

## BACKGROUND

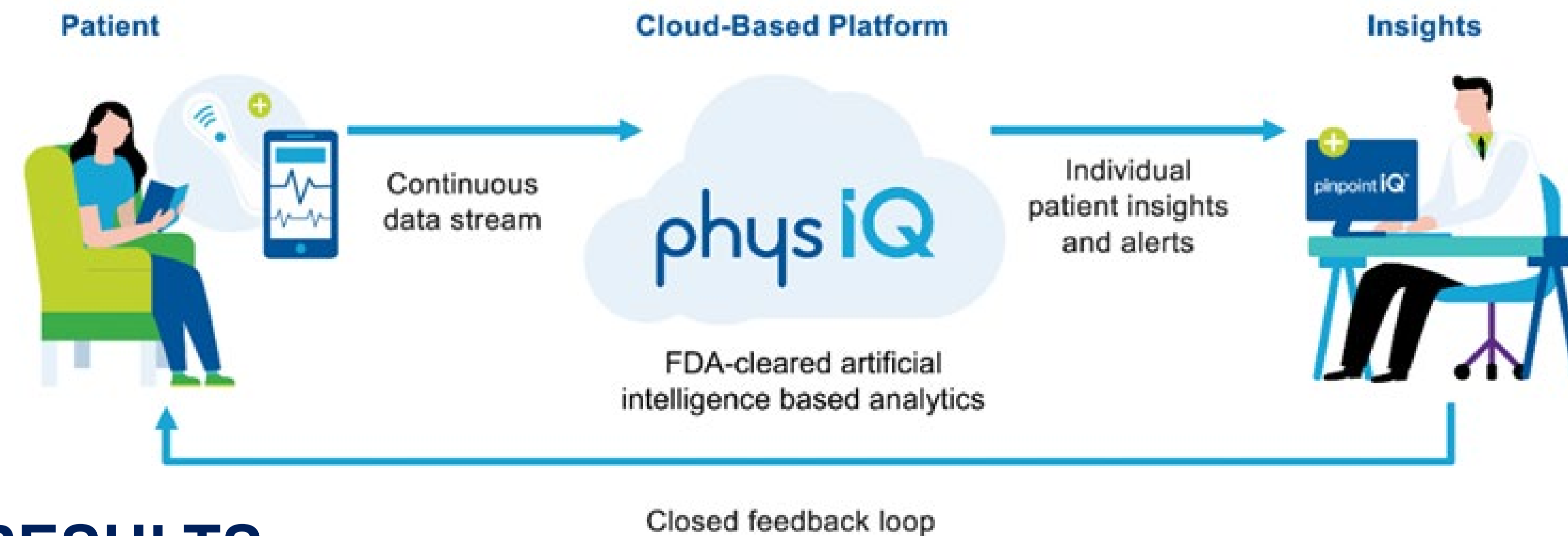
Healthcare workers testing positive for SARS-Co-V2 (COVID-19) were provided a unique opportunity to monitor their health status while recovering from the virus. To assure these individuals recovered safely, a nurse practitioner (NP) managed continuous remote patient monitoring program was deployed at a midwestern, academic medical center, June 2020 – July 2021, using physIQ's pinpointIQ™ platform.

The platform uses a biosensor to collect physiologic data, apply machine learning analytics and alert NPs when there is change in clinical condition.

## IMPLEMENTATION

Healthcare workers were pre-screened by employee health, NPs contacted screened individuals to assess interest in the program and those interested were consented and enrolled in the program remotely. NPs were responsible for twice daily review of patient data through the pinpointIQ™ Watchlist.

During review of the Watchlist, if the NP was alerted to abnormal physiologic data for the participant, an “alert” appeared. Thresholds for alerts were determined at the onset of the program. Shared decision making was utilized when deciding on escalation of medical care (i.e., calling 911, following up with primary care provider, or seeking urgent care).



## RESULTS

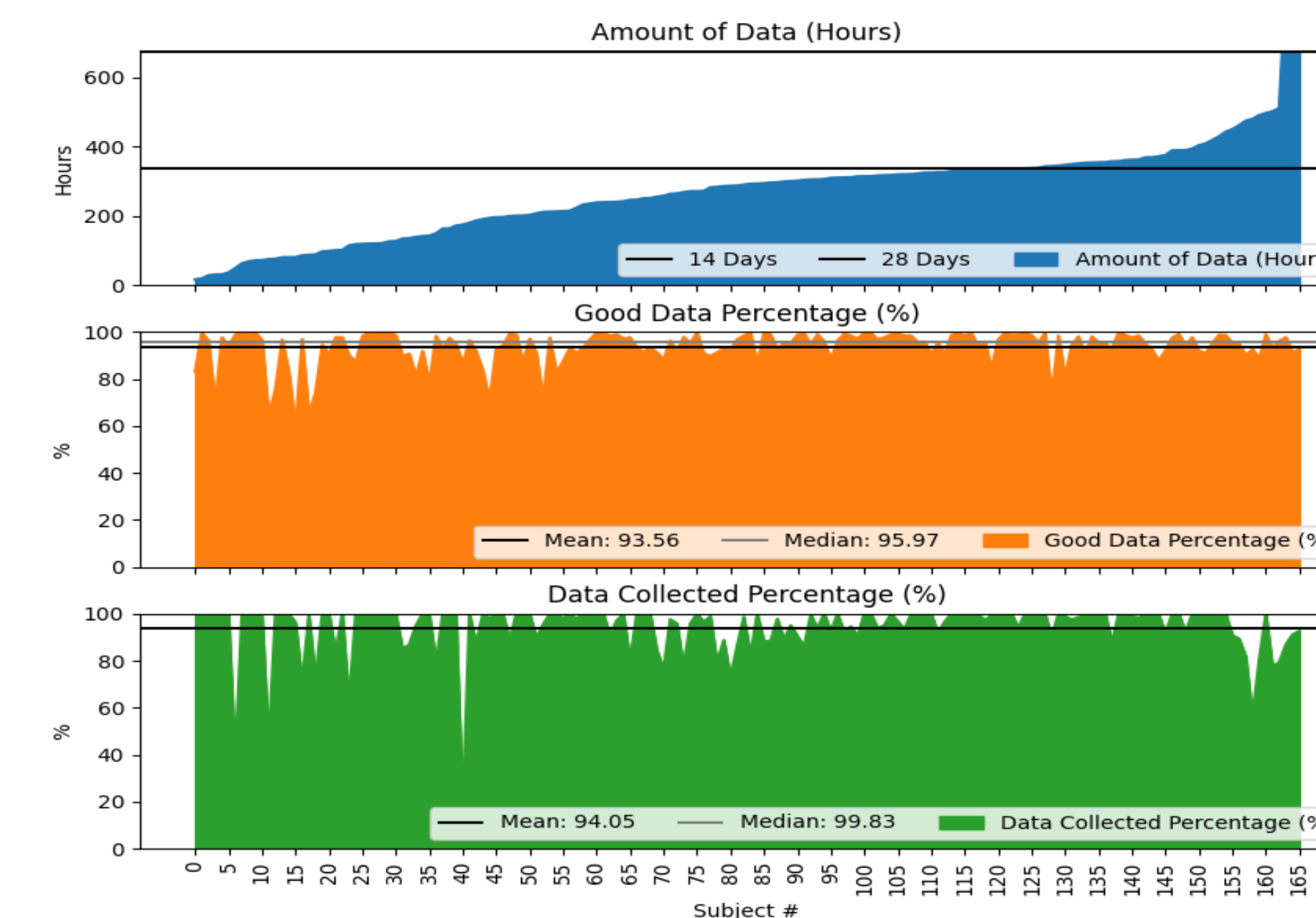
Retrospective chart and monitoring data review was conducted on 165 participants in remote monitoring program for COVID-19 positive healthcare workers between June 2020 to July 2021.

Participants improved overall health outcomes with 69.5% of participants expressing that monitoring was beneficial to their recovery.

The study found the pinpointIQ™ solution to be feasible based on review of amount of data collected over a 28-day monitoring period (83% of participants collected good quality data).

	Amount of Data (Hours)	Good Data (%)	Data Collected (%)
Mean	272.4	93.7	94.1
Std	151.0	7.5	11.7
Min	16.5	58.7	15.7
Max	1114.6	100	100.1
Median	291.2	96.0	99.8
Total subjects	166	166	166
Subjects ≥ 90%		137	132

Amount and proportion of data collected



Data yield and quality characteristics for all participants

## IMPLICATIONS

- Decreasing the risk of hospitalization, length of stay, and replacement costs of employees are outcome measures that can be quantified to demonstrate cost avoidance when using a continuous remote monitoring program.
- Overall success (demonstration of usability and feasibility) of a remote monitoring program for high risk COVID-19 positive patients opens doors for future clinical surveillance of a pandemic illness as well as other chronic diseases as NPs learn how to improve systems of care.
- These results are important for those wanting to replicate this intervention at another institution or among different patient populations.

## REFERENCES

Kricke, G., Roemer, P.E., Barnard, C., Peipert, J., Henschen, B., Bierman, J., Blahnik, D., Grant, M., & Linder, J.A. (2020, June 16). *Rapid implementation of an outpatient COVID-19 monitoring program*. NEJM Catalyst. <https://catalyst.nejm.org/doi/pdf/10.1056/CAT.20.0214>

Larimer, K., Wegerich, S., Splan, J., Chestek, D., Prendergast, H., & Vanden Hoek, T. (2021). *Personalized Analytics and a Wearable Biosensor Platform for Early Detection of COVID-19 Decompensation (DeCODE): Protocol for the Development of the COVID-19 Decompensation Index*. JMIR Research Protocols, 10(5), e27271. doi: [10.2196/27271](https://doi.org/10.2196/27271)