



COVID Complications AlgoMarker™

EarlySign's COVID Complications AlgoMarker Identifies individuals at increased risk for having COVID-19 complications. With the goal of prioritizing patients for COVID-19 testing and treatment, this new AlgoMarker aids in triaging patients by reducing chart review time to determine whether they are potentially at high risk for hospitalization, complications, and mortality.

Early Action Matters

COVID-19 negatively impacts the community and creates a massive burden to the health system. With emotional distress, significant economic anxiety, and physical suffering for individuals, early action is critical.

Using proven AI algorithms, the COVID Complications AlgoMarker is optimized to accelerate efforts to identify those patients in need of early intervention. The result: More patients at high risk see their medical conditions addressed earlier and essential clinical resources are used more efficiently and effectively.

About the EarlySign COVID Complications Model

EarlySign's model identifies individuals at high risk of developing complications from the Coronavirus using routine, existing EHR data. The model was developed using millions of EHR records—originally trained to predict moderate to severe flu complications¹—and adjusted based on global publications of COVID-19 risk factors and epidemiological records. Individuals are flagged by the model through analysis of hundreds of routine medical parameters, including demographics, admission history, prescribed medications, smoking history, and diagnoses associated with immunosuppression and chronic conditions such as respiratory and cardiac diseases.

Easy to Deploy; Fast Results

EarlySign's "IT-Lite" 2-step data export/import services run a one-time batch calculation on the entire population. Cutoff settings can be customized to fit specific client use cases.

Highly secure and HIPAA-compliant, the system will return a list containing the highest risk patients calculated using input data from the health system comprised of relevant clinical elements.

Optimize Clinical Workflow

Once highest risk patients are identified and stratified, decision-making and resource allocation can be focused to enhance clinical touchpoints including:

- Prioritization of patients for testing
- Facilitation of timely intervention
- Surge planning

¹ The Flu Complications and the COVID Complications AlgoMarkers are investigational solutions.

- Allocation of vital resources
- Post-discharge and outpatient follow-up

What the Data Shows—To Date

A similar model that was trained using the same methods on a different large population, was validated under clinical trial on ~700 confirmed adult hospitalized COVID-19 patients. **Using the top 25% highest risk group, the model identified over 85% of the patients with severe and/or moderate complications.**

Population flagged by the model	Sensitivity to COVID-19 complications		
	Severe (n=55)	Moderate (n=78)	Severe + moderate
Top 10% of highest risk	56.4%	48.7%	51.9%
Top 25% of highest risk	89.1%	85.9%	87.2%

Table: Prospective analysis - sensitivity to COVID-19 complications

About EarlySign

EarlySign partners with its clients to lead the industry in delivering personalized machine learning-based clinical solutions to aid in early identification and prevention of high-burden disease. With clinical evidence validated in 14 worldwide studies—and published in multiple scholarly publications—EarlySign’s ground-breaking clinical risk predictors are optimized to accelerate efforts to identify those patients on high-risk trajectories in need of early intervention, allowing healthcare clients to engage them earlier—all with a shared mission to massively impact human health.

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