

State of Patient Care 2023

Greg Bullington, Co-Founder and CEO
Tammy Johnson, AVP, Clinical Strategy

OVERVIEW / METHODOLOGY

- 1,002 US adults in the medical and non-medical fields were surveyed to understand their attitudes, knowledge, and level of concern towards antimicrobial resistant bacteria (AMR), hospital-acquired infections (HAIs), and other risks during hospitalization.
- 681 respondents completed the survey between 5/26/23 - 6/9/23 from Magnolia Medical Technologies' contact list.
- 321 respondents completed the survey between 5/25/23 - 6/2/23 from a third party panel's list.

Contents

- I. Perspectives on Hospitalization and Concerns
- II. Perspectives on Antimicrobial Stewardship
- III. Perspectives on Infection and Concerns
- IV. Perspectives on Sepsis from Impacted Americans
- V. Perspectives on Hospital-Acquired Infections (HAIs)
- VI. Perspectives on Government Performance

EXECUTIVE SUMMARY

Significant opportunity to increase AMR and HAI education.

As one can imagine, the AMR and HAI knowledge gap between medical and non-medical personnel is wide. But what is clear is the support from both, especially medical professionals, regarding the need for more education.

Sepsis is the #1 feared infection, and 31% of respondents have had sepsis or known a loved one who has.

46% of Americans rate the government's performance as poor, but there's a roadmap to improve with education.

1. Given the current state of the economy, not surprisingly, the most feared hospital risk for Americans is the financial cost of hospitalization with 55% indicating they were 'Very' or 'Extremely' fearful.
2. Approximately 3 out of 4 Americans agree that "Healthcare providers should be more cautious when prescribing antibiotics."
3. Significant knowledge gap in familiarity with the term "antimicrobial resistant bacteria" revealing a need for more government-led discussions between healthcare providers and patients given the dangers of AMR.
4. 52% of respondents are 'Very concerned' or 'Extremely concerned' about the effects of infections caused by AMR on their current or future health and 85% agree that "More education is needed for patients about antimicrobial resistant bacteria."
5. Sepsis is not only the #1 cause of death, readmissions, and costs for U.S. hospitals, it is also the most feared infection (46% 'Extremely' or 'Very' fearful).
6. Nearly one third of respondents either have had a loved one or have been personally diagnosed with sepsis.
7. These respondents are more knowledgeable about AMR, HAIs, etc., most likely because they've been impacted by such a significant threat to their health or the health of a loved one.
8. Approximately 2 out of 5 respondents in non-medical related occupations were 'Barely' or 'Not at all' informed about the risk for hospital-acquired infections (HAIs).
9. However, 81% agree that it is 'Very' or 'Extremely' important to be informed about HAI risk and infection control measures in the hospital.
10. 46% of respondents rated the government's performance as either 'Extremely poorly' or 'Poorly' when it comes to protecting the health of Americans.

I. Perspectives on Hospitalization and Concerns

#1 FEAR IS FINANCIAL COSTS

The most feared hospitalization risks for respondents are financial costs (55% 'Very' or 'Extremely' fearful), medical errors (35% 'Very' or 'Extremely' fearful) followed by receiving inadequate care (32% 'Very' or 'Extremely' fearful).

During your hospital stay (or future stay), please rate your level of fear in relation to the following: (Overall)



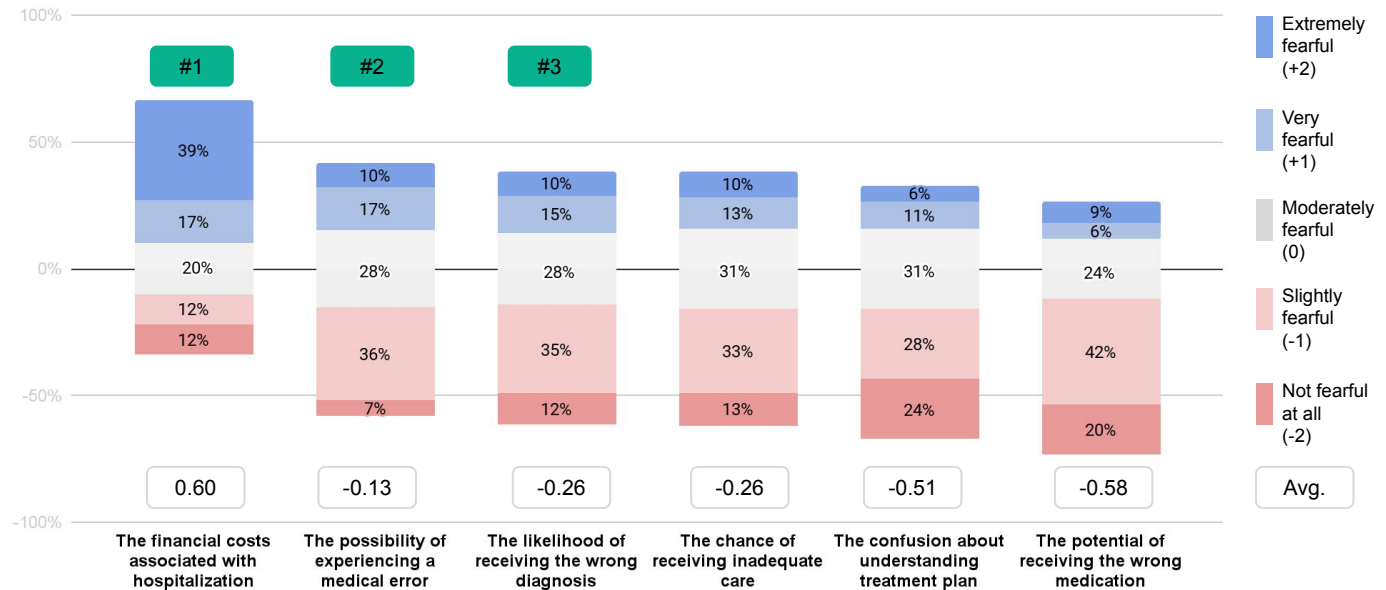
Note: N=1002, All respondents. Averages were calculated by coding responses from a -2 to +2 to scale.

FINANCIAL FEAR HIGHER FOR NON-MEDICAL PROFESSIONALS

For respondents in non-medical related occupations, the fear of the cost of hospitalization is 5% higher than the overall average.

Their fear of receiving inadequate care falls to #4 while receiving the wrong diagnosis moves up to #3.

During your hospital stay (or future stay), please rate your level of fear in relation to the following: (Non-Medical Related Occupation)



Note: N=243, Non-Medical respondents. Averages were calculated by coding responses from a -2 to +2 to scale.

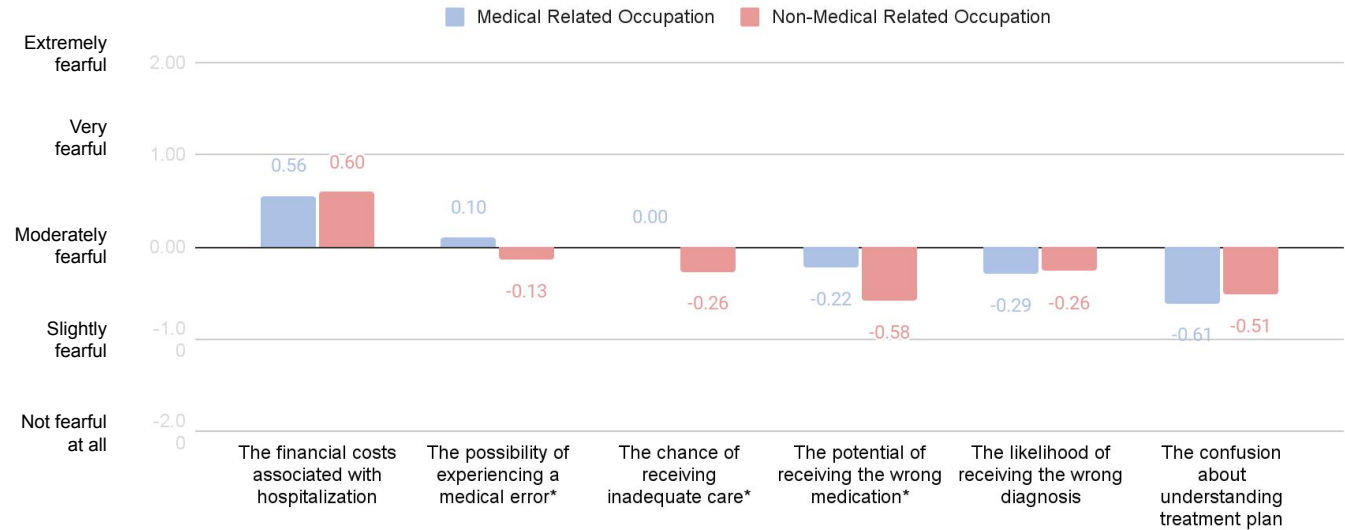
ASIDE FROM COSTS, VARYING PERSPECTIVES

Non-medical professionals were least fearful of wrong medication.

For medical professionals, not surprisingly, they were least fearful of confusion around treatment plans.

But both parties' #2 fear was medical error.

During your hospital stay (or future stay), please rate your level of fear in relation to the following:



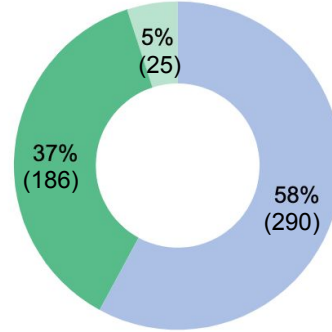
Note: N=1002, All respondents. *Differences that were statistically significant. Sig. <0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

II. Perspectives on Antimicrobial Stewardship

PRESCRIBING ANTIBIOTICS

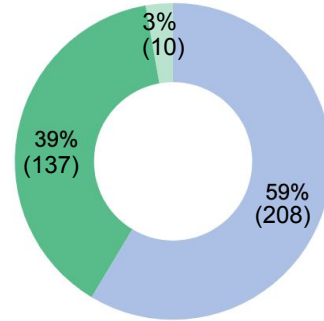
Most respondents were prescribed antibiotics (290 respondents) during their hospitalization.

Overall

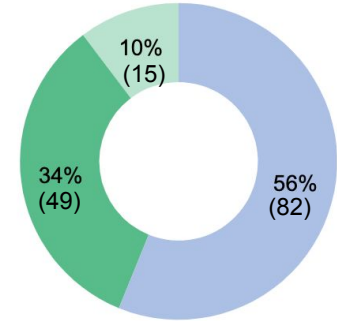


- Were prescribed antibiotics
- Were not prescribed antibiotics
- Were not sure

Medical Related Occupation



Non-Medical Related Occupation



Note: N=501, Patients and Caregivers.

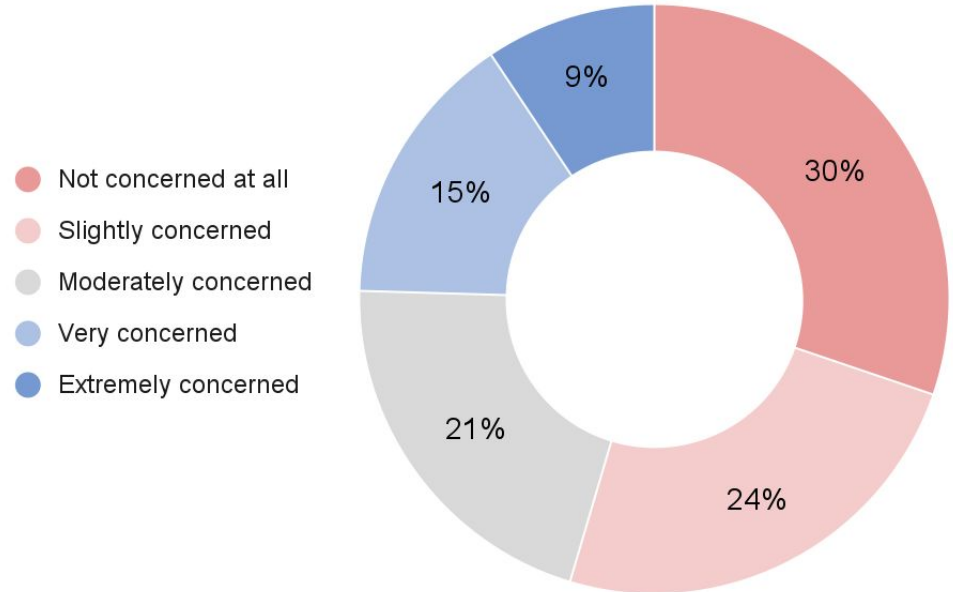
Number of respondents for Medical and Non-Medical Related Occupation is shown in parentheses in the bottom charts.

MIXED CONCERNS ABOUT ANTIBIOTIC PRESCRIPTIONS

45% of respondents were moderately to extremely concerned about the risk of being prescribed unnecessary antibiotics.

The slight majority were 'Slightly concerned' or 'Not concerned at all.'

Concerns about the possibility of being prescribed antibiotics unnecessarily during hospitalization



Note: N=1002, All respondents.

Q. How concerned were you about the possibility of being prescribed antibiotics unnecessarily during hospitalization?

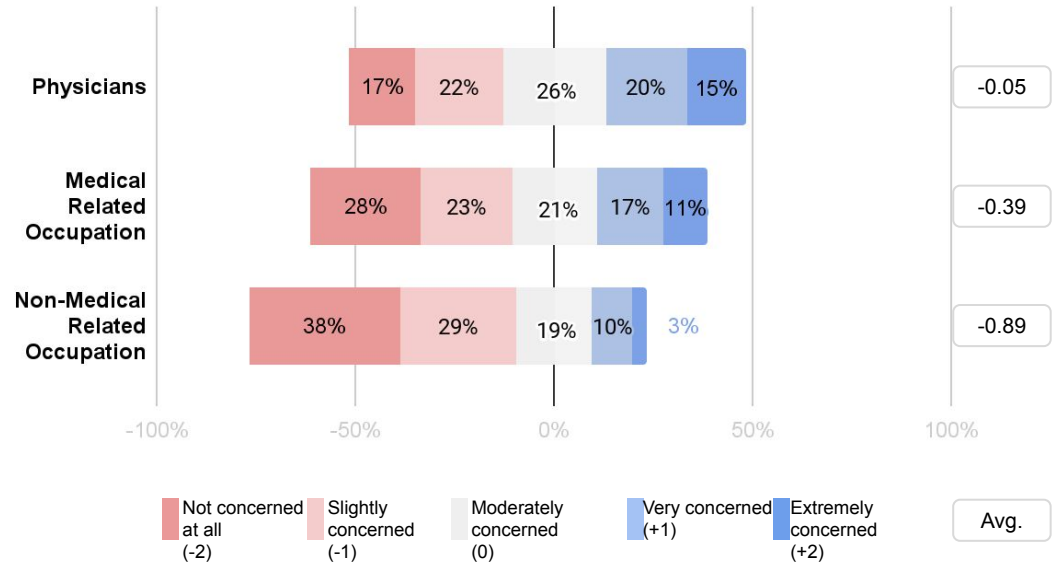
Q. If you were to be admitted to the hospital, how concerned would you be about the possibility of being prescribed antibiotics unnecessarily during your hospital stay?

PHYSICIANS SIGNIFICANTLY MORE CONCERNED ABOUT UNNECESSARY ANTIBIOTICS

Among respondents in medical related occupations, physicians exhibit the highest level of concern regarding the potential of being prescribed antibiotics unnecessarily during hospitalization.

Specifically, physicians are 25% more likely to express 'Very' or 'Extremely' concerned compared to all medical related respondents, and 169% more concerned than non-medical respondents.

Concerns about the possibility of being prescribed antibiotics unnecessarily during hospitalization

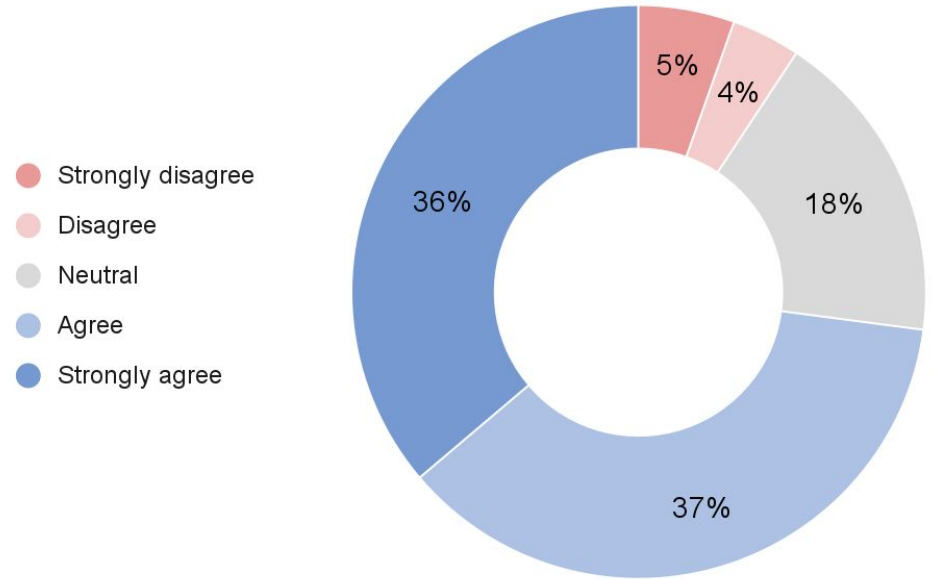


Note: N=1002, All respondents. Sig.<0.05. Chart created by combining two similar questions: "How concerned were you about the possibility of being prescribed antibiotics unnecessarily during hospitalization?" and "If you were to be admitted to the hospital, how concerned would you be about the possibility of being prescribed antibiotics unnecessarily during your hospital stay?" Averages were calculated by coding responses from a -2 to +2 to scale.

73%

Approximately 3 out of 4 Americans agree that “Healthcare providers should be more cautious when prescribing antibiotics.”

To what extent do you agree with the statement:
‘Healthcare providers should be more cautious when
prescribing antibiotics’?



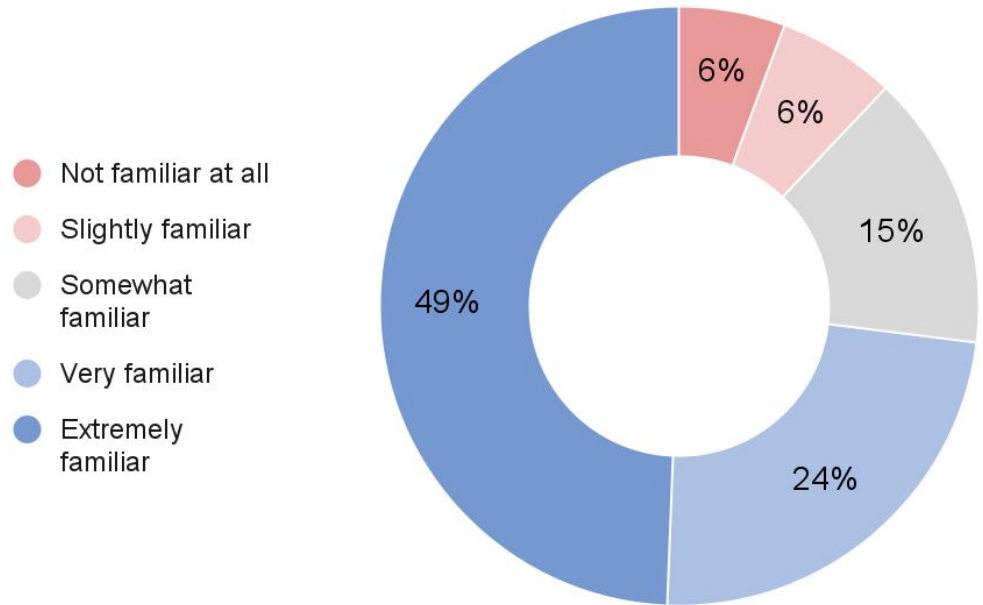
Note: N=1002, All respondents.

HIGH FAMILIARITY WITH TERM “ANTIMICROBIAL RESISTANT BACTERIA”

High level of awareness regarding antimicrobial resistant bacteria with 94% of respondents at least ‘Slightly familiar’ with the term “antimicrobial resistant bacteria.”

73% were ‘Very familiar’ or ‘Extremely familiar’.

How would you rate your familiarity with the term "antimicrobial resistant bacteria"?



Note: N=1002, All respondents.

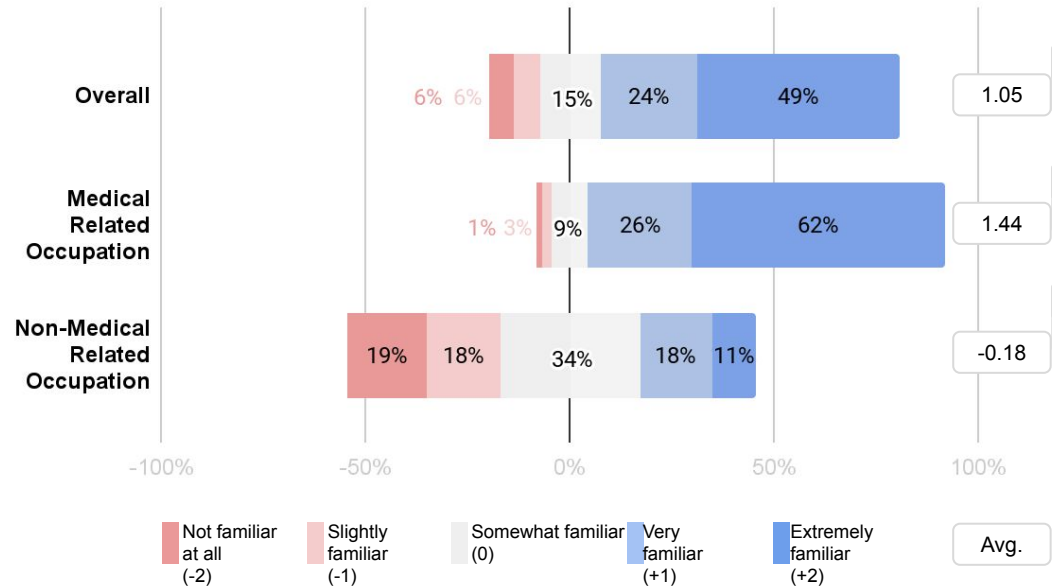
SIGNIFICANT GAP IN KNOWLEDGE FOR AMR

While the delta in familiarity with AMR between respondents in medical related occupations vs respondents in non-medical related occupations is expected, the gap was wide.

Medical professionals were ~700%+ more familiar with the term than non-medical professionals.

Reveals a need for more government-led discussions between healthcare providers and patients given the dangers of AMR.

How would you rate your familiarity with the term "antimicrobial resistant bacteria"?

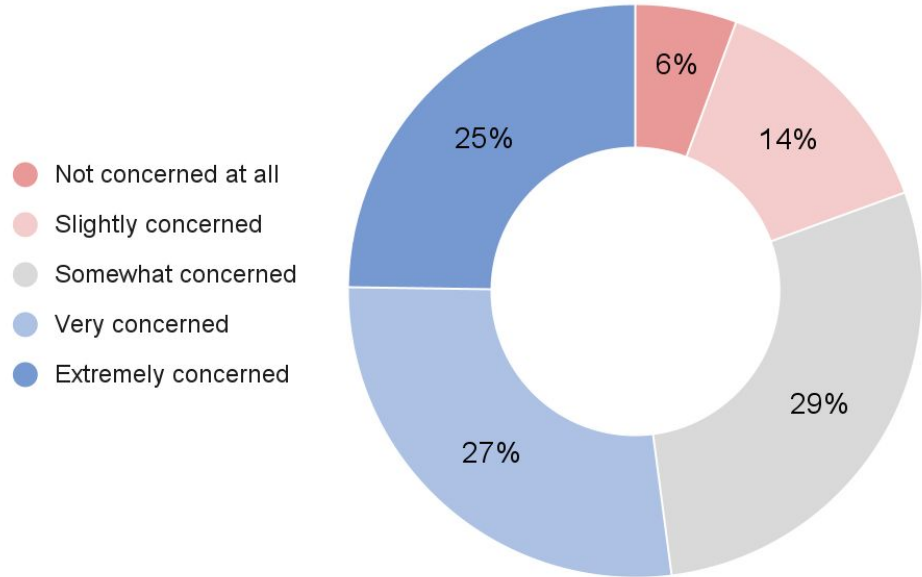


Note: N=1002, All respondents. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

52%

‘Very concerned’ or ‘Extremely concerned’ about the effects of infections caused by AMR on their current or future health.

How concerned are you about the effects of infections caused by antimicrobial resistant bacteria on your current or future health?



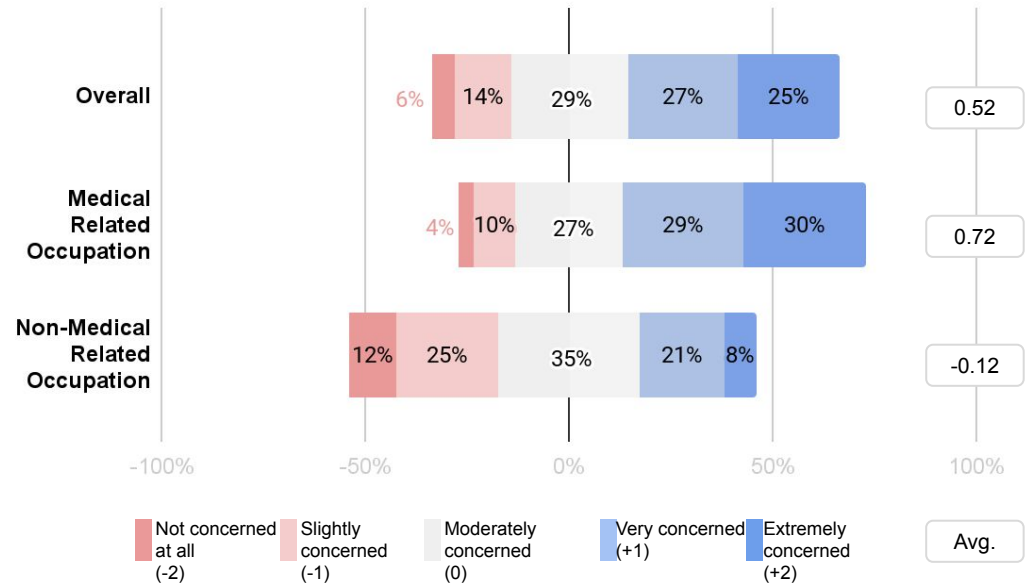
Note: N=1002, All respondents.

SUBSTANTIAL GULF REGARDING AMR CONCERNS ON CURRENT OR FUTURE HEALTH

Medical professionals were ~500%+ more concerned than non-medical professionals about the effects of AMR caused infections on their current and future healths.

Points to a chasm in awareness and education that needs to be crossed.

How concerned are you about the effects of infections caused by antimicrobial resistant bacteria on your current or future health?



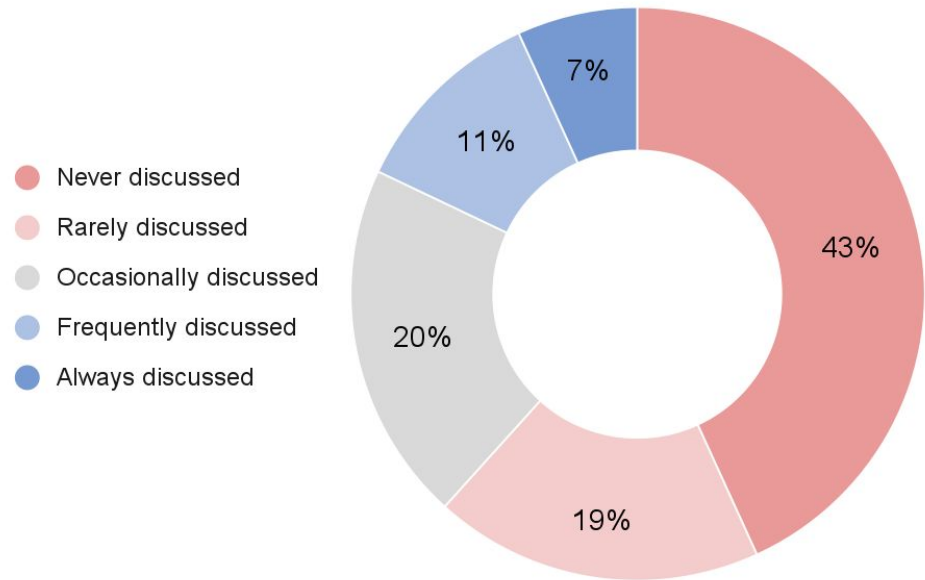
Note: N=1002, All respondents. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

DISCUSSING AMR WITH HEALTHCARE PROVIDERS

Unfortunately, education and awareness efforts are rarely occurring between healthcare providers and patients.

43% of respondents have 'Never discussed' AMR with their healthcare provider.

Have you discussed antimicrobial resistance bacteria with your healthcare provider?



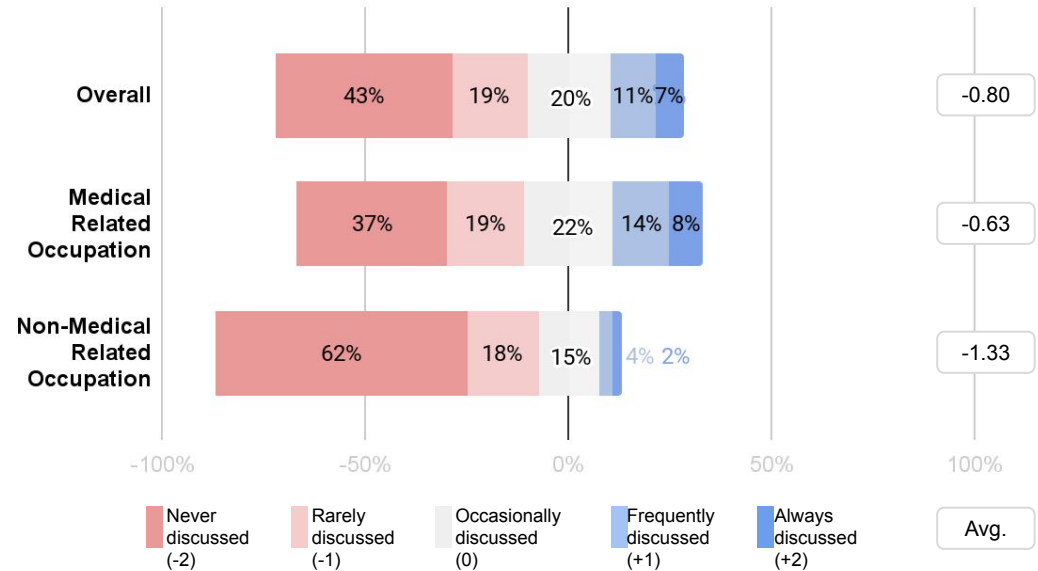
Note: N=903, Respondents, who have had a conversation with their healthcare provider recently. Respondents who cited 'I haven't recently had a conversation with a healthcare provider' were excluded.

DISCUSSING AMR WITH HEALTHCARE PROVIDERS

Even respondents in medical related occupations rarely talk about AMR with their healthcare providers.

Overall, 62% cited 'Rarely discussed' or 'Never discussed.'

Have you discussed antimicrobial resistance bacteria with your healthcare provider?

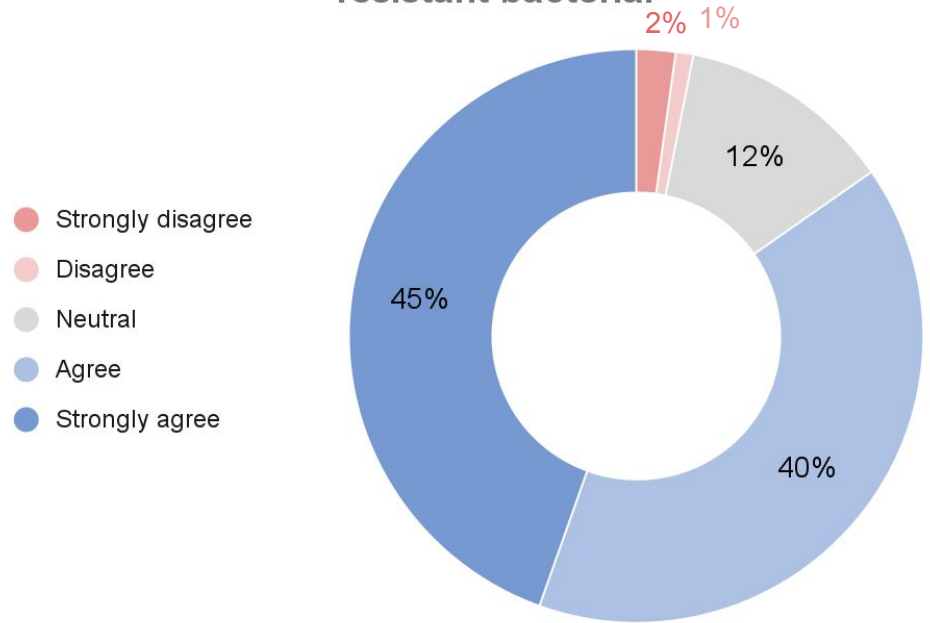


Note: N=903, Respondents, who have had a conversation with their healthcare provider recently. Respondents who cited 'I haven't recently had a conversation with a healthcare provider' were excluded. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

85%

‘Agree’ that "More education is needed for patients about antimicrobial resistant bacteria."

To what extent do you agree with the statement: "More education is needed for patients about antimicrobial resistant bacteria."

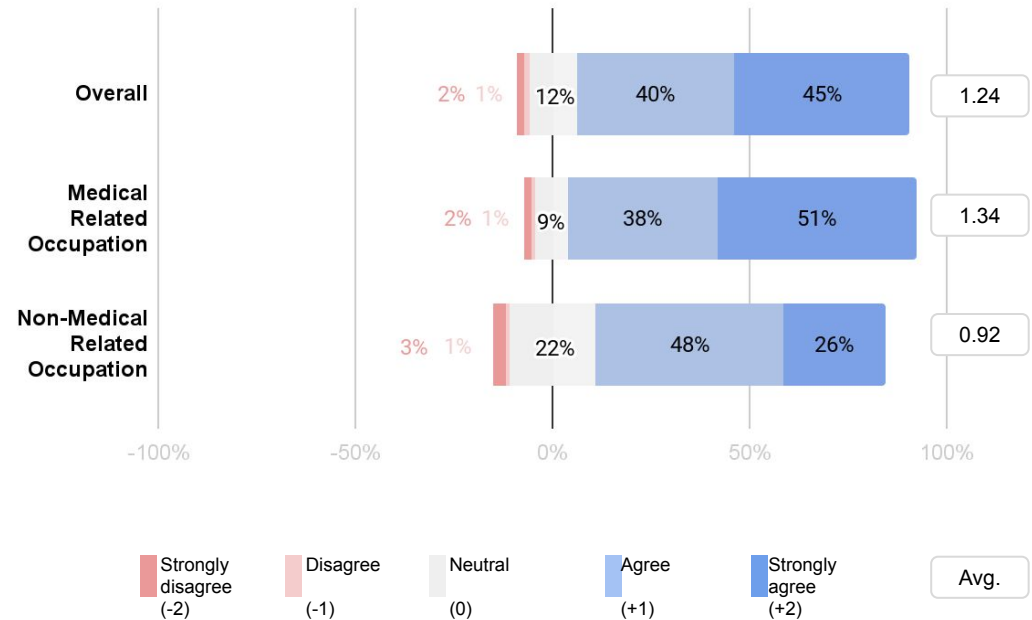


Note: N=1002, All respondents.

EDUCATION NEEDED FOR ANTIMICROBIAL RESISTANCE

Majority of respondents in medical related occupations 'Strongly agree' that "More education is needed for patients about antimicrobial resistant bacteria."

To what extent do you agree with the statement: "More education is needed for patients about antimicrobial resistant bacteria."



Note: N=1002, All respondents. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

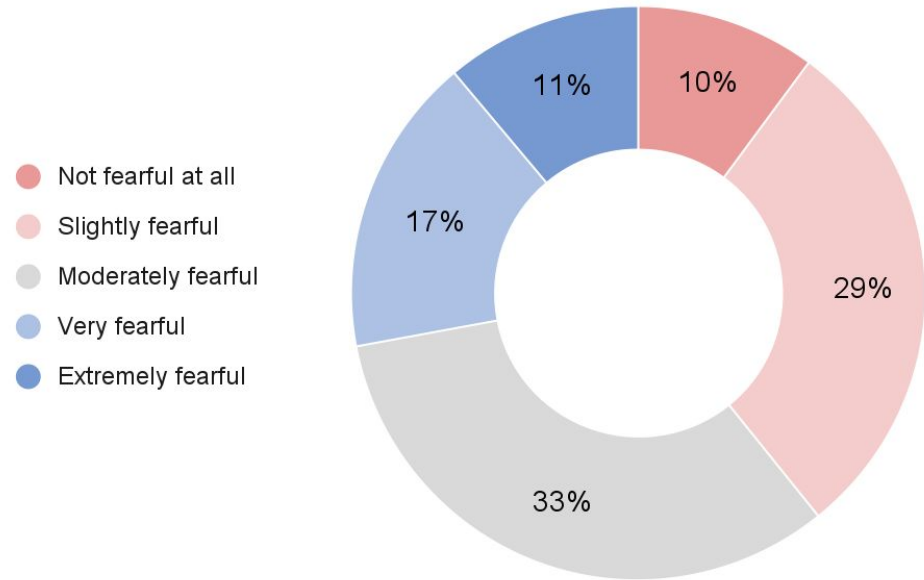
III. Perspectives on Infection and Concerns

RISK OF CATCHING AN INFECTION

90% of respondents were at least 'Slightly fearful' regarding the risk of catching an infection during hospitalization.

28% of respondents rated their fear level in catching an infection during hospitalization as 'Very' or 'Extremely' fearful.

During your hospital stay (or future stay), please rate your level of fear in relation to the risk of catching an infection:

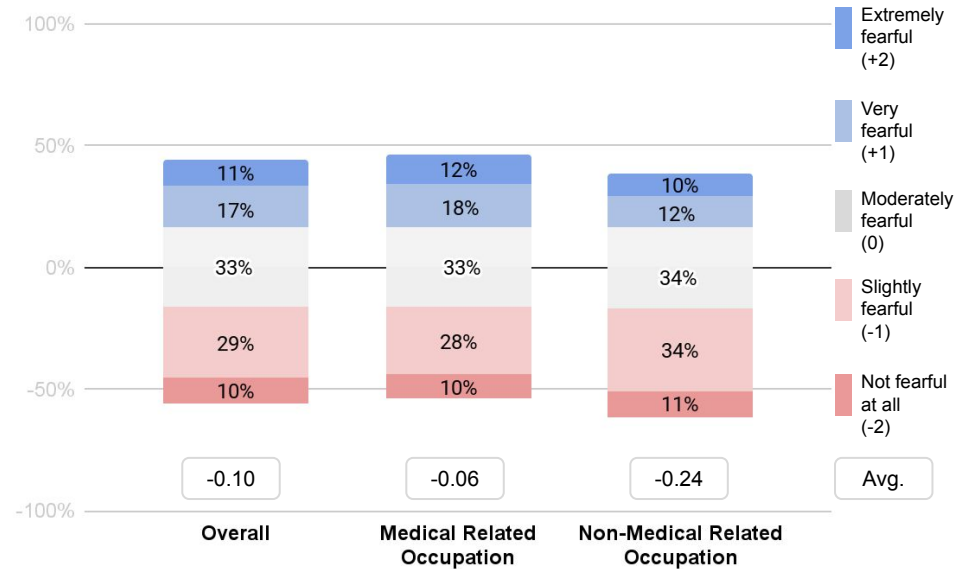


Note: N=1002, All respondents.

RISK OF CATCHING AN INFECTION

Respondents in medical related occupations were more fearful of catching an infection, rating their fear level as 30% for 'Very' or 'Extremely' fearful versus 22% by respondents in non-medical related occupations.

During your hospital stay (or future stay), please rate your level of fear in relation to the risk of catching an infection:



Note: N=1002, All respondents. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

SEPSIS #1 INFECTION FEAR

Sepsis was the most feared infection (46% 'Extremely' or 'Very' fearful), followed by surgical site infections (43%), and antimicrobial resistant infections (38%).

This ranking was consistent for both medical and non-medical related occupations.

© 2023 Magnolia Medical Technologies® All rights reserved. Confidential and proprietary.

Please rate your level of fear associated with the following health conditions: (Overall)



Note: not every survey respondent rated the level of fear, some of the respondents answered 'I don't know/Not applicable'. The sample size for respondents that rated the sepsis was 972, surgical site infections - 980, bloodstream infections - 989, antimicrobial resistant infections - 987, MRSA - 952, C Difficile infections - 925, central line-associated bloodstream infection - 960, catheter associated urinary tract infection - 968. Averages were calculated by coding responses from a -2 to +2 to scale.

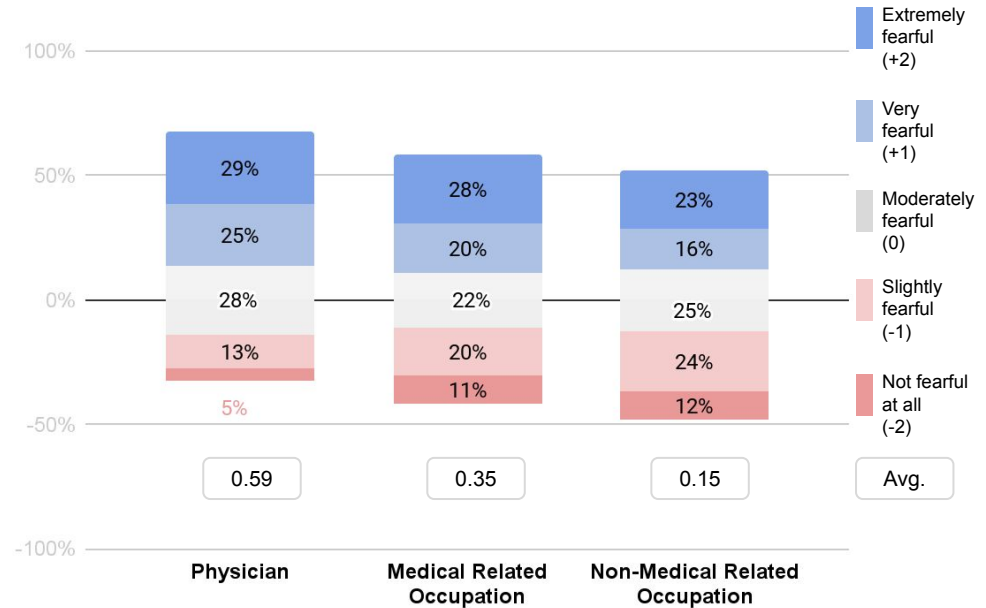
SEPSIS, LEADING CAUSE OF DEATH, READMISSIONS, AND HOSPITAL COSTS

For all respondents, sepsis stands out as the most alarming infection.

In fact, 54% of physicians were 'Very' or 'Extremely' fearful of catching sepsis.

On average, they are 38% more fearful of catching sepsis during hospitalization than respondents in non-medical related occupations,

During your hospital stay (or future stay), please rate your level of fear in relation to the risk of catching an infection: SEPSIS



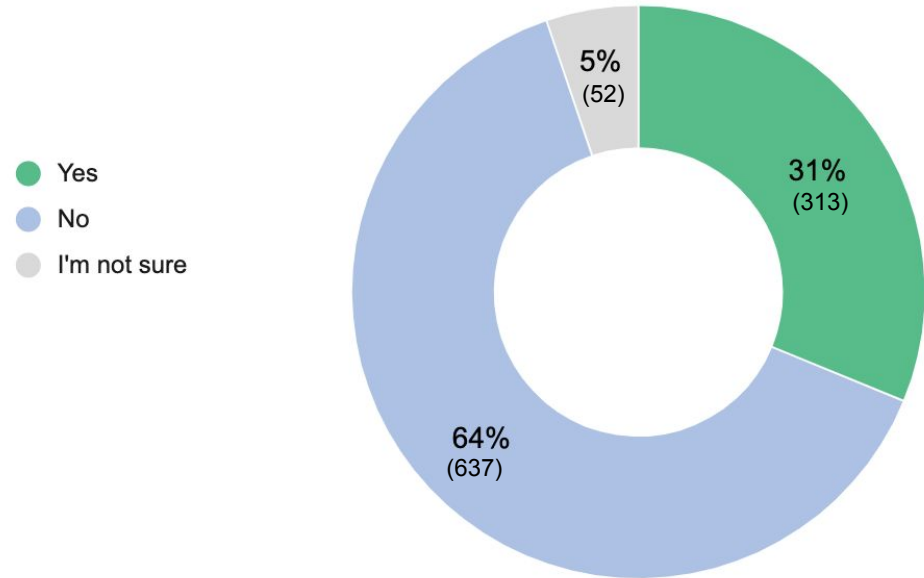
Note: N=1002, All respondents. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

IV. Perspectives on Sepsis from Impacted Americans

DIAGNOSED WITH SEPSIS

31% of respondents either have had a loved one or have been personally diagnosed with sepsis.

Have you or a loved one ever been diagnosed with sepsis?

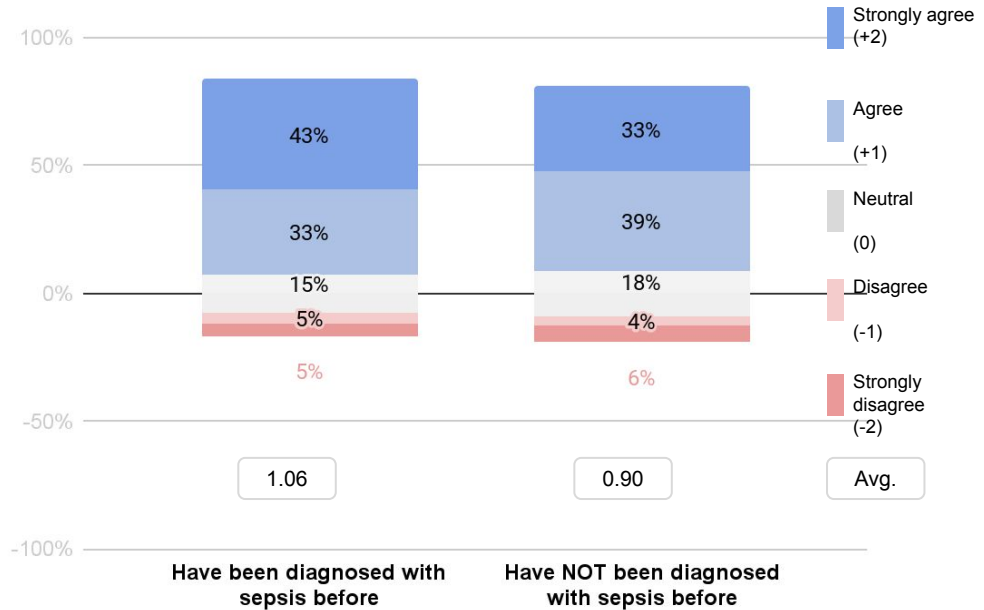


Note: N=1002, All respondents.

VIEW ON PRESCRIBING ANTIBIOTICS

On average, respondents who have previously been diagnosed with sepsis (or their loved ones were diagnosed with sepsis) are 18% more likely to agree that healthcare providers should exercise greater caution when prescribing antibiotics, compared to those who have not experienced a sepsis diagnosis.

To what extent do you agree with the statement: 'Healthcare providers should be more cautious when prescribing antibiotics'?

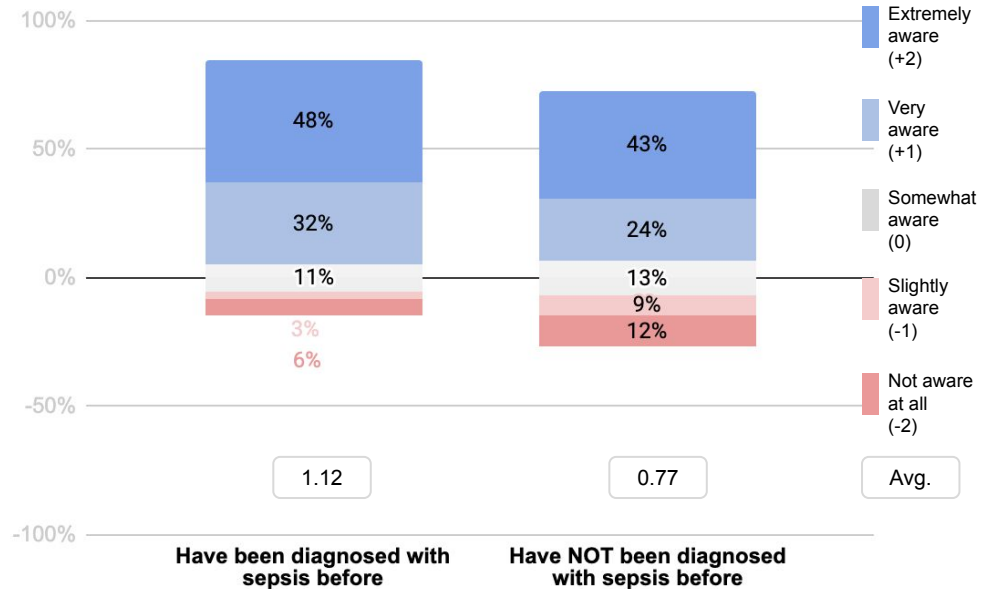


Note: N=950, Respondents who have or haven't been diagnosed with sepsis, excluding 'I'm not sure'. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

AWARENESS OF THE IMPACT OF INACCURATE RESULTS

On average, respondents who have previously been diagnosed with sepsis (or their loved ones were diagnosed with sepsis) are 45% more aware that inaccurate results from a blood culture test can lead to the extended unnecessary administration of antibiotics (typically 450% more antibiotics), compared to those who have not experienced a sepsis diagnosis.

How aware are you that inaccurate results from a blood culture test can lead to unnecessary administration of antibiotics?

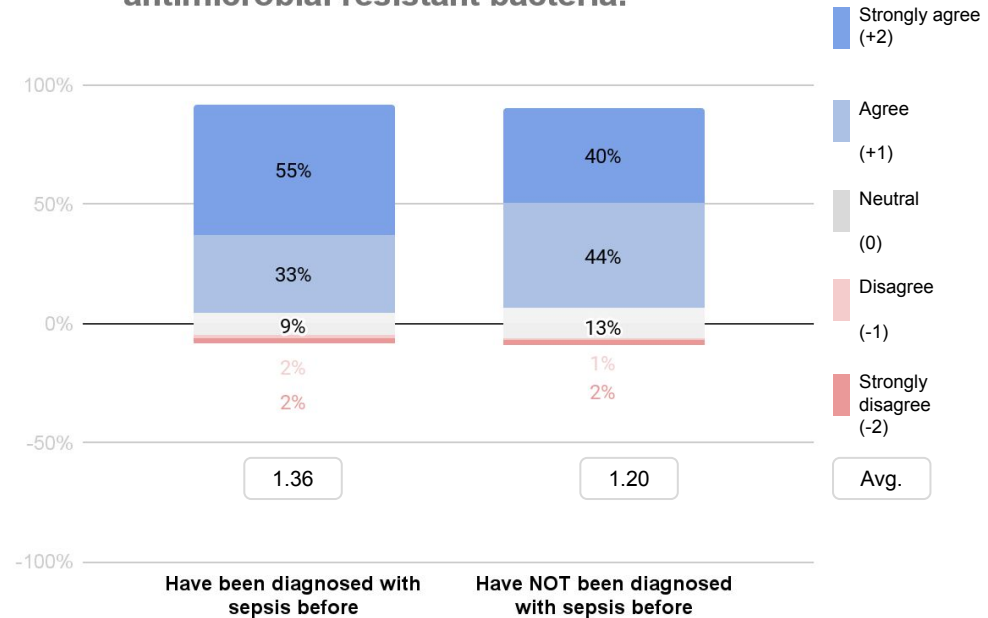


Note: N=950, Respondents who have or haven't been diagnosed with sepsis, excluding 'I'm not sure'. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

55%

Of respondents that have previously been diagnosed with sepsis (or their loved ones were diagnosed with sepsis) strongly agree with the statement that “More education is needed for patients about antimicrobial resistant bacteria”

To what extent do you agree with the statement:
"More education is needed for patients about antimicrobial resistant bacteria."

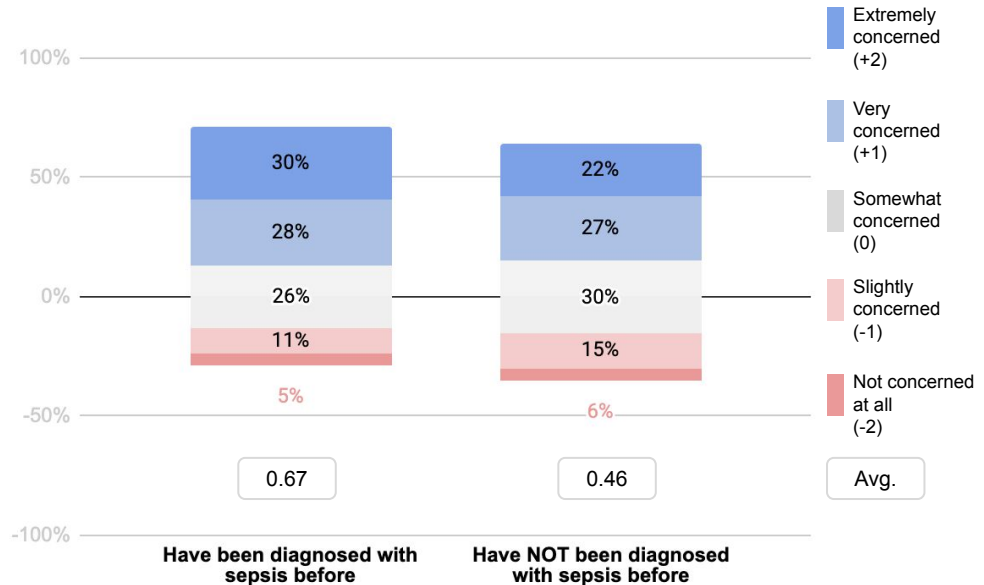


Note: N=950, Respondents who have or haven't been diagnosed with sepsis, excluding 'I'm not sure'. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

ANTIMICROBIAL RESISTANT INFECTIONS

On average, respondents who have previously been diagnosed with sepsis (or their loved ones were diagnosed with sepsis) are 46% more concerned about the effects of infections caused by antimicrobial resistant bacteria on their current or future health, compared to those who have not experienced a sepsis diagnosis.

How concerned are you about the effects of infections caused by antimicrobial resistant bacteria on your current or future health?



Note: N=950, Respondents who have or haven't been diagnosed with sepsis, excluding 'I'm not sure'. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

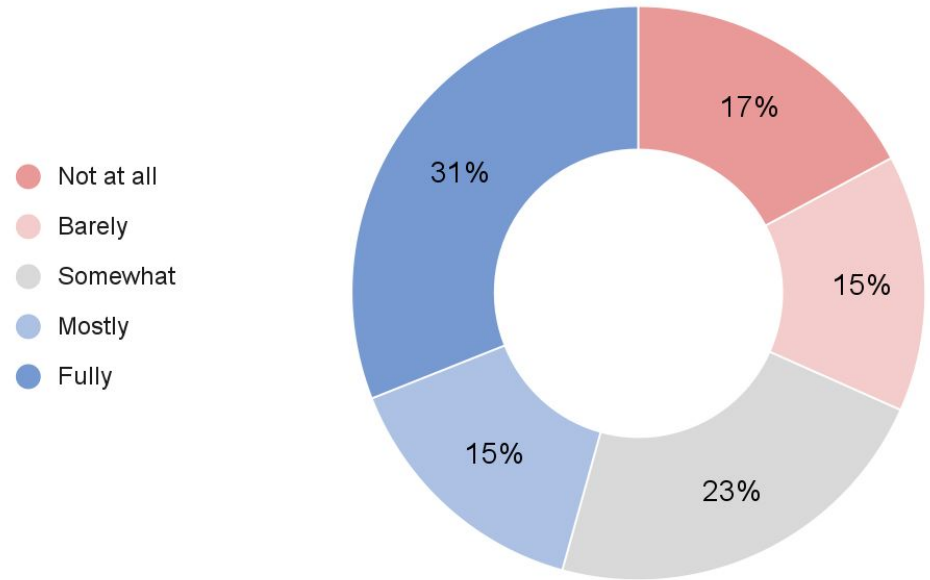
V. Perspectives on Hospital-Acquired Infections (HAIs)

46%

Of all respondents who were recently hospitalized were 'Fully' or 'Mostly' informed about the potential risk for Hospital-Acquired Infections (HAI) during hospitalization.

17% were not informed at all.

To what extent do you feel you were informed about the potential risk for Hospital-Acquired Infections (HAIs) during hospitalization?

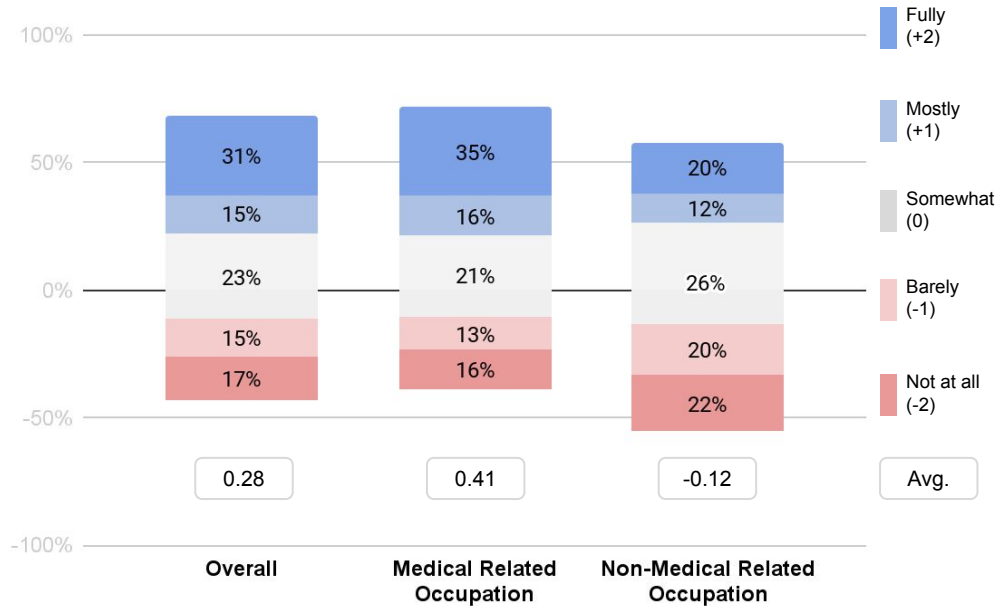


Note: N=501, Patients and Caregivers.

HOSPITAL-ACQUIRED INFECTION (HAI) EDUCATION

Approximately 2 out of 5 respondents in non-medical related occupations were 'Barely' or 'Not at all' informed.

To what extent do you feel you were informed about the potential risk for Hospital-Acquired Infections (HAIs) during hospitalization?



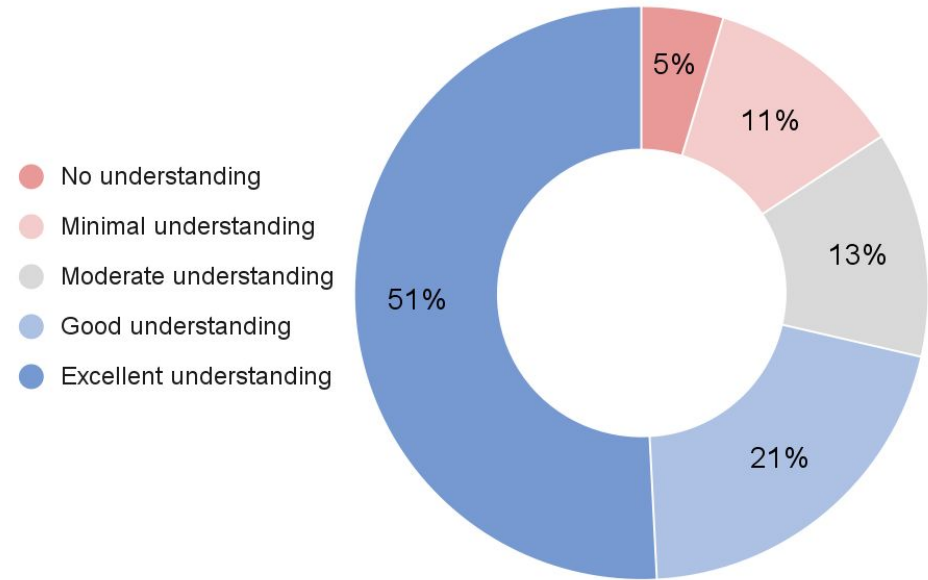
Note: N=501, Patients and Caregivers. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

UNDERSTANDING CAUSES OF HAI

72% of all respondents believe they have a 'Good' or 'Excellent' understanding of the potential causes of HAI.

16% of all respondents have 'Minimal' or 'No' understanding of the potential causes of HAI.

How would you rate your understanding of the potential causes of a Hospital-Acquired Infection (HAI)?



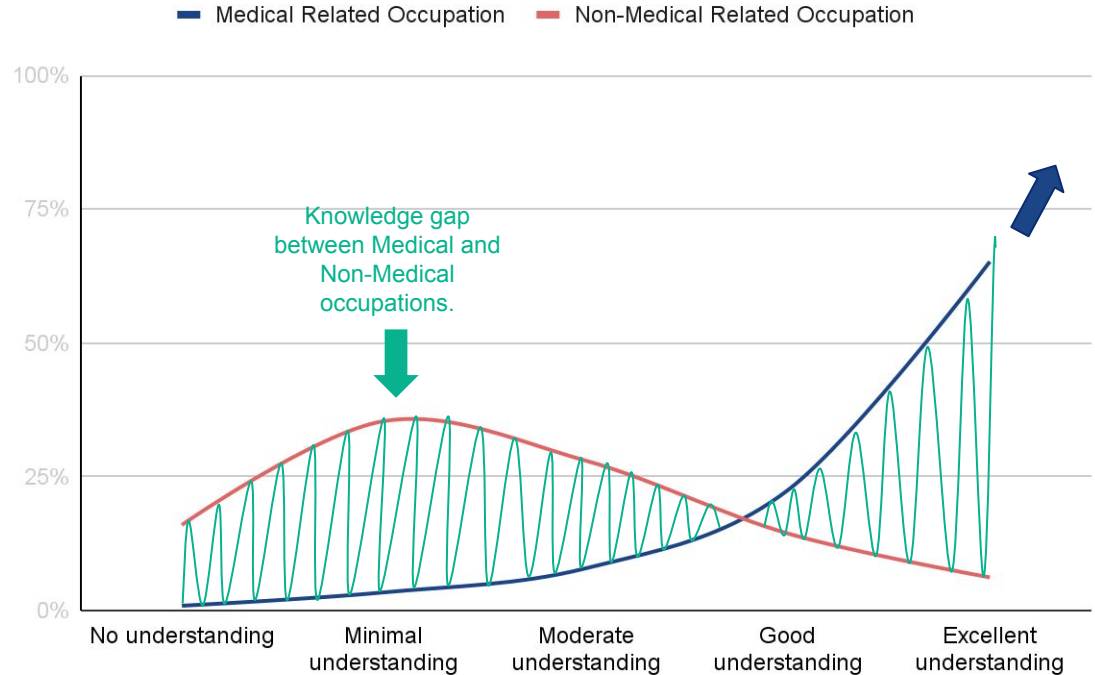
Note: N=1002, All respondents.

UNDERSTANDING CAUSES OF HAI

Again, there is a gap in the understanding of potential causes of HAI between respondents in medical related occupations vs respondents in non-medical related occupations.

This extreme difference highlights the educational opportunity that could benefit from more government support.

How would you rate your understanding of the potential causes of a Hospital-Acquired Infection (HAI)?



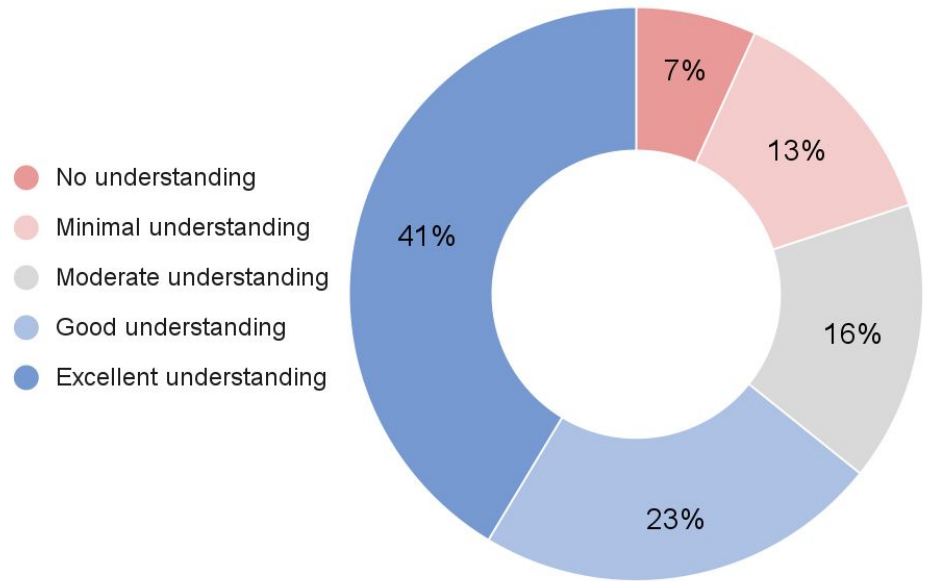
Note: N=1002, All respondents. Sig.<0.05.

UNDERSTANDING MEASURES TO PREVENT HAI

64% of respondents had a 'Good' or 'Excellent' understanding of the hospital's measures to prevent HAI.

20% possessed 'Minimal' or 'No' understanding of the hospital's measures to prevent Hospital-Acquired Infections (HAIs).

How would you rate your understanding of the hospital's measures to prevent Hospital-Acquired Infections (HAIs)?



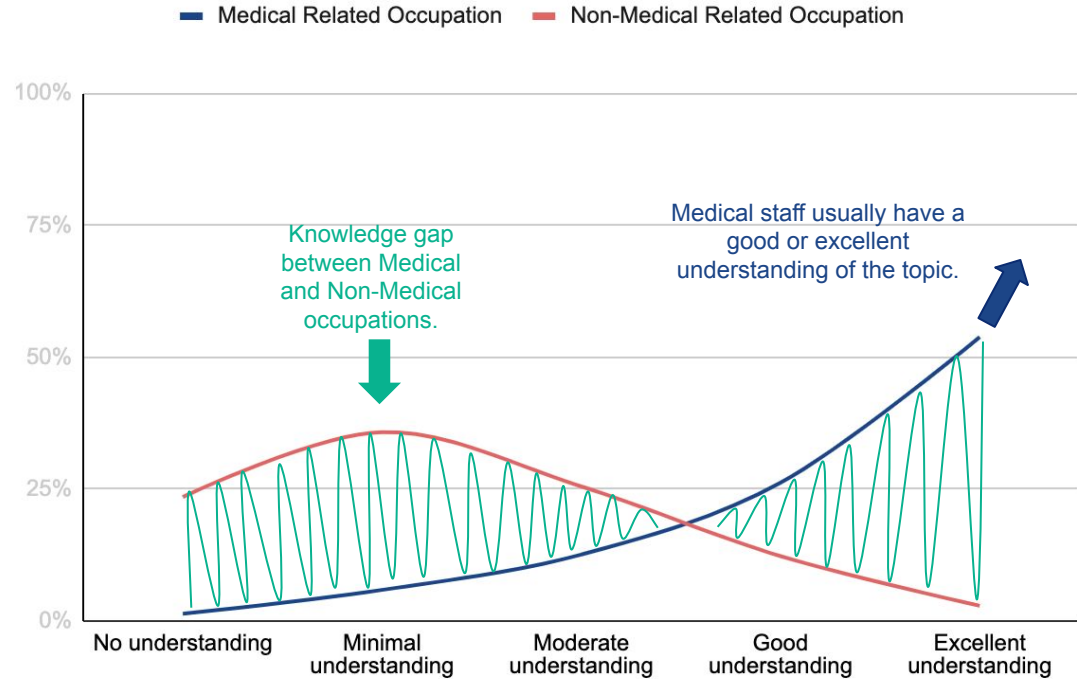
Note: N=1002, All respondents.

UNDERSTANDING MEASURES TO PREVENT HAI

There is a greater understanding of the potential causes of HAIs compared to the understanding of hospital measures to prevent them.

60% of respondents in non-medical related occupations have 'No understanding' or 'Minimal understanding.'

How would you rate your understanding of the hospital's measures to prevent Hospital-Acquired Infections (HAIs)?



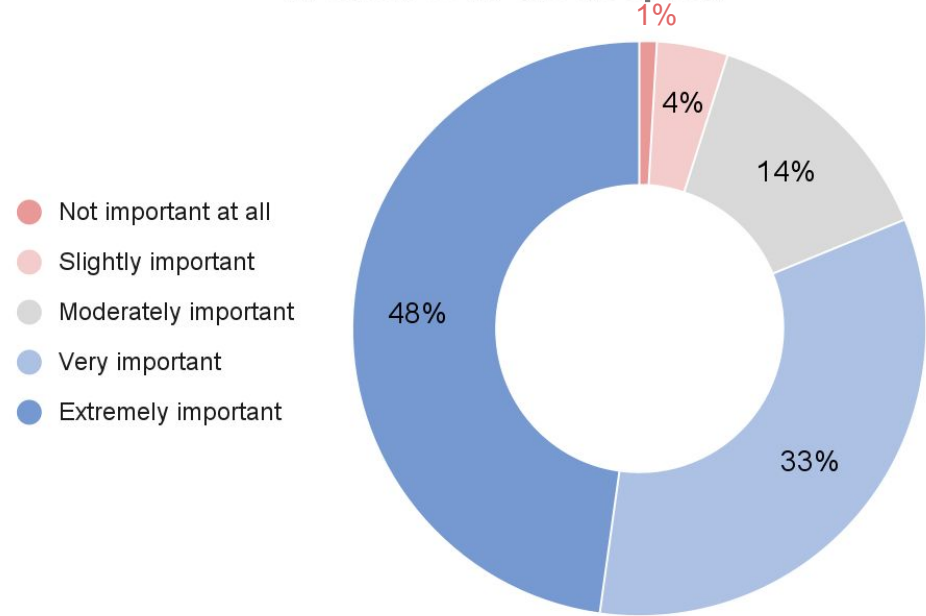
Note: N=1002, All respondents. Sig.<0.05.

99%

Agree that it is at least 'Slightly' important to be informed about Hospital-Acquired Infections (HAIs) and infection control measures in the hospital.

81% agree that it is 'Very' or 'Extremely' important to be informed about HAI and infection control measures in the hospital.

Please rate the importance of being informed about Hospital-Acquired Infections (HAI) and infection control measures in the hospital.



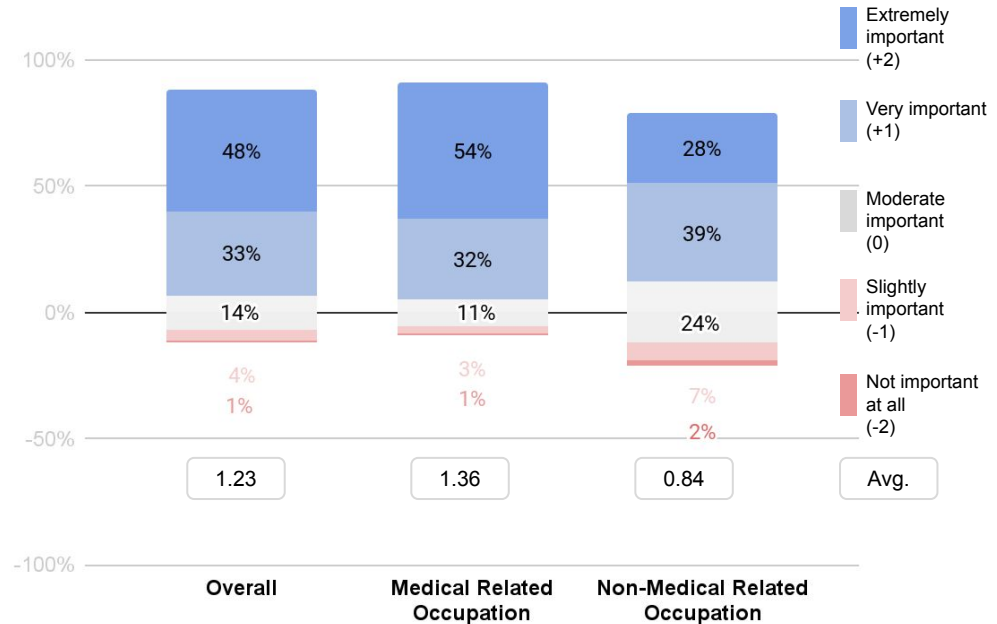
Note: N=1002, All respondents.

BEING INFORMED ABOUT HAIs AND INFECTION CONTROL MEASURES

86% of respondents in medical related occupations rated it 'Very' or 'Extremely' important.

67% of respondents in non-medical related occupations rated it 'Very' or 'Extremely' important.

Please rate the importance of being informed about Hospital-Acquired Infections (HAI) and infection control measures in the hospital.



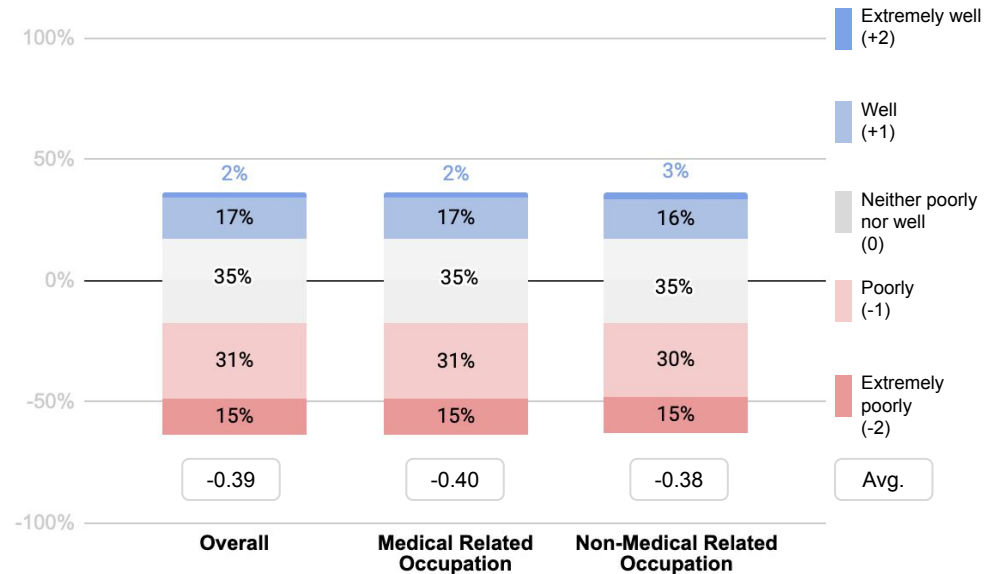
Note: N=1002, All respondents. Sig.<0.05. Averages were calculated by coding responses from a -2 to +2 to scale.

VI. Perspectives on Government Performance

46% RATED 'POORLY' GOVERNMENT'S EFFORTS

- 46% of the respondents rated the government's performance as either 'Extremely poorly' or 'Poorly'.
- Individuals in medical (46%) and non-medical (45%) professions share a similar viewpoint regarding the government's performance in safeguarding the health of Americans in hospitals.

In your opinion, how well is the government performing in terms of protecting the health of Americans in hospitals?



Note: N=1002, All respondents.

Zero False Positives. Zero Patients Harmed.

We're on a mission to help all healthcare institutions eliminate sepsis misdiagnosis due to the preventable error of false-positive blood culture results caused by contamination.

I'M ON A
**MISSION
TO ZERO** 

- Significant opportunity to increase AMR and HAI education.
- As one can imagine, the AMR and HAI knowledge gap between medical and non-medical personnel is wide. But what is clear is the support from both, especially medical professionals, regarding the need for more education.
- Sepsis is the #1 feared infection, and 31% of respondents have had sepsis or known a loved one who has.
- 46% of Americans rate the government's performance as poor, but there's a roadmap to improve with education.

Sign the Pledge

I am committed to helping prevent sepsis misdiagnosis by providing diagnostic excellence and the highest level of patient care possible.

FIRST NAME *

LAST NAME *

EMAIL *

SIGN



Greg Bullington
Co-Founder and CEO



Tammy Johnson
AVP, Clinical Strategy