

COVID-19

# CulturIntel HCP PSYCHOLOGICAL IMPACT meter



CULTURINTEL  
THE VOICE OF THE PEOPLE

UNLOCK THE POWER OF  
*Cultural  
Intelligence™*

.....●  
Traumatized

.....●  
Denial

.....●  
Depression

.....●  
Lack of  
Mental Wellness

## VOICES OF HEALTHCARE HEROES:

How COVID-19 impacted the  
different aspects of their lives

powered by:



[www.cien.plus](http://www.cien.plus) | Proudly women-owned and minority owned | Lili Gil Valletta, Co-Founder and CEO [Liliana@cien.plus](mailto:Liliana@cien.plus)



# At CulturIntel we know what people think and feel without having to ask them

With the power of A.I., we have  
tech-enabled a way to mine  
**millions of conversations** online  
to discover actionable Cultural  
Intelligence®, straight from the  
voice of the people.



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AWARDED BY



Forbes



MM&M

## WHAT WE ALREADY KNEW:

DURING THE PANDEMIC HCPs REPORT NOT GETTING ENOUGH EMOTIONAL SUPPORT, FEELING STRESSED OUT AND STRETCHED TOO THIN

**93%**

of healthcare workers were experiencing **STRESS**

**76%**

of HCPs reported **EXHAUSTION AND BURNOUT**

**77%**

of healthcare workers reported **FRUSTRATION**

**39%**

of healthcare workers said that they did not feel like they had adequate emotional support

## WHAT OUR ANALYSIS REVEALS:

NOT ALL HCP WORKERS ARE EXPERIENCING THE SAME IMPACT. THROUGH OUR ANALYSIS WE ARE ABLE TO UNDERSTAND EACH OF THEIR SPECIFIC NEEDS BETTER, TO BE ABLE TO HELP THEM GET THROUGH THIS CRISIS.

**1 out of 3**

healthcare workers acknowledge that they suffer from **DEPRESSION**

Physicians are experiencing **ANGER**

**1.8x more**

than the overall population

Nurses discuss having a **LACK OF MENTAL WELLNESS**

**1.2x more**

than the overall population

Overall HCPs are

**1.6x more**

**TRAUMATIZED**  
than the overall population

Sources: Review of reports on healthcare workers between Jan to end of October 2020 - MHA Screening ([mhascreeing.org](https://mhascreeing.org)) from June 1-September 1, 2020. The majority (76 percent) of respondents were young adults ages 18-44.

SEE MORE IN THE  
**POWER BI  
DASHBOARD**

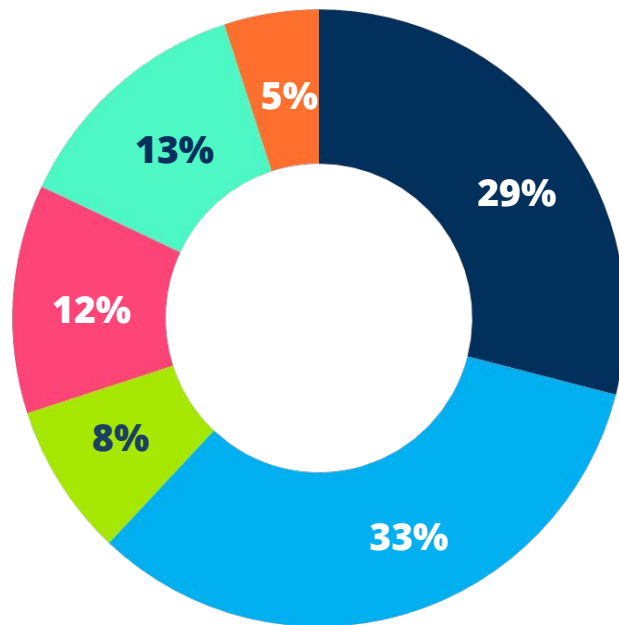
# 62% of the conversations are taking place in topical sites and message boards

- Topical Sites
- Message Boards
- Social Networks
- Content Sharing
- Blogs
- Comments

**N= 48.4M**

digital discussions available for mining in the US

Overall Healthcare Professionals 7.8M  
Physicians 789.4K  
Nurses 834.3K  
HCP Support 589.4K  
EMT 667.4K



allnurses

HCP FORUM

Medscape



## CHANNEL PROFILE

March 2020 to March 2021

### MESSAGE BOARDS

Forums where people post messages.

### TOPICAL SITES

Sites that relate to a specific topic.



Understanding

# HOW

## COVID-19

IS IMPACTING HCP's ATTITUDES, PERCEPTIONS, MINDSET IN EVERY ASPECT OF THEIR LIVES.







## PSYCHOLOGICAL



My state of mind,  
emotional and  
overall mental state

- **GEOGRAPHY**

United States

- **SEGMENTS**

Overall Population

Overall HCPs

Physicians

Nurses

HCP Support

EMT



## HCP's MENTAL HEALTH IS AT RISK

They believe that

**67%**

of their impact from COVID-19 is **Psychological** & Behavioral.

**42%**

of HCPs have a **Traumatic** mindset about the state of their mental health.

HCPs express that COVID-19 has impacted their psychological state

**2.5x more**

than their economic state.

# WHEN THEY DISCUSS THEIR PSYCHOLOGICAL IMPACT, THEY TALK ABOUT 3 TOPICS:

## COPING

The way I try to deal with the situation

## COMMISERATING

Empathizing with the pain of the people who have been affected

## LACK OF MENTAL WELLNESS

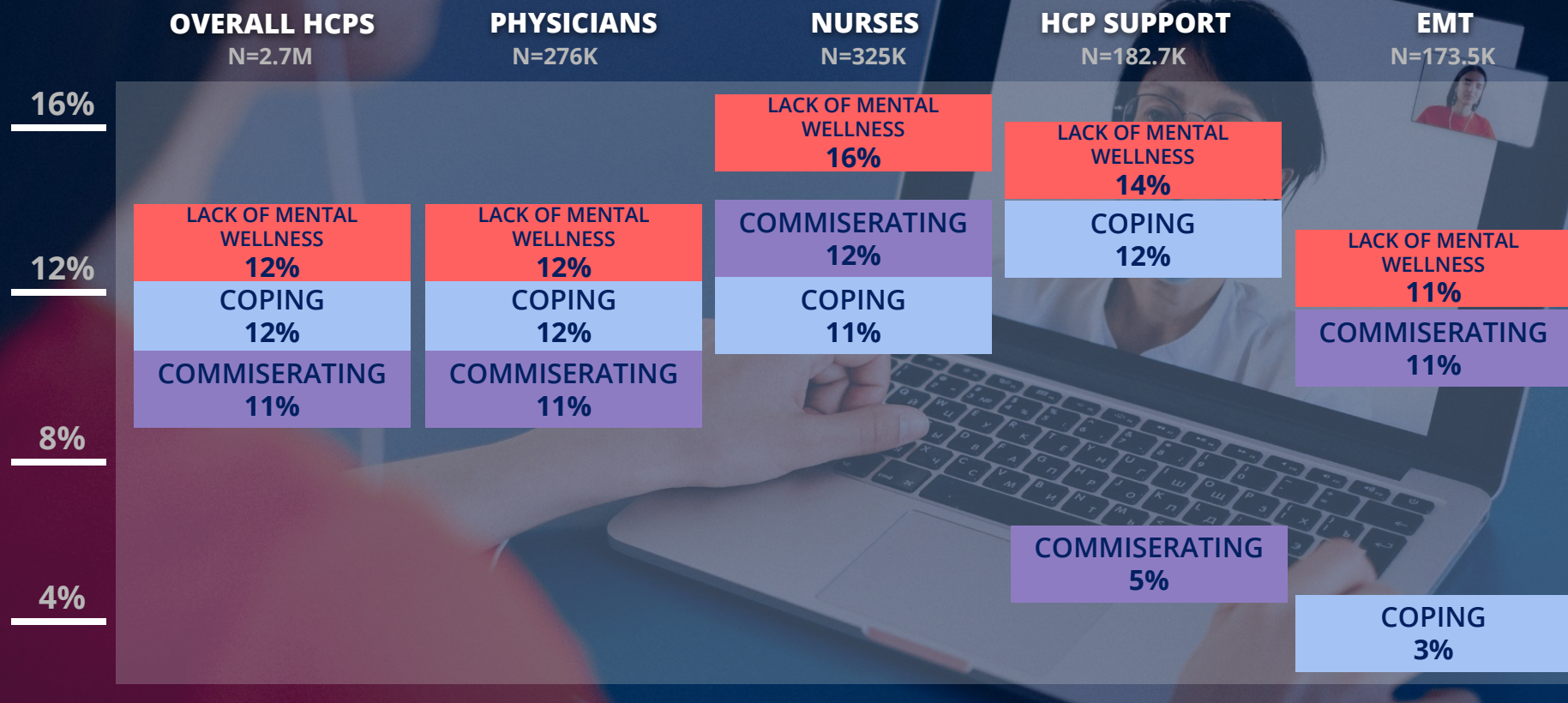
How this situation has affected my mental health balance



My state of mind,  
emotional and  
overall mental state



# When it comes to the psychological impact that COVID-19 has caused, lack of mental wellness is one of the most discussed topics across HCP segments



Topics associated to the COVID-19 psychological impact

# OVERALL HCP's

mindsets towards their psychological state

**To view or talk about the worst possible outcome of an action or event.**

Traumatized **42%**

**The tendency to view or represent things as they really are.**

Realism **41%**

Denial **8%**

**The refusal to recognize or acknowledge.**

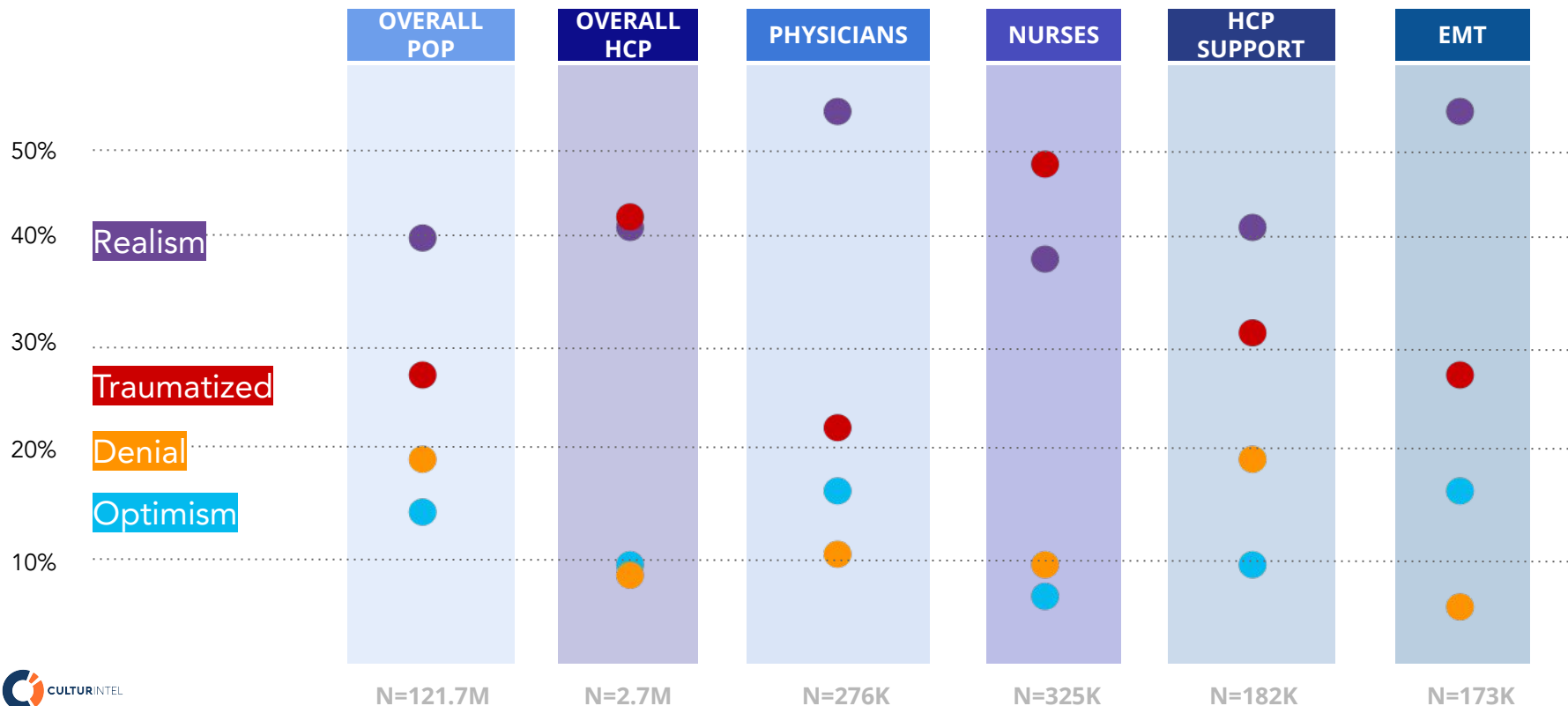
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m

**9%**

**Tendency to look on the more favorable side of events or conditions and to expect the most favorable outcome.**



## THE MAJORITY OF HCPs ARE REALISTIC YET TRAUMATIZED ABOUT THEIR MENTAL STATE, WHILE DENIAL & OPTIMISM CONTRIBUTE LESS TO THEIR OVERALL PSYCHOLOGICAL MINDSET





Discussions happening  
across the US



**OVERALL POPULATION**

N= 16.9M

## PSYCHOLOGICAL IMPACT SENTIMENT

6% 13%

81%

● Positive ● Neutral ● Negative

*"I am scared. COVID-19 affects me every day because I'm afraid of bringing this home to my son."*

**8 out  
of 10**  
feel **NEGATIVE**  
about their current  
psychological state.

**FEELING  
2.1X MORE  
ANXIOUS**  
than healthcare workers

**THEIR  
MENTAL  
WELLNESS**  
has been deeply affected and  
their discussions show an  
interest in restoring mental  
balance.

### TOP NEGATIVE DRIVERS

ANXIETY

DEPRESSION

LOSS/GRIEF

**Realism**  
TOP MINDSET

40%

41%

Overall population  
Overall HCPs





Discussions happening  
across the US



**OVERALL HCPs**

N= 2.7M

## PSYCHOLOGICAL IMPACT SENTIMENT



● Positive ● Neutral ● Negative

*"Anxiety, depression, distress, and sleeping problems... I've experienced them all."*

**73%**  
of HCPs currently  
feel **NEGATIVELY**  
about their  
psychological state.

THEY FEEL  
**1.2x**  
MORE DEPRESSED  
&  
**1.5x**  
MORE GRIEF  
than the overall population.

REQUIRING  
**MENTAL  
WELLNESS  
&  
COPING  
SUPPORT**

### TOP NEGATIVE DRIVERS

DEPRESSION

ANXIETY

LOSS/GRIEF

**Traumatized**  
TOP MINDSET

**42%**  
**27%**

Overall HCPs

Overall Population



Discussions happening  
across the US

MEET  
DAWJD



PHYSICIAN

N= 276K

## PSYCHOLOGICAL IMPACT SENTIMENT

13%

14%

73%

● Positive ● Neutral ● Negative

*"There is this internal conflict between protecting yourself, but also having to go out there and save lives. My fear is getting sick and not being there for my family."*

**73%**  
feel a **NEGATIVE**  
impact on their  
psychological state.

**1.8x more  
ANGER**  
vs the overall population.  
Fueled by the effects of the  
pandemic.

**REQUIRING  
MENTAL  
WELLNESS  
&  
COPING  
SUPPORT**

### TOP NEGATIVE DRIVERS

DEPRESSION

ANXIETY

ANGER

**Realism**  
TOP MINDSET

52%

41%

Physicians

Overall HCPs



Discussions happening  
across the US

MEET  
KAZMA



HCP SUPPORT

N= 183K

## PSYCHOLOGICAL IMPACT SENTIMENT

1%

20%

79%

● Positive ● Neutral ● Negative

*"We are exhausted, not only from the impact of the pandemic itself, but also in terms of coping day to day."*

**8 out  
of 10**  
feel **NEGATIVELY**  
about their current  
psychological state.

THEY FEEL  
**ANXIETY**  
**1.5X MORE**  
than the overall HCPs and  
more than any other HCP  
segment.

THEY NEED TO  
RESTORE THEIR  
**MENTAL  
WELLNESS**  
to mitigate the external  
pressures that are affecting  
their mental health.

### TOP NEGATIVE DRIVERS

DEPRESSION

ANXIETY

LOSS/GRIEF

**Realism**  
TOP MINDSET

41%

41%

HCP Support  
Overall HCPs



Discussions happening  
across the US

MEET  
DEBBJE



NURSE

N= 325K

## PSYCHOLOGICAL IMPACT SENTIMENT



● Positive ● Neutral ● Negative

*"Nurses at the frontlines have really borne a very substantial emotional burden in this pandemic that has really, I think, pushed us beyond our capacity to cope in many situations."*

**7 out of  
10**

Nurses feel  
**NEGATIVE** on a  
psychological level

**1.5X**  
**MORE DEPRESSED**  
than the overall population

**THEY REQUIRE  
IMMEDIATE  
MENTAL  
WELLNESS  
SUPPORT**

as they discuss this specific  
topic, **1.2x more** than the  
overall population

### TOP NEGATIVE DRIVERS

DEPRESSION

ANXIETY

LOSS/GRIEF

**Traumatized**  
TOP MINDSET

**47%**

Nurses

**42%**

Overall HCPs





Discussions happening  
across the US

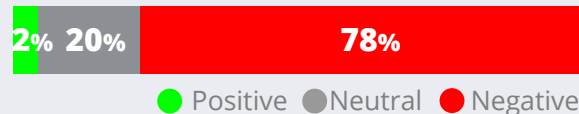
MEET  
AASPO



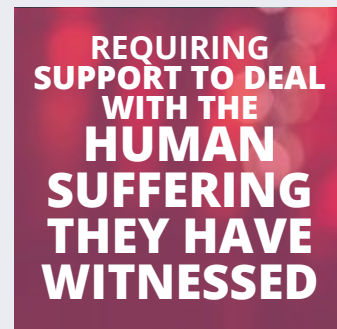
EMT

N= 174K

## PSYCHOLOGICAL IMPACT SENTIMENT



*"What we are experiencing is akin to domestic combat."*



### TOP NEGATIVE DRIVERS

ANXIETY

LOSS/GRIEF

DEPRESSION

**Realism**  
TOP MINDSET





## A GLIMPSE OF HOPE

Despite the strong impact that the COVID-19 situation has had on healthcare workers' lives, from a psychological perspective there are still lights of hope that make them positive.

- For overall healthcare workers, their **purpose** of saving lives and **making an impact** are reasons for them to remain positive. (2.8x more than the overall population).
- Also, the **camaraderie within their community** has been another factor that has given them hope and positivity. (1.3x more than the overall population).
- Physicians are a little more positive towards the situation, compared to all other HCP segments . (1.4x more than Overall HCP)



1

## **COVID-19's psychological impact has awakened healthcare workers' most vulnerable side**

At the core of this internal impact, we are seeing the angles in which HCPs are affected on the most significant aspects of their lives. Showing their more vulnerable side during this global health crisis, they are discussing the devastation the pandemic is having on their personal and professional lives.

2

## **Being grounded by reality, yet inevitably traumatized about their mental health state**

Due to the nature of their jobs, as HCPs continue to deal with the casualties of the pandemic, they become more realistic about the overall impact it produces. However, as we have mentioned, this extreme situation is awaking even the most vulnerable side of HCPs, leaving many with a sense of lost hope and feeling traumatized when they think about their mental health.

3

## **Their struggle with mental stability is becoming a public health crisis**

Many HCPs are currently suffering from depression and anxiety, made worse by the combination of the other COVID-19 impacts. These feelings of pain and stress are deepening the agony in which HCPs can navigate the pandemic.

4

## **A salute to healthcare workers resilience**

Healthcare workers' lives have changed. They have had to face many challenges to move forward, but for many it has been far too overwhelming. Increasing grief, anxiety, and depression has left many hopeless. However, all not is lost. The purpose of making an impact and the strong relationships they have established within their community are the reasons that keep them fighting and help them see the positive side.



# Appendix





What we do:

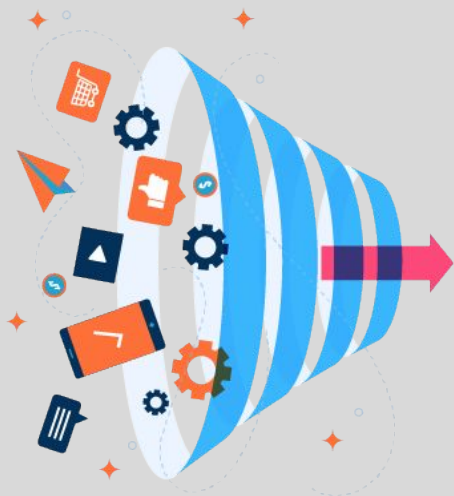
**WE HARVEST AND TURN  
OPEN-SOURCE DIGITAL DISCUSSIONS  
INTO ACTIONABLE INSIGHTS  
INFORMED BY THE DIGITAL  
VOICE OF THE PEOPLE**

CulturIntel's proprietary algorithm uses AI, NLP, machine learning and big data tools to harvest and turn all available open-source digital discussions (everywhere they happen beyond social media) into actionable insights and decision journeys across segments, globally.

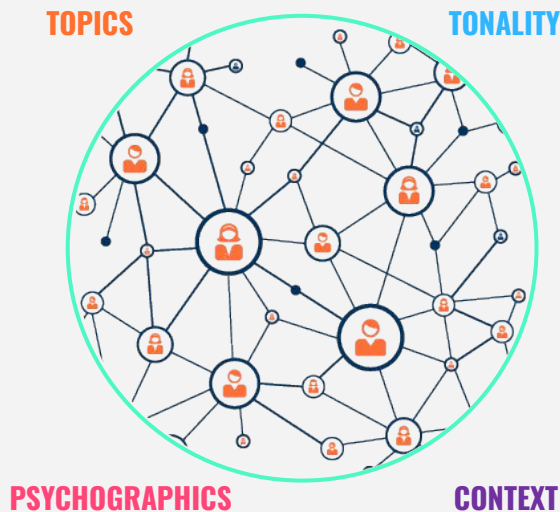
# How do we do it?



**Harvest all available  
open-source digital discussions  
everywhere they happen**



**Cluster, segment and  
discover patterns in topics,  
sentiment and behaviors**



**Visualize, map and report**  
Cultural intelligence®  
across segments and geographies globally



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# PUBLISHED AND VALIDATED AS AN INNOVATOR



**Learning from social media: utilizing advanced data extraction techniques to understand barriers to breast cancer**

Rachel A. Freedman<sup>1</sup>, Raminmehr Shalei<sup>1</sup>, Nancy L. Keating<sup>1</sup>

**Epilepsia**

**Digital conversations about suicide among teenagers and adults with epilepsy: A big-data, machine learning analysis**

Tatiana Falcón<sup>1</sup>, Anjali Daga<sup>2</sup>, Ruby C. Cardillo-Puentes<sup>3</sup>, Amit Anand<sup>4</sup>, Caroline Bretherton<sup>5</sup>, Liliana G. Valdez<sup>6</sup>, Patrick Furey<sup>7</sup>, Jane Timmons-Mitchell<sup>8</sup>, Elia Portano Knight<sup>9</sup>

**Abstract** Post-traumatic stress disorder (PTSD) is a common mental health condition that can significantly impact quality of life. We examined treatment barriers only among those with PTSD. Using an integrative approach, we analyzed social media posts, news articles, and clinical records to identify barriers to care. We found that barriers to care include lack of information, financial barriers, and stigma. These findings suggest that digital conversations can provide important insights into the barriers to care for people with PTSD. The study aimed to explore the big data from open source digital conversations across PTSD with regard to identifying specifically competing barriers and adults using machine learning technology. Methods: Advanced machine learning supervised methodology was used to mine and monitor open source digital conversations of self-identifying teenagers and adults who self-identified with PTSD and engaged in conversations about suicide. The search was limited to 12 months and included only conversations originating from US internet protocol (IP) addresses. Natural language processing and sentiment analysis were employed to develop a thematic analysis.

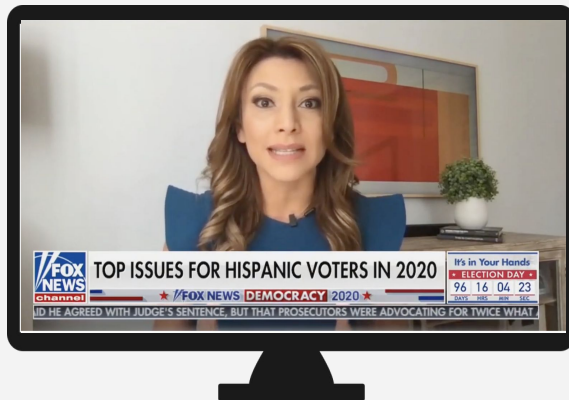
**Conclusions:** Digital media conversations can provide important insights into the barriers to care for people with PTSD. The study aimed to explore the big data from open source digital conversations across PTSD with regard to identifying specifically competing barriers and adults using machine learning technology. Methods: Advanced machine learning supervised methodology was used to mine and monitor open source digital conversations of self-identifying teenagers and adults who self-identified with PTSD and engaged in conversations about suicide. The search was limited to 12 months and included only conversations originating from US internet protocol (IP) addresses. Natural language processing and sentiment analysis were employed to develop a thematic analysis.

**Keywords:** PTSD, digital conversations, barriers to care, machine learning, sentiment analysis, natural language processing.

**Electronic supplement:** The electronic supplement to this article contains the full text of the abstract and the full text of the article. It is available at: <https://doi.org/10.1016/j.epilepsy.2019.05.001>

**Harvard University**

“[Until using CulturIntel] ...we have never had a method of hearing what people are saying in a way that is completely unsolicited, completely spontaneous, completely without any interviewer or researcher bias.”



## Dispelling polls and bringing the power of inclusive data to mainstream news

Contrary to polls and based on over 1 million Hispanic data points, reported 37% positive affinity for Trump in June prior to the November, 2016 elections. Appearing almost weekly to report new findings about today's socio-political issues and sentiment by segments.



**CITY HEALTH SENTIMETER™**

What the digital discussions of people in Jersey City / Moscow / Austin / Mumbai reveal about their relationship to wellness and living healthy

**OUR OPPORTUNITY**

Tap into the digital voice of the citizens

In collaboration with CulturIntel, leverage the power of technology and AI to analyze people's digital discussions about health to measure sentiment and factors impacting healthy living around the world.

PEOPLE ACTIVELY ENGAGE DIGITALLY TO DISCUSS WELLNESS AND HEALTHY LIVING IN THEIR CITIES, PRIMARILY ACROSS MESSAGE BOARDS AND TOPICAL SITES

WHERE ARE CITIZENS DISCUSSING HEALTH ONLINE?



**184K**  
DIGITAL DISCUSSIONS  
are happening about  
wellness healthy living  
in the context of Austin,  
over 12-months

**WORLD  
ECONOMIC  
FORUM**

**Davos 2020**

GLOBAL CITY HEALTH SENTIMETER

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