

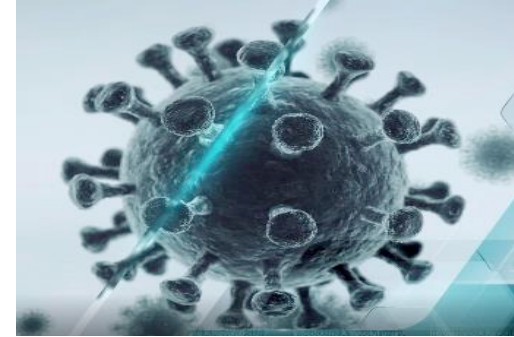


Skypath Health's A.I. Powered
Voice COVID-19 Screening
Noninvasive and Results in Under 5 Minutes



Powered By Artificial Intelligence

Voice AI Covid-19 Screening - The Digital, Affordable, Secure and Effective First Line of Defense



Voice Biomarkers & Artificial Intelligence



The Problem – Fall of 2022



Two years post onset
– Covid-19 is now the
4th leading cause of death worldwide –
3rd in the US behind
heart disease, cancer

[FastStats – Leading Causes of Death](#)
CDC.gov
Just How Do Deaths Due to COVID-19
Stack Up? *Think Global Health*



Conflicting guidance
on how to mitigate
infection transition to
endemic



Large workforce
disruption



Overall pandemic
fatigue



Relaxed protocols
for normalcy
increasing infections



Long Term COVID-19 Risk Management Implications

COVID - 19 lead to a shortage of

500,000

workers

Goda & Soltas, 2022

Unvaccinated: hospitalization expenditures may vary from **\$15,000 to \$100,000**, not considering rehabilitation or post-hospitalization activities, which could affect medical claims costs.

Bloomberg Law, 2021

Risk losing up to

39%

of critical employees for in-person environment.

Goda & Soltas, 2022

16 million 18-to-65-

year-old Americans have long haul Covid.

Prater, Erin - September 2022 Fortune

500 tests per week would cost **\$74,000, or \$890,000**

over a 12-week period.

Bloomberg Law, 2021

2 million to 4 million are unemployed because to long haul Covid,

costing \$62 billion in lost productivity,

\$168 billion - \$230 billion in lost wages.





Covid-19 Long Haul Syndrome - How to mitigate what is still an unknown?



COVID-19 Mitigation Challenges



Lockdown

disruptive to lives and global economy – avoid

Testing

Antigen & PCR – Unwieldy/Invasive/Costly

Masking

Mask Fatigue

Vaccine

67% are not fully vaccinated – having only 1 dose;
require multiple doses to mitigate spread

Guidance is not consistent

restriction easing causing misconception for inaction



Why Voice Screening?

4. RESULTS

Classifier results: Table 1 shows the classification results in terms of ROC-AUC (averaged) and STD in the 3-fold cross-validation experiment. The classifier used was a convolutional neural network (CNN).

Feature extractor	Pooling	ROC-AUC	STD
-	2AP	0.6611	0.0978
-	2SAP	0.7925	0.1073
CNN (1,3,32)	2AP	0.8009	0.1009
CNN (2,3,32)	2AP	0.8248	0.0790
CNN (2,3,32)	2SAP	0.8330	0.0745
CNN (2,5,64)	2SAP	0.8520	0.0577

Table 1. Classifier performance on 3-fold cross validation

	/a/	/i/	/u/	/a+/i/	/a+/u/	/i+/u/
AUC	0.57	0.839	0.896	0.690	0.804	0.900
STD	0.119	0.102	0.067	0.064	0.074	0.062

Table 2. Performance of best model on individual extended vowels and their combinations

Voice biomarkers **proven highly effective** in detecting conditions

Adjusted to **recognize Covid-19** and subsequent variants

Initial deployments have **>94% correct** classification rate

Up to **75% cost savings** vs. traditional testing

Pilots performed in India, Philippines; ongoing

Proactive vs. reactive approach



Traditional Testing vs. Voice Screening



A healthcare worker collects a nasopharyngeal swab specimen to test a man for Coronavirus. GETTY IMAGES

VS



About Us



Developed from 25 years of world renowned voice analysis research by **Dr. Rita Singh** – Carnegie Mellon University



Approved for Medical Independent Review Board, IRB



Patented technology platform used in over 460 projects for high security onboarding and data management



Backed by **experienced** health management experts



How the Technology Works

Voice Recognition Screening

BNORA Support

Patient ID#: 12345678
Screening ID#: 202209131830

PCR and/or Antigen test result needed to submit.
Click [Edit Patient Data](#) to add results to person's record.

You will be asked to say the following prompts.
Speak the sounds, holding out the vowel for as long as you can.

- AAAH
- EHHH
- EEEE
- OOOH
- OOOO
- Cough Sample
- Count from 1 to 20

[Cancel](#) [Edit Patient Data](#) [Begin](#)

Voice Recognition Screening

BNORA Support

1 2 3 4 5 6 7

Press record and wait 3 seconds. Then say "AAAAH", holding out the vowel for as long as you can.

AAAAAHHHHHHHHHH

0 1 2 3 4 5

[Cancel](#) [Edit Patient Data](#) [Save](#)

Voice Recognition Screening

BNORA Support

1 2 3 4 5 6 7

Press record, wait 3 seconds, and then count from 1-20.

Count from 1 to 20

1 2 3 4 5 6 7 8 9 10 11
12 13 14 15 16 17 18 19 20

0 2 4 6 8 10 12 14 16 18 20

[Cancel](#) [Edit Patient Data](#) [Save](#)

Voice Recognition Screening

BNORA Support

Patient ID#: 12345678
Screening ID#: 202209131830

The recordings have been submitted.

AAAH	Success!
EHHH	Success!
EEEE	Success!
OOOH	Success!
OOOO	Success!
Cough Sample	Success!
Count from 1 to 20	Success!

[Edit Patient Data](#) [View Result](#)

- Noninvasive secure voice AI Solution for **screening** presence of Covid-19 & variants
- Onboard, capture voice recordings, get result in **less than 5 minutes**
- Universal simple vowel sounds – **language agnostic**
- Can detect Covid **sooner** than traditional tests.

- **AI enhanced system** system is smarter as more samples are captured
- Central Neural Network (CNN) processes to accurately classify voice recordings



Ease of Adoption



Standardized onboarding,
voice capture



Cloud-based enterprise
deployment and/or
mobile application



Scalable data platform easily
combining multiple datasets



Easily deployed for
immediate usability



Real-time use,
notifications, reporting &
data sharing capabilities



Accessible anytime,
anywhere



System security and privacy
compliant - protection of
personal and health data



Secure API integration can
be used with other systems



Permission-based user
rules for managing,
viewing and sharing data





Digital Covid-19 Screening to Mitigate Long Term Risks

“In any moment of decision, the best thing you can do is the right thing. The worst thing you can do is nothing.”

— Theodore Roosevelt

Contact Us to get started today!