

**AI CHAMPIONS CONNECT**

# QUARTERLY REPORT

MAY 2021

**AI  
MED**

ARTIFICIAL  
INTELLIGENCE  
IN MEDICINE



## **AI CHAMPION CONNECT INSIGHTS**

Artificial intelligence and population health

In collaboration with

**jvion**





# FOREWORD

As we struggle to push past the grips of the pandemic, population and global health have become more important and relevant than ever before. The data and information demand for improving population health, however, demands a paradigm shift in how we handle data, gather information, and eventually execute AI. This AIMed Connect issue on population health is very timely assessment of the state of population and global health during the pandemic and will be extremely useful insight for all of us as we recover from this viral public health crisis.

**Anthony Chang MD, MBA, MPH, MS, Founder AIMed, Chief Intelligence and Innovation Officer, Children's Hospital of Orange County.**

Artificial intelligence in healthcare is a nascent industry that is starting to demonstrate its immense potential during these turbulent times. The Covid pandemic has highlighted the tremendous need to streamline medical care and treat population health on a global scale. This is crucial for patients, providers and payers of medical care. Using the power of AI, we can maximize readily available data to enable early detection of chronic often underdiagnosed and undertreated medical conditions on imaging data to improve medical care and decrease medical costs.

We must all work together - health care professionals, payers and industry innovators - to harness the power of artificial intelligence to improve the quality and accessibility of medical care while containing costs associated with chronic medical conditions. Improving population health has become the primary focus for Zebra Medical Vision and together with AIMed we encourage leaders in the healthcare industry to join us in making this vision a reality.

**Orit Wimpfheimer, CMO and Head of Product Strategy, Zebra Medical Vision Ltd**





# FOREWORD

20 years ago, I had a radical new tool for navigation called a “Tom-Tom”. I could attach this “thing” to the dashboard in my car and with little to no effort on my end, it would help me navigate the most efficient way to get to my destination. Fast-forward 20 years and now this “thing” we call GPS no longer sits on a dashboard but is fully integrated into car navigation systems and connected to our smart phones. Needless to say, my Tom-Tom is a relic and lives in a box somewhere in my basement.

This, I feel, is where we are with Artificial Intelligence in healthcare. For many organizations, it is a “thing” that gets attached vs. a capability becomes an almost natural and seamless part of their clinical and patient experience. The vision to fully incorporate and integrate into everyday clinical care is the ultimate way to transform our healthcare system from a fee-for-service to a value-based care premise. The insights delivered help clinicians and care teams navigate a patients health journey as effectively and efficiently as possible without adding significant cognitive work and complexity to existing workflows.

This is our time and opportunity to think about AI, not as a “tool” to try to fit on top of certain problems, but rather, an enabler of healthcare delivery transformation. To navigate forward well, it will take boldness and leadership to bring healthcare up to other industries and into the 21st century. We are counting on each of us to lead well.

**John Frownfelter MD, FACP, Chief Medical Officer, Jvion.**





# ABOUT THE SURVEY



AIMed is the only clinician-led movement dedicated to artificial intelligence in health and care, connecting and educating clinicians, healthcare executives and industry to inspire action and drive forward the deployment of AI.

We have developed the AIMed Champions Connect platform to facilitate communication and collaboration between the key stakeholders involved in the implementation of artificial intelligence in healthcare.

Through AIMed Champions Connect, we run quarterly virtual meetings addressing key trends and challenges in this space. These meetings are complemented by research examining industry insights which are then delivered as a brief report.

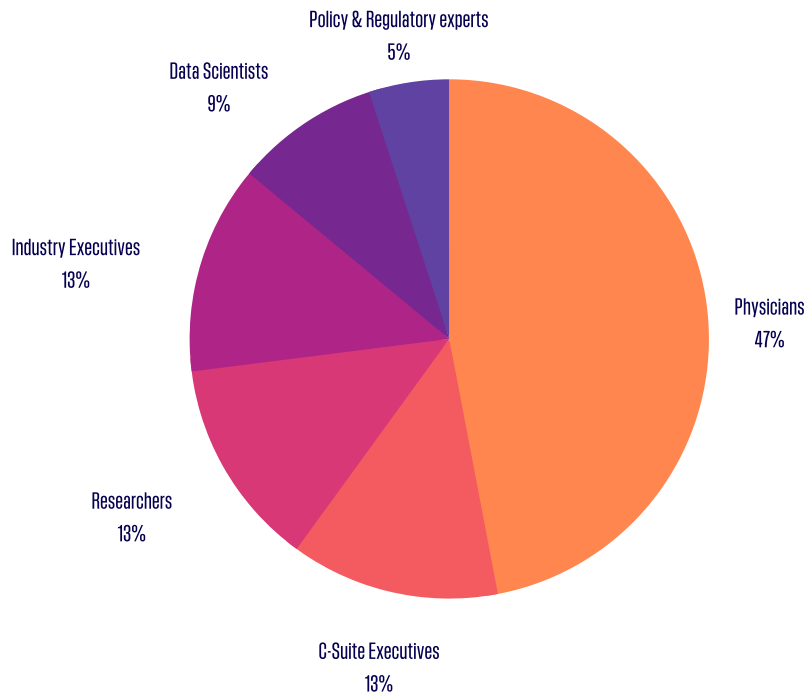
This research project sought to assess the extent to which artificial intelligence (AI) is being deployed at a population health level within healthcare systems across the world, identifying where AI can impact population health most successfully, how it can align around key initiatives like value-based care, and how best to encourage adoption.





## Our Approach

# RESEARCH



## RESPONSE

Participants were asked to complete a survey, with some also selected for a telephone interview.

Of the respondents, 47% identified as physicians which is unsurprising considering AIMed is clinician-led.





## Research Questions

# SURVEY AT A GLANCE

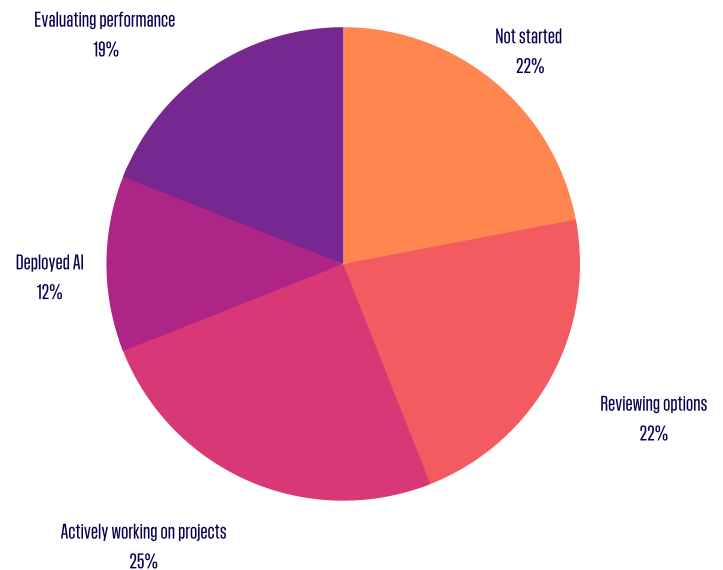
### Research Question 1

## TO WHAT EXTENT IS AI BEING DEPLOYED AT A POPULATION HEALTH LEVEL WITHIN YOUR ORGANIZATION/SYSTEM?

1

### RESPONSE

In terms of adoption, a majority (56%) of respondents are actively working on AI at a population health level.



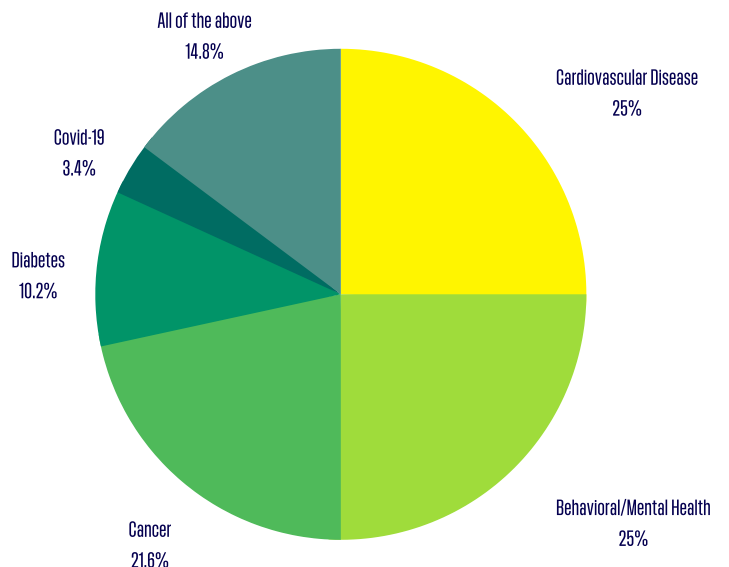
### Research Question 2

## WHERE DO YOU SEE AI HELPING MOST WITHIN IN WHICH AREAS DO YOU FEEL AI CAN IMPACT POPULATION HEALTH MOST SUCCESSFULLY?

2

### RESPONSE

Cardiovascular disease, behavioral and mental health, and cancer are the top 3 areas in which respondents feel AI can impact population health most successfully





## Research Questions

# SURVEY AT A GLANCE

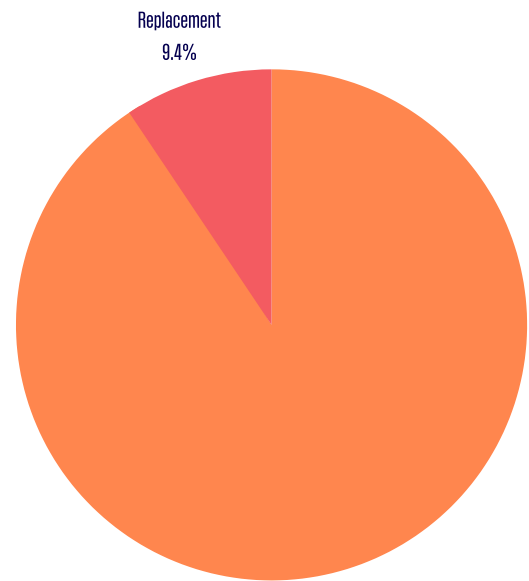
### Research Question 3

## DO YOU SEE AI AS COMPLEMENTARY TO OR A REPLACEMENT FOR OTHER ANALYTICS BEING LEVERAGED TO INFORM POPULATION HEALTH STRATEGIES?

3

### RESPONSE

The overwhelming majority of respondents see AI as complementary to other analytics being leveraged to inform population health strategies



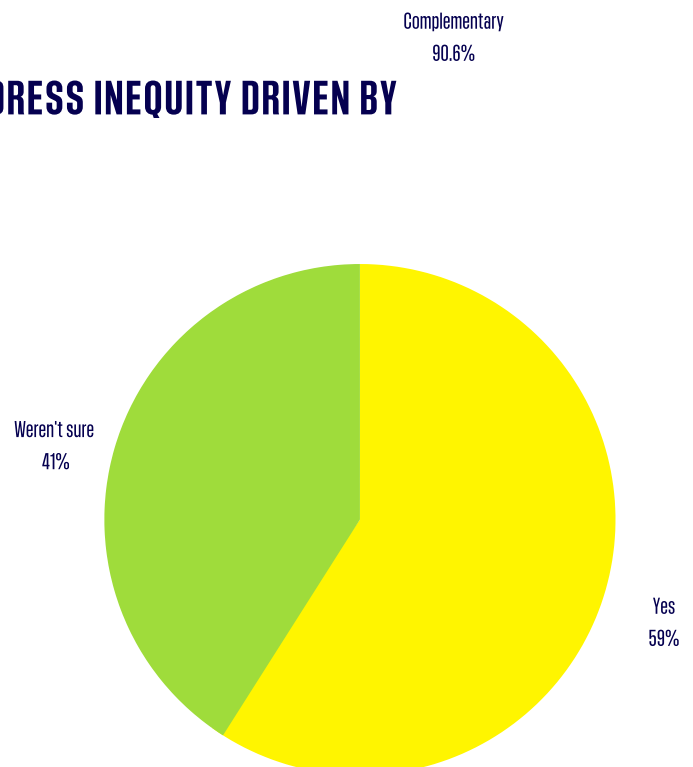
### Research Question 4

## DOES AI HAVE THE ABILITY TO HELP ADDRESS INEQUITY DRIVEN BY SOCIOECONOMIC GAPS AND BARRIERS?

4

### RESPONSE

A majority (59%) believe that AI has the ability to help address inequity driven by socioeconomic gaps and barriers





Research Questions

# SURVEY AT A GLANCE

## Research Question 4

**DOES AI HAVE THE ABILITY TO HELP ADDRESS INEQUITY DRIVEN BY SOCIOECONOMIC GAPS AND BARRIERS?** EXPANDED

4

### RESPONSE EXPANDED

"AI, if provided with broad and in-depth population level data that has been accounted for bias, has the potential to identify root causes of inequity not previously considered. Moreover, it may provide novel solutions to deal with it."

"If implemented in the right way, it could have the ability to address these issues. However, it could go either way at this point. There may well be significant detriments on a large scale where the least affluent demographics are digitally excluded and health or care provision is limited to those with a personal and curated 'data wallet'."





Research Questions

# SURVEY AT A GLANCE

Research Question 5

## WHAT'S NEXT IN POPULATION HEALTH?

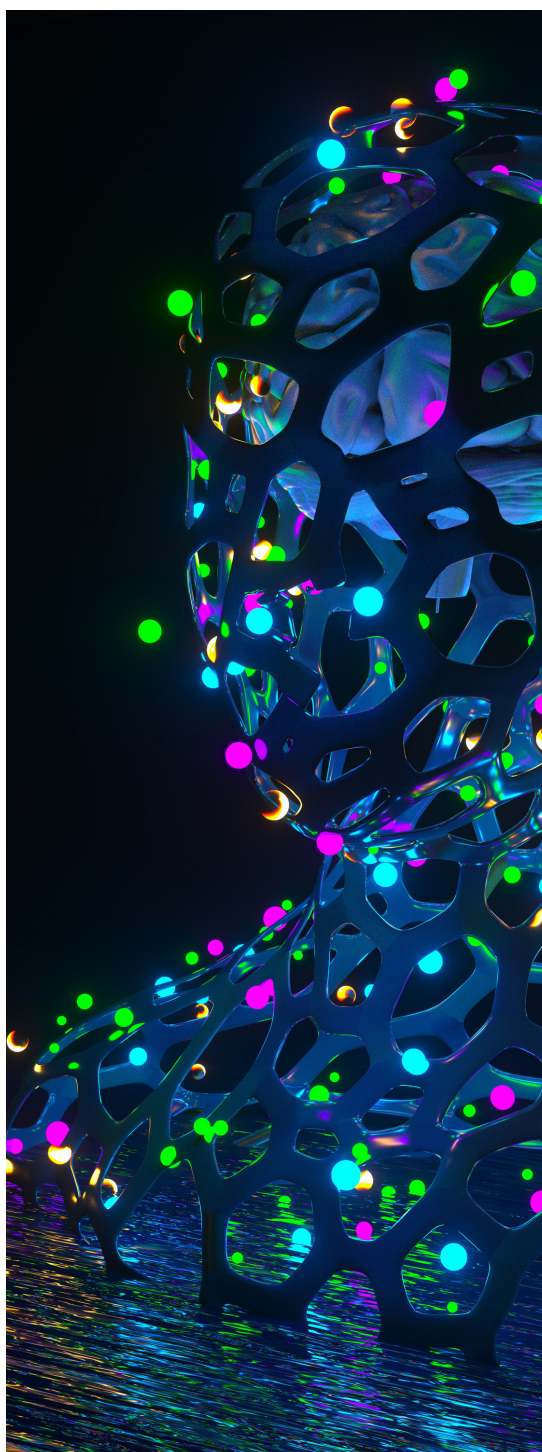
5

1. Deployment and implementation
2. Standardization of the global population health surveillance model
3. Reconcile population health and personalized medicine
4. Preventive care
5. Using AI to mitigate the mental health crisis

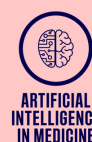




## KEY FINDINGS



- In terms of adoption, a majority (56%) of respondents are actively working on AI at a population health level
- 31% have already deployed AI solutions in this space, with 19% evaluating performance
- Cardiovascular disease, behavioral and mental health, and cancer are the top 3 areas in which respondents feel AI can impact population health most successfully
- The overwhelming majority of respondents see AI as complementary to other analytics being leveraged to inform population health strategies
- A majority (59%) believe that AI has the ability to help address inequity driven by socioeconomic gaps and barriers





# ADDRESSING INEQUITY

While a majority of respondents agreed that AI has the ability to help address inequity driven by socioeconomic status, there is clearly a great deal of work required in order to grasp this opportunity.

Key considerations include:

- The sheer scale of the socioeconomic barriers involved, versus the relative infancy of health AI
- The risk that AI could also worsen socioeconomic gaps if biases are not addressed. For example, it may amplify biases that are systemic, if not accounted for
- This all depends on the accuracy of data collection or the system it is extracted from, so how well we can recognize bias and train/test algorithms accordingly will be critical
- How best to apply AI in order to make healthcare more accessible and help to prioritize care
- The potential of AI to find clusters based not only on socioeconomic variables, but spatio-temporal, genomic and behavioural/cognitive metrics as well





# WHAT'S NEXT IN POPULATION HEALTH?

## Deployment and implementation:

- The adoption of AI algorithms is the next step
- Start with simple AI solutions. After these are proven successful, go for more complex integrated options
- Retain an emphasis on the ethical implementation of AI

## Standardization of the global population health surveillance model:

- Transparent and accurate data is still the key foundation prior to deploying AI
- Standardizing data collection across health systems to build integrated data sets. Think FHIR, OpenEHR, terminology servers
- Good quality data integration; training and validation of predictive models using global data
- Towards a unified, national (or even international) database

Jvion's prescriptive clinical artificial intelligence, enables healthcare organizations to identify and prevent avoidable patient harm, utilization, and costs. An industry first, the Jvion CORE™ goes beyond predictive analytics and machine learning to identify patients on a trajectory to becoming high-risk. Jvion then determines the interventions that will more effectively reduce risk and enable clinical and operational action. Visit [jvion.com](https://jvion.com) to learn more.



Copyright 2020 Jvion, Inc. Jvion and logo design are registered trademarks of Jvion, Inc. All rights reserved. All other trademarks are the property of their respective owners.

Copyright 2020 AIMed Events Limited. AIMed and logo design are registered trademarks of AIMed Events Limited. All rights reserved. All other trademarks are the property of their respective owners.