



CONTRIBUTIONS TO MOVE ASSESSMENT FORWARD

Supporting the medical education and assessment science communities is the driving force behind our work at NBME. This edition of *NBME Impact: A Community Report* will show you how we are empowering solution developers, providing opportunities for educators and students, and contributing to make an impact in assessment, research, and other fields.

EMPOWERING SOLUTION DEVELOPERS TO DRIVE INNOVATION

In our last edition of [NBME Impact](#), we shared our goal of working with you and your colleagues to improve and accelerate assessment innovations that help ensure future physicians have the skills and behaviors to treat patients.

Creative Community Confronts the Challenges of Assessing Clinical Reasoning

To support learners in the development of clinical skills, NBME launched the [Objective Structured Clinical Examination \(OSCE\) for Clinical Reasoning Creative Community](#). **Ten [medical schools were selected to participate](#)** and will receive **\$150,000** over a **two-year** time frame to identify and develop incremental OSCE enhancements.

In May, leaders from the participating institutions and NBME professionals met in Philadelphia to share experiences and ideas. Though participants came from different educational environments, many of the challenges surrounding clinical reasoning assessment were universal. Creative Community members participated in a series of generative exercises to brainstorm potential solutions for these challenges, including new post-encounter exercises, new case formats, and alternative assessment platforms. Currently, the Community is working in small groups to expand the potential solutions into detailed assessment approaches. If you would like to stay updated on this work and future opportunities to collaborate, [join the email list on NBME.org](#).

Data Scientists All Over the World Tackle the Scoring of Clinical Patient Notes

Learning how to write patient notes is critical for future physicians' readiness to practice medicine. However, assessing this skill is time-intensive for already overburdened medical educators and physicians. Approaches using natural language processing (NLP) have been created to address this problem, but patient notes can still be challenging to score computationally because features may be expressed in many ways. Major challenges like this require creative solutions from untapped places.

That's why NBME hosted a [competition on Kaggle](#), the world's largest online community of data scientists and machine learning practitioners, to help find a solution. Contest entrants were challenged to develop an automated method of mapping clinical concepts from an exam rubric to various ways in which these concepts are expressed in clinical patient notes written by medical students. Though the

content focuses on scoring patient notes, these NLP approaches have the potential to be leveraged and modified to score free text responses on assessments.

Almost **1,500** teams entered the contest, and **six** winners were selected to receive up to **\$15,000**. The top six winning solutions have an open-source license, which means that they can be utilized in various ways by NBME and other institutions, such as medical schools. Interested researchers can apply for access to the full dataset for academic research purposes by submitting a proposal to [NBME's Data Sharing portal on NBME.org](#).

PROVIDING OPPORTUNITIES FOR FUTURE ASSESSMENT LEADERS

Learning and professional development are essential for future assessment leaders. By providing those opportunities, NBME can listen to and learn from others.

NBME 2022 Invitational Conference for Educators (NICE)

Designed to foster skills development in assessment and provide a venue for networking, the [fourth annual NICE](#) was hosted on **June 14 and 15, 2022** in Philadelphia using a hybrid format. **More than 250 faculty from 140 allopathic and osteopathic medical schools** attended the conference. The Closing Keynote Session featured a lively discussion with Drs. Andrea Deyrup and Joseph Graves, whose article on "[Racial Biology and Medical Misconceptions](#)" was published in the New England Journal of Medicine.

2022 Assessment Science and Psychometrics Summer Internship

Six graduate students are partnering with NBME measurement scientists, data scientists, and psychometricians on research projects to help advance assessment through [NBME's Summer Internship](#) program. This program provides an eight-week, hands-on experience for graduate students in fields such as measurement, statistics, cognitive science, or medical education. Their diverse perspectives invigorate NBME research professionals and their work. Since its inception, many individuals have participated in the program, including current NBME measurement scientists **Chris Runyon**, PhD, and **Su Somay**, PhD, and psychometrician **Francis O'Donnell**, PhD.

Meet the 2022 Summer Interns



Mohammed Abulela is pursuing his PhD in Measurement and Evaluation at the University of Minnesota.



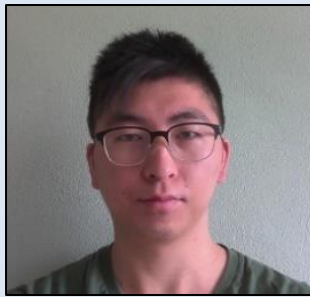
Merve Sarac is pursuing her PhD in Quantitative Methods at the University of Wisconsin-Madison.



Feiyi Sun is pursuing her MS degree in Applied Statistics at Teachers College, Columbia University.



Patience Wieland is a PhD candidate in Learning Technologies at the University of North Texas.



King Yiu Suen is a doctoral student in Quantitative and Psychometrics Methods at the University of Minnesota.



Jia Quan is a PhD candidate in Research and Evaluation Methodology at the University of Florida.

CATCH NBME TALENT OUT IN THE COMMUNITY

Leaders and professionals throughout NBME look to contribute and make an impact in assessment, research, and their respective fields of expertise. Here are a few recent notable contributions from some of our senior leaders, psychometricians, and measurement scientists.

Leaders Making an Impact

LINDA M. GADSBY, ESQ.

Senior Vice President, General Counsel and Chief Diversity, Equity and Inclusion Officer, Office of the General Counsel and Organizational Affairs



In 2022, **Linda Gadsby** has been recognized for the:

- ▶ [Top 50](#) Corporate Counsel Icon Award in the world.
- ▶ [100 Most Influential African American Leaders](#) in Business.
- ▶ [Top 100](#) Women in Business.

She also has been appointed to Cornell University's Board of Trustees for a four-year term, following her four-year term as an Alumni-elected Trustee.

ANDY FARELLA, MS

Senior Vice President, Chief Information Officer, Information Technology



After being recognized as a [top Philadelphia CIO in 2021](#), **Andy Farella** continues to be acknowledged for his leadership this year through a [feature in CIO magazine](#).

YE TONG, PHD

Senior Vice President, Assessment Operations



Ye Tong contributes to the measurement community through her service as:

- ▶ Founding Advisory Board Member for the Center for Measurement Justice.
- ▶ Founding Board of Director for Women in Measurement, Inc.
- ▶ President of the National Council on Measurement in Education (NCME) from 2020 to 2021.

Researchers Advancing the Fields of Assessment and Data Science

In April, NBME researchers traveled to San Diego for the American Educational Research Association (AERA) and National Council on Measurement in Education (NCME) conferences. In addition to presenting their research findings and participating in panel discussions, NBME professionals were invited to be chairs, mentors for previous and upcoming research interns, and meeting facilitators as leaders of Divisional and Special Interest Group gatherings.

Notably, **Melissa Margolis**, Senior Measurement Scientist, and **Richard Feinberg**, Senior Psychometrician, received the 2022 AERA Division I (Education in the Professions) Outstanding Research Publication Award. **Victoria Yaneva**, Senior Data Scientist, received the Established Investigator Award (with co-authors **Daniel Jurich**, Associate Vice President, USMLE, Le An Ha, Senior Lecturer in natural language processing at the University of Wolverhampton, and **Peter Baldwin**, Principal Measurement Scientist).



Victoria Yaneva, Richard Feinberg, and Melissa Margolis at the 2022 AERA conference.

Recently, Richard Feinberg was recognized for **winning** the [Educational Measurement Issues and Practices \(EM:IP\)](#) cover graphic/data visualization competition for the **fifth time**. EM:IP is one of two prominent journals run by the NCME and a leading forum for measurement and psychometric research.

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- ▶ **Send us** feedback about the content in this edition by emailing NBMECommunications@nbme.org.
- ▶ **Share your thoughts** on [Reassess the Future](#) to meet this moment in medicine together.
- ▶ **Find us** on LinkedIn at [NBME.org](https://www.linkedin.com/company/nbme), follow us on Twitter [@NBMEnow](https://twitter.com/NBMEnow), and like us on Facebook [@NBME.org](https://www.facebook.com/NBME.org).
- ▶ **Access** [previous editions](#) of this report to learn about NBME's efforts in other areas.