

14th PAN ARAB
TRANSFUSION
MEDICINE
CONFERENCE
QATAR 2024



Inspiring
Transfusion
Excellence Across
Arab Nations

Joint-Provider



Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



30 November to 2 December 2024

Sheraton Grand Doha Resort & Convention Hotel,
Doha, Qatar

Techniques for Effective Research in Transfusion Medicine

MAHA BADAWI

Joint-Provider



Under the Patronage of



Disclosure Statement

I make the following declaration in relation to this CPD Activity :

- This complies with the Ministry of Public Health in Qatar Department of Healthcare Professions MoPH-DHP accreditation standards.
- There is NO Conflict of Interest.
- There is no plagiarism or copyright infringement.
- The content is balanced and free of bias, either commercial or non-commercial.

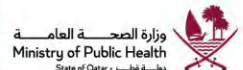
**14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024**

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Outline

- Health research output from the region
- Helpful practices for collaborative research
- Elements of good survey design
- The role of artificial intelligence tools in the research process

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Where do we stand



**14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024**

Inspiring Transfusion Excellence Across Arab Nations

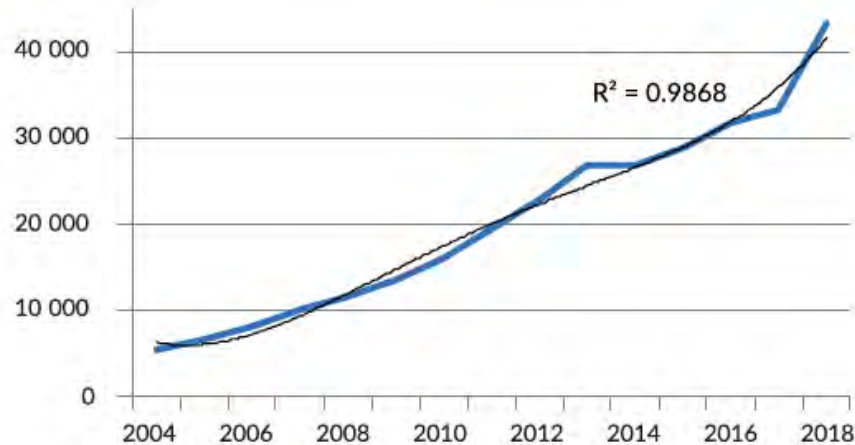
Joint-Provider



Under the Patronage of



Fig. 1. Number of biomedical and health research articles indexed in PubMed, Eastern Mediterranean Region, 2004-2018



Note: The thick line represents the annual raw counts of articles. The thin black line represents the trend line. R^2 represents the coefficient of determination.

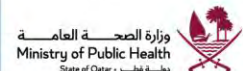
14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Research from the Eastern Mediterranean region
contributed

2%

of the global biomedical research output
between 2004-2018

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



Top 5 Contributors

- Iran 43%
- Egypt 14%
- Saudi Arabia 11%
- Pakistan 8%
- Tunisia 6%

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

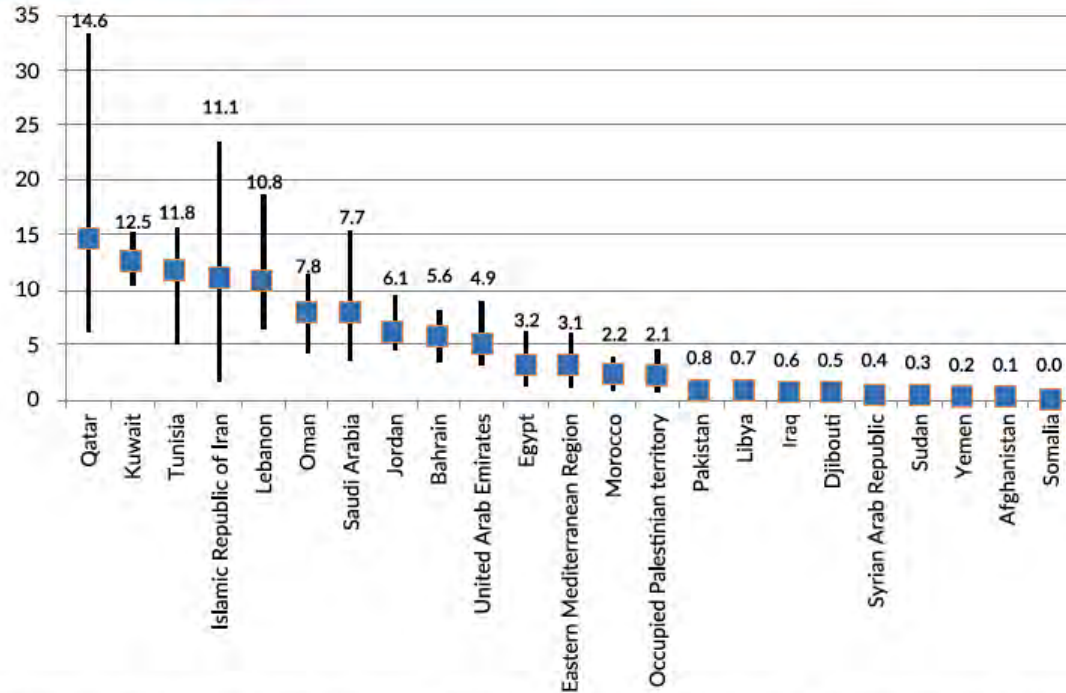
Joint-Provider



Under the Patronage of



Fig. 2. Number of biomedical research publications by country, Eastern Mediterranean Region, adjusted for population, 2018-2004



Note: Values indicate average health research publications per 100 000 population per year. Boxes represent means and vertical lines represent minimum-to-maximum. Eastern Mediterranean Region represents the overall average value for the entire Region.

14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Way Forward

- Building capacity
- Strengthening infrastructure
- Collaboration

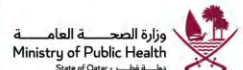
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



A global network of researchers
AUTHORAID

Search for...

SEARCH

Sign in or Register

Español

HOME

ABOUT

NEWS

COMMUNITY

GETTING INVOLVED

MENTORING

COURSES

EVENTS

RESOURCES

FORUM

FAQ

DONATE



AuthorAID is a free pioneering global network that provides support for researchers in low and middle income countries

Our online platform offers free online mentoring and collaboration, online courses and resources. There are currently over 14,000 members in our community from 175 countries, so why not join now?
Registering is free and easy



NEWS AND BLOGS



Exploring Potential Drawbacks of Standardized Mentorship Pairings

While mentorship remains

RESOURCES



Publishing, authorship and choosing a journal for your re-search publication

Play Video

FEATURED RESEARCHERS



Amon Paul Shoko

Research interests:
Aquaculture, Fish biology and ecology, Fisheries and aquatic sciences

<https://www.authoraaid.info/en/>

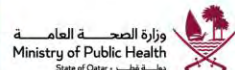
14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Collaborative Research

Collaboration

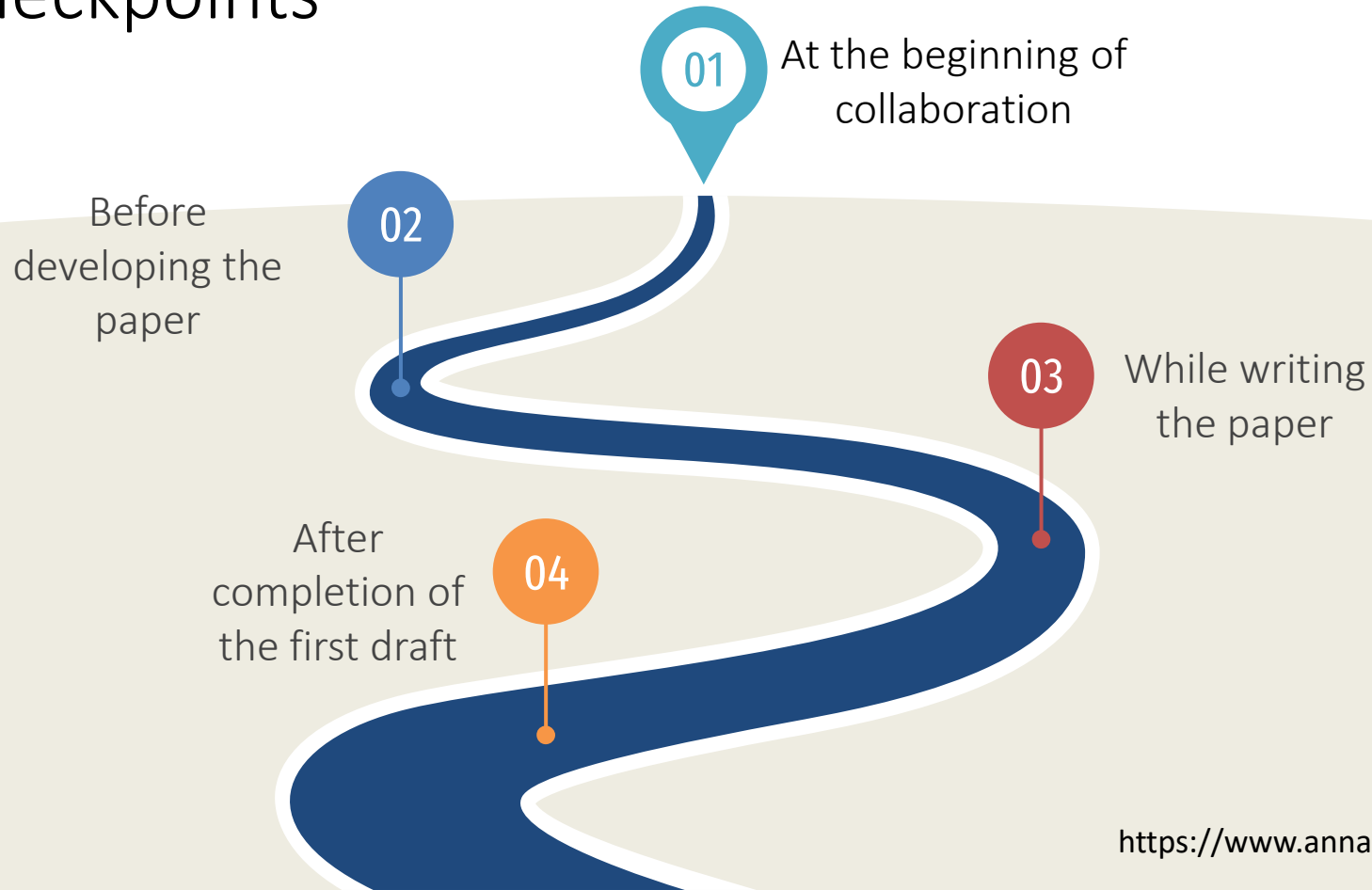


- Intradepartmental
- Inter-disciplinary
- Cross-institutional
- International
- Public-private

The Art of Collaboration

- Ensure project carried to completion
- Good quality research
- Minimize conflicts

Checkpoints



At the start of collaboration

- Determine the project owner
 - Could be the primary investigator
- Determine responsibilities
- Project timeline and plan
- Communication

Before writing the paper

- Revisit ownership and authorship

Authorship: Requirements of the International Committee of Medical Journal Editors (ICMJE)



Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND



Drafting the work or reviewing it critically for important intellectual content; AND



Final approval of the version to be published; AND



Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Use authorship criteria for inclusion

Authorship

- Project owner: first or last author
- Project owner should be in charge of compiling the text from co-authors and submitting the paper.

Order of Authors

Study design

Implementation

Analysis and discussion

Writing

- How large was each person's contribution in each area?
- Small
- Moderate
- Major

Before Writing the Paper

- Revisit ownership and authorship
- Who will write each section
- Who makes final decisions
- Software
- Timeline and plan



Digital White Board for Brainstorming

Allows for team collaboration to create a story board.

Platforms: Zoom "Whiteboard", Google Jamboard



File Sharing & Organization

Allows all collaborators to have access to the project documents at all times.

Platforms: Dropbox, Google Drive, Microsoft OneDrive, Box



The Writing Canvas

Allows for synchronous writing on the same document - a "single source of truth"

Platforms: Google Docs, Dropbox Paper, Microsoft Word via Office 365



Asynchronous Communication

Allows a team to interface between meetings to complete project milestones.

Platforms: Slack, MS Teams, WhatsApp, Email, Text Message



Synchronous Communication

Facilitates check-ins and particularly good to create shared mental model for work.

Platforms: Zoom, WebEx, Google Meet, Skype



Reference Manager

Facilitates citations and allows for sharing of collections of papers within team.

Platforms: Zotero, Paperpile, Mendeley, EndNote, Cite



Scheduling Software

Coordinates times for synchronous meetings. Embeds relevant links to all invitations to ensure everyone has the right links easily.

Platforms: Doodle, When2Meet, plus use of a calendar app (Outlook, iCal, Google Calendar)

While Writing the Paper

- Agree on paper flow
- Agree on target journal

After Completion of 1st Draft

- Who is going to edit for coherence?
- How are authors going to revise the draft?
- Each author should read the final draft before submission and agree with it

TOTALLY WORTH IT

Survey Research

Is a survey the the right tool?

This depends on the research question

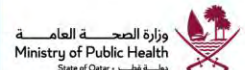
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Is a survey the the right tool?

This depends on the research question

Do blood groups affect susceptibility to COVID-19?

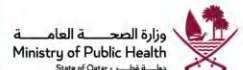
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Is a survey the the right tool?

This depends on the research question

Best suited to collect information on non-observable human phenomena (attitudes/beliefs/opinions)

Also used to collect information about actions or behaviors that would be otherwise hard to collect

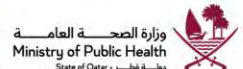
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Is a survey the the right tool?

Alignment is needed



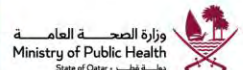
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

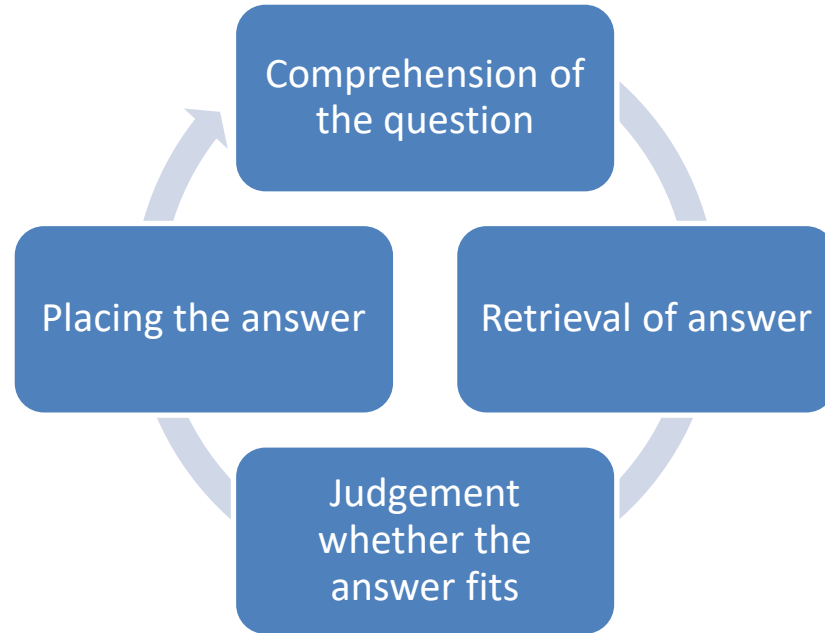
Joint-Provider



Under the Patronage of



Answering Surveys Requires Cognitive Effort



Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The psychology of survey response*.

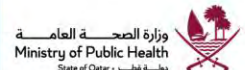
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

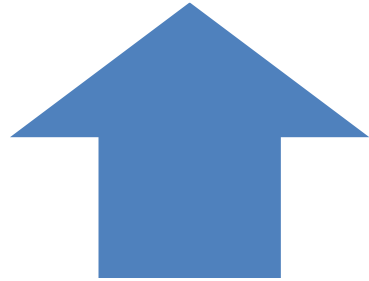
Joint-Provider



Under the Patronage of



Likelihood of Accurate Responses



Ability

Motivation



Task difficulty

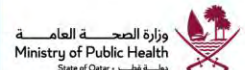
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

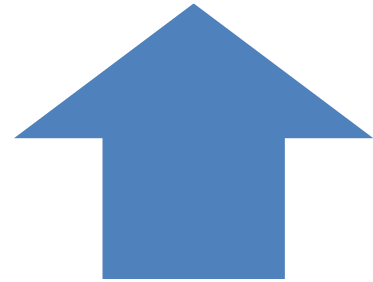
Joint-Provider



Under the Patronage of



Likelihood of Accurate Responses



Ability

Motivation

Availability of answers to participants

Trust

Cost

Rewards



Task difficulty

Design
Length

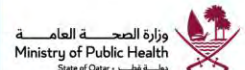
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Good Design Principles

- Increase rewards
 - Provide information about survey and its importance
 - Ask for help or advice from participants
 - Show positive regard
 - Make it interesting

Prof. Anthony R. Artino Jr.

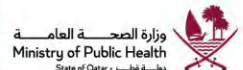
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Good Design Principles

- Decrease costs
 - Make it convenient
 - Make it short
 - Minimize requests for personal information

Prof. Anthony R. Artino Jr.

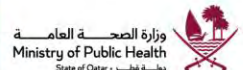
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Good Design Principles

- Increase trust
 - Connect through trustable organizations and/or individuals
 - Ensure confidentiality and security

Prof. Anthony R. Artino Jr.

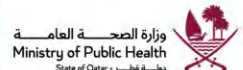
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Pre-testing

- Expert reviews
- Cognitive interviews

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Pre-testing

- Expert reviews
 - Clarity
 - Relevance
 - Language level
 - Missing aspects
- Cognitive interviews
 - By members of target population
 - Ideally one-on-one





Medical Teacher



ISSN: 0142-159X (Print) 1466-187X (Online) journal homepage: www.tandfonline.com/journals/imte20

Developing questionnaires for educational research: AMEE Guide No. 87

Anthony R. Artino Jr., Jeffrey S. La Rochelle, Kent J. Dezee & Hunter Gehlbach

Received: 2 April 2020 | Revised: 26 April 2020 | Accepted: 27 April 2020

DOI: 10.1111/trf.15861



HOW DO I?

TRANSFUSION WILEY

How do we design and report a high-quality survey?

Monica B. Pagano¹ | Nancy M. Dunbar² | Simon Stanworth^{3,4,5} |

BEST Collaborative and the Clinical Studies Group

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



AI Tools

14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



AI AND SCIENCE: WHAT 1,600 RESEARCHERS THINK

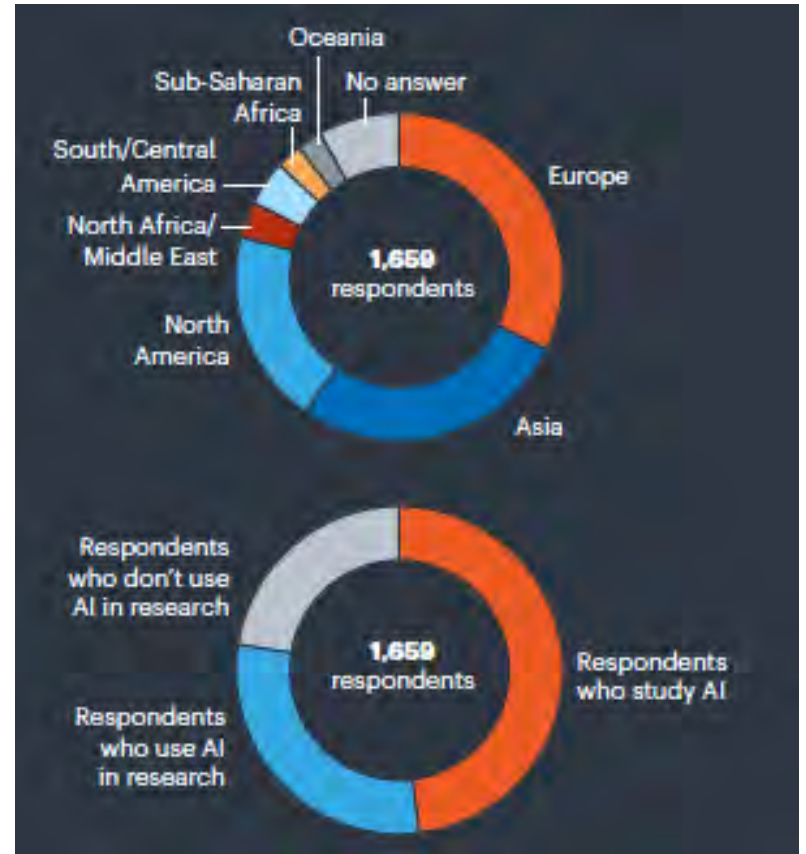
A *Nature* survey finds that scientists are concerned, as well as excited, by the increasing use of artificial-intelligence tools in research.

By Richard Van Noorden and Jeffrey M. Perkel

672 | Nature | Vol 621 | 28 September 2023

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations



Joint-Provider



Under the Patronage of



POSITIVE IMPACTS OF AI

Q: Considering machine-learning methods, what do you think are positive impacts of AI in research? (Choose all that apply.)

☒ Provides faster ways to process data

☒ Speeds up computations

☒ Saves researchers time or money

☒ Automates data acquisition

☒ Makes it possible to process new kinds of data

☒ Provides faster ways to write code

☒ Answers questions that are otherwise very difficult to solve

☒ Optimizes experimental set-ups for acquiring data

☒ Makes new discoveries

☒ Generates new research hypotheses

☐ Other

0

100%

NEGATIVE IMPACTS OF AI

Q: Considering machine-learning methods, what do you think are negative impacts of AI in research? (Choose all that apply.)

☒ Leads to more reliance on pattern recognition without understanding

☒ Results can entrench bias or discrimination in data

☒ Makes fraud easier

☒ Ill-considered use leads to irreproducible research

☒ Exacerbates power imbalances: only scientists at well-resourced universities or firms can be at the cutting edge

☒ Expensive or energy-intensive tool

☐ Other

0

100%

14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



AI ANTICIPATIONS

Q: How useful do you think AI tools are for researchers in your field?

- Essential
- Very useful
- Useful
- Slightly useful
- Not at all useful

Respondents who use AI in research



Respondents who don't use AI in research



Q: How useful do you think AI tools will become for researchers in your field in the next decade?

Respondents who use AI in research



Respondents who don't use AI in research



How Can AI help Researchers?

Literature review

scite_



Undermind



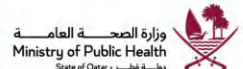
14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Are transfusion reactions under reported?

- Searching more than 125 million academic papers
- Summarizing the first 4 abstracts

Results

Summary of top 4 papers

Copy

Research indicates that transfusion reactions are indeed underreported. Studies have found that minor reactions, such as febrile nonhemolytic and allergic reactions, are often not reported (Narvios, 2004). The implementation of electronic reporting systems has been shown to significantly increase reporting rates (Bernard, 2015). However, the underreporting of acute transfusion reactions, particularly in critically ill patients, remains a concern (Kumar, 2014). This underreporting may be due to confusion of symptoms with underlying diseases (Kumar, 2014). The need for a hemovigilance system to increase the safety and quality of blood transfusion has been emphasized (Kumar, 2013).

+ Add columns

Sort

Filters

CSV

PLUS

BIB

PLUS

Paper

Abstract summary

Underreporting of minor transfusion reactions in cancer patients.

A. Narvios +2

MedGenMed : Medscape general medicine

Minor adverse reactions following transfusion of blood components to cancer patients are not uncommon.

Search or create a column

Describe what kind of data you want to extract

e.g. summary, counter-arguments

14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



+ 3 columns added

Sort

Filters

CSV

PLUS

BIB

PLUS

Paper

Abstract summary

Outcome measured

Limitations

Underreporting of minor transfusion reactions in cancer patients.

A. Narvios +2

MedGenMed : Medscape general medicine

2004 28 citations

Minor adverse reactions following transfusion of blood components to cancer patients are not uncommon.

Underreporting of minor transfusion reactions, such as febrile nonhemolytic transfusion reactions and allergic reactions

The limitations of the study include the focus on a specific inpatient unit, reliance on self-reported data, lack of consideration for the impact on patient outcomes, and absence of suggestions for further research or alternative reporting methods.

Significant Increase in Reporting of Transfusion Reactions with the Implementation of an Electronic Reporting System

R. Bernard +5

2015 4 citations DOI

Transfusion reaction reporting significantly increased and was sustained after the implementation of an electronic reporting system.

Reported patient reaction events (PRE) rate before and after the implementation of the electronic reporting system (ERS)

The limitations of the study include potential underreporting of transfusion reactions, potential confounding factors in assessing the impact of the ERS, and the need for further investigation into discrepancies between reported PREs and UTRs.

Acute Transfusion Reactions (ATRs) in Intensive Care Unit (ICU): A Retrospective Study.

R. Kumar +4

Journal of clinical and diagnostic research : JCDR

2014 15 citations DOI

Acute transfusion reactions are probably under diagnosed in critically ill patients due to confusion of the symptoms with the underlying disease.

The main or primary outcome measured in the study is the incidence and spectrum of acute transfusion reactions (ATRs) occurring in critically ill patients, including the specific types of ATRs and their rates associated with different blood components.

The limitations of the study include the lack of data on whether the reaction was from leuco-reduced or non leuco-reduced blood component, reliance on clinical reporting as the only source of information about the incidence of transfusion reactions, the need for ICU studies based on exclusive use of leucoreduced products to determine the rate of reduction of adverse reactions,

14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider

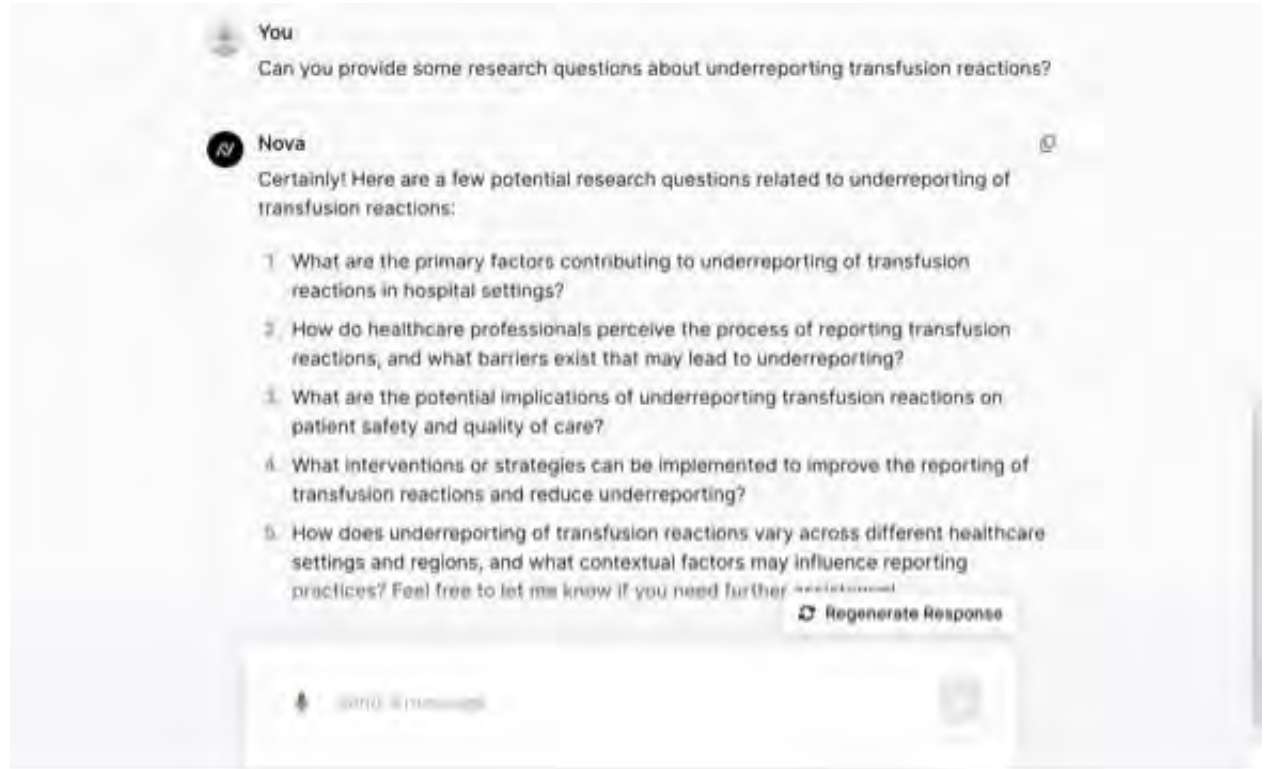


Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



Suggestions for research questions



14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



Statistical Analysis

Use Cases ▾

Julius

Docs

Community

Sign Up

Sign In

Analyze your data with computational AI.

Chat with your files and get expert-level insights in seconds.

Try Julius AI >



Loved by over 1,200,000 users worldwide

ETON
UNIVERSITY



HARVARD
UNIVERSITY

BCG

Yale



Charts & Graphs

Create sleek looking data visualizations.

Try now →



Insights

Ask anything to your data, and get answers.



Advanced Analysis

Perform modeling and predictive forecasting.



Problem Solving

Scan-and-solve math, physics, and chemistry.



Reports

Generate polished analyses and summaries.

14th PAN ARAB TRANSFUSION MEDICINE CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of

وزارة الصحة العامة
Ministry of Public Health
دولة قطر - State of Qatar



Writing



**14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024**

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of



If AI Tools are Used...

- Declare that they were used in the cover letter and the manuscript.
- Do not list ChatGPT among authors.
- Authors should be able to assert that there is no plagiarism in their paper, including in text and images produced by the AI.

<https://www.icmje.org/>

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

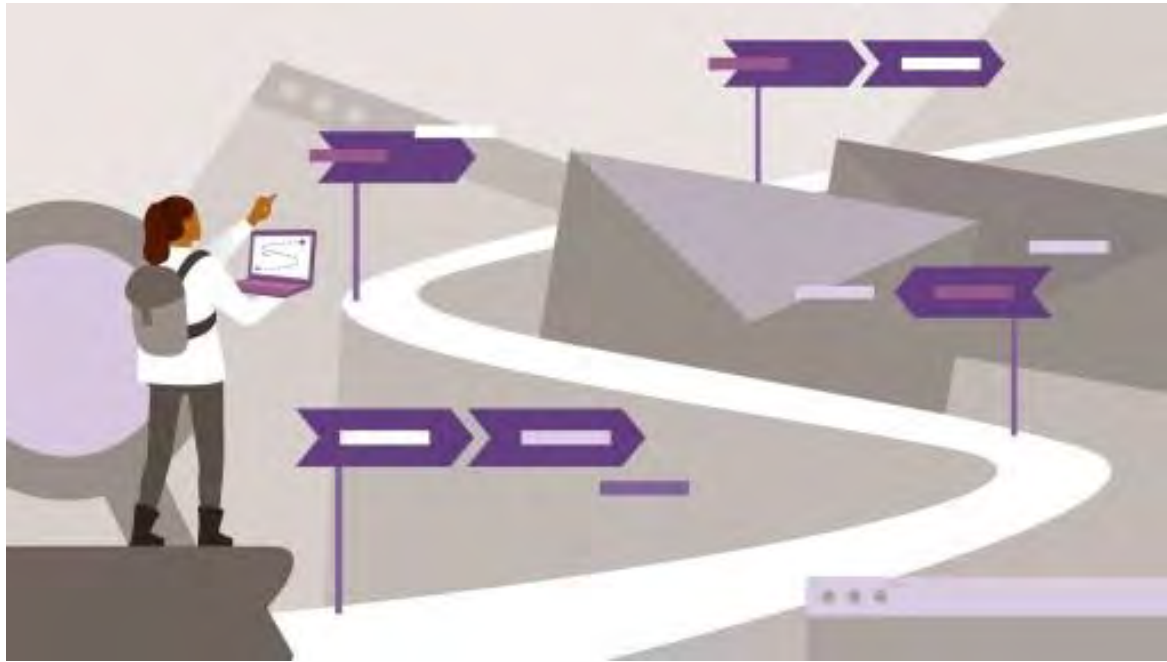
Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of





Thank you

14th PAN ARAB TRANSFUSION MEDICINE
CONFERENCE QATAR 2024

Inspiring Transfusion Excellence Across Arab Nations

Joint-Provider



Under the Patronage of

