring to Get Open and Stay Open.**

Address cases before they become outbreaks.
Bringing disparate data sources together into actionable information.
Identifying at-risk populations for special monitoring and risk mitigating actions
Identify Early and limit exposures.

Manage risk and return with confidence.

**Work and School Re-entry**

Make informed decisions about when to have workers, businesses, schools, students, faculty and staff return to and remain at school or work, with a focus on health

**Facilities and People Management, Safety & Wellness**

Organize and manage facilities and space, aid tracking to support contact tracing, people safety, and adherence to new protocols and processes

Technologies to check temperature, provide access to buildings based on health status.

**Contact Tracing & Care Management**

Trace exposures of COVID-19, manage care for impacted cases and contacts, and connect them to necessary resources to support successful quarantine and isolation.

Watson Works provide rapid access to the right software, data, IoT, AI, services and industry expertise to address today’s crisis and support ongoing planning.
Support county residents, businesses, schools and staff and protect their health and safety as school and work re-opens

→ Communicate self-reported symptoms and test results to staff to initiate contact tracing and case management process

→ Co-ordinate status and next steps for accessing testing and medical care resources

→ Manage and trace COVID-19 positive community members, students and staff and document all case information

→ Report on contact tracing efforts to slow the spread of infection

→ Support the health and social needs of quarantined and isolated individuals through community programs and services
Example journey for a family affected by COVID-19

Each day, Jack (or Susan) logs into the community app to review local conditions and document his health condition. He receives a green pass to attend classes at his school.

One morning, Jack feels ill and he uses the app to report his symptoms. He receives a red card from school and is advised where to go for testing.

Jack and Susan go to the local testing site where they test positive for COVID-19. Their results are sent to their apps and the Community Command Center.

At the end of the day, Jill reviews her Command Center dashboard to monitor trends across the community and within school students and staff.

Each night during the semester, Susan logs into the community app to check the status of her son's school and receive notifications of any community issues for the coming day.

Jill receives a notification of a student with potential symptom or exposure. She works with the school to evaluate response, using her dashboard to monitor the community for new information.

Jill is notified of the results and logs into Watson Care Manager to open a case, reaches out to Susan and Jack, and coordinates supports. She begins tracing and notifying the school and exposed individuals and arranges isolation supports for Jack and Susan.

*Scenario is representative only.*
Assess individual needs and capture critical information to determine next steps

Pre-loaded assessments allow you to capture critical information about the individual’s symptoms and needs.

These assessments help inform the care plan and recommend appropriate actions and interventions that are needed for each individual student.

Connect impacted contacts and cases to resources to support daily needs during quarantine and isolation:

- Food and grocery services
- Medication delivery
- Health programs
- Laundry services
- Mental health providers
- Academic and personal supports
Watson Care Manager

High-touch contact tracing and care management to ultimately slow the transmission of COVID-19

- Easily configurable cloud-based SaaS solution
- Rapidly deployed in as little as a week
- HIPAA enabled to protect personal health data
- Mobile responsive and accessible
- Reporting support for employer requirements
- Monthly licenses based on individuals under care
Thank you.

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Reopening will be a journey. Here’s your guide.
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- Trusted Multitenant Cloud
- 2,700+ Partner Apps
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- Custom Objects
- Mobile UI
- Collaboration
- Analytics
- Workflow
- Identity
- Fast App Dev & Customization
- CRM
- Service
- Outreach
- Apps
- Community
- Analytics
- Scalable Metadata Platform
- Trusted Multitenant Cloud
- SaaS
But There Are Many Considerations Before Reopening

Returning to the workplace will look different than before

How do you assess readiness to return to the workplace?

How do you reimagine your County for the new normal?

Where do you go for guidance to reopen safely?
Governor Gina M. Raimondo  |  State of Rhode Island

Reimagine contact tracing to be more efficient, scalable, reliable

Reopen businesses across the state

Reinforce the importance of community well-being

We are partnering with Salesforce to make our contact tracing process more efficient, more scalable, more reliable... it should give the public great confidence that our systems are getting so much better and we’re that much closer to getting back to work. Efficient, reliable contact tracing is essential for getting everybody back to work.
Capture the Right Information
Use guided assessments to collect data consistently and comply with workplace guidelines

Evaluate Potential Risk
Manually trace interactions across employees, meetings, and offices to identify possible points of transmission

Take Immediate Action to Stop the Spread
Trigger actions to accelerate intake, follow up, and daily monitoring

Protect Employees & Maintain Business Continuity
Track possible barriers to employee wellbeing and productivity over time

Connect to Workplace Command Center
Use a single hub to assess return-to-work readiness across multiple dimensions

Contact Tracing for Employees
Track Employee Health Relationships Safely and Securely
Work.com
Reopening will be a journey. Here’s your guide.

• Reopen Your Communities & Businesses Safely
• Return to Your Workplace
• Reimagine Your Organization
• Reskill Your Employees
• Respond to Any Future Crisis
Work.com Products
Helping Your County & Businesses Reopen Safely, Built on the World’s #1 CRM Platform

Workplace Command Center
Single hub for leaders to make decisions & take actions

Employee Wellness Check
Securely survey and assess employee health and wellness

Shift Management and Planning
Coordinate facilities and employee shift scheduling

Contact Tracing
Manually trace health and relationship contacts

myTrailhead for Learning and Wellness
Skill up your workforce to meet new business needs

Emergency Response Management
Allocate health, public and private sector resources

Volunteer and Grants Management
Streamline volunteering and giving programs

Extend with Partners
Integrated pre-built partner apps and solutions
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Contact: michael.barry@salesforce.com
Thank You
Modernized Approach to Contact Tracing

*Speed* saves lives

*Speed* protects the economy

Steve Bennett, Ph.D., Director, Global Government Practice at SAS; Former Director of the National Biosurveillance Integration Center, U.S. Department of Homeland Security

Sarah Newton, MPH, Manager, U.S. Health Policy Team for Government & Education

Andrew Ball, Director, Public Affairs & Policy, US Public Sector
Transforming a world of data into a world of intelligence.
Government is our second-largest industry by revenue

SAS supports 700+ Government Departments, Ministries, Offices, and Agencies in 134 countries around the world

100% of U.S. Government Cabinet Departments and Agencies, as well as all 50 states are SAS customers
SAS in New York State

- 20 NYS Agencies and Authorities are currently leveraging SAS software including:
  - Supporting New York State Dept. Of Health Epidemiologists with COVID-19 Response;
  - Advanced budget and revenue forecasts at New York State Division of the Budget
  - Audit prioritization at New York State Department of Tax and Finance;
  - Leveraging predictive analytics to improve mental health outcomes at Office of Mental Health
SAS Global Support for COVID-19

Epidemiological Modeling
- Cleveland Clinic
- Numerous U.S. States

Medical Resource Optimization
- Cleveland Clinic
- German Ministry of Health
- Spanish Ministry of Health

Benefits Delivery
- Brazilian Dataprev

Situational Awareness
- 7 U.S. States
- 17 Countries

Contact Tracing
- Hong Kong
- German Ministry of Health
SAS offers a modernized approach to Contact Tracing, enabled by analytics.
SAS Supports Modernized Contact Tracing in Four Ways

Contact Transaction Database
- Store contact tracing data
- Perform entity resolution
- Establish and display links among patients, contacts, and places
- Analyze how linkages form over time

Enriched Contact Tracing Data
- Direct Links
- Inferred Links
- Communication Methods

Intelligent Alerting
- Assess health risk
- Recommend action
- Generate alert
- Send alert to Contacts

Public Health Insights
- Who should be tested?
- Who is most likely to spread the virus?
- How do I find missing or unknown linkages?
- Which communities are at greatest risk?
- Is social distancing working?
The SAS Platform – Tackling COVID-19 issues with analytics

Public Health Insights

Identify Susceptible Populations

Leverage analytic models to monitor community risk by monitoring supply (e.g., hospital occupancy data), against potential demand (e.g., susceptible population, demographic factors).

Epidemiological Modeling for Decision Making

Model different R0 scenarios to understand impact of social distancing policies on virus transmission and future resource needs.

<table>
<thead>
<tr>
<th>R0 Value</th>
<th>R0 Intervention</th>
<th>Peak State Infections</th>
<th>Peak Hospitalizations</th>
<th>Peak ICU Beds</th>
<th>Peak Vent. Bed Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>0.7</td>
<td>389K</td>
<td>8.1K</td>
<td>2.4K</td>
<td>1.08K</td>
</tr>
<tr>
<td>0.8</td>
<td>0.9</td>
<td>424K</td>
<td>9.3K</td>
<td>3.1K</td>
<td>1.61K</td>
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</tbody>
</table>

Risk Modeling to Identify Vulnerable Populations

Nursing Home Cluster Analysis
Leveraging contact tracing data to infer case demographics and the associated known exposures with other public health surveillance data (e.g. clinical), SAS provides analytical models and visualizations to help:

- Pinpoint “super spreaders” and at-risk individuals and geographies
- Analyze data across county/community boundaries
- Find hidden patterns of risk
- Prioritize deployment of testing and PPE

**Case Investigator/Epidemiologist**

- Hotspot emerging clusters
- Create microsegments across NY jurisdictions to identify both “at-risk” and “safe” communities
- Add social determinants to protect historically underserved communities
- Enable Medical Resource optimization

**NY Health Policy Analyst/Lead Epidemiologist**
CASE INVESTIGATOR – Examine risk alert
CASE INVESTIGATOR – Drill deeper on key risks
CASE INVESTIGATOR – Find hidden pattern of risk
CASE INVESTIGATOR – Find hidden pattern of risk
HEALTH POLICY ANALYST – Hotspot emerging clusters

Covid-19 Location Priority Scoring Dashboard

Covid-19 Location Priority Scorecard

Understand the spread of Covid-19 cases and the top 15 locations with highest priority scores.

Location | Address | City | Score Change Percent | Prioritization Score | Covid-19 Patients | Num. Individ Exposed
--- | --- | --- | --- | --- | --- | ---
Saturn Nursing and Rehabilitation Center | 8156 South Tryon Street | Charlotte | 20% | 96 | 8
Signature Care Facility | 214 W Franklin Street | Chapel Hill | 17% | 87 | 2
AJ's Bakery | 2608 Erwin Road | Durham | 50% | 78 | 3
Litchfield Nursing & Rehabilitation Center | 3030 Evans St | Greenville | -6% | 75 | 1

Individuals Exposed

- Wake County
- Mecklenburg County
- Durham County
- Iredell County
- Onslow County
- Pitt County
- Orange County
HEALTH POLICY ANALYST – Perform microsegmentation

Sample Data

<table>
<thead>
<tr>
<th>Location</th>
<th>Contact Status</th>
<th>Mass Gathering</th>
<th>Contact Risk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batchellerville Presbyterian Church</td>
<td>Not-Contacted</td>
<td>Y</td>
<td>65</td>
</tr>
<tr>
<td>American Baptist Churches of New York State</td>
<td>Positive</td>
<td>Y</td>
<td>62</td>
</tr>
<tr>
<td>Chapel Hill Bible Church</td>
<td>Positive</td>
<td>Y</td>
<td>96</td>
</tr>
<tr>
<td>Oakwood Avenue Presbyterian Church</td>
<td>Positive</td>
<td>Y</td>
<td>100</td>
</tr>
<tr>
<td>Redden’s Funeral Home</td>
<td>Positive</td>
<td>Y</td>
<td>80</td>
</tr>
<tr>
<td>Townsend Harris High School</td>
<td>Positive</td>
<td>N</td>
<td>79</td>
</tr>
<tr>
<td>Chapel Hill Bible Church</td>
<td>Quarantined</td>
<td>Y</td>
<td>83</td>
</tr>
<tr>
<td>Oakville Presbyterian Church</td>
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<td>84</td>
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<tr>
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<td>92</td>
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<tr>
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<tr>
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<tr>
<td>Redden of Long Island</td>
<td>Recovered</td>
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<td>64</td>
</tr>
</tbody>
</table>

High-risk segments mapped
Moving Forward
Engage on both a business and technology track

**BUSINESS TRACK**
*Discuss scope and model building with SAS team that supports CDPH*
- SAS Data Scientists
- SAS Epidemiologists
- SAS Health Policy Experts

**TECHNOLOGY TRACK**
*Discuss IT Environment, security requirements, and data sources*
- SAS IT Architects
- SAS Data Modelers
- SAS Security Experts

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Let’s Work Together!

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