YEAR IN REVIEW
2021

OFFICE OF DATA ANALYSIS AND STRATEGY

ECU **BRODY SCHOOL OF MEDICINE**

TABLE OF CONTENTS

Vision & Mission

Vision

Proactively deliver innovative and data-centric solutions to support the School's mission and impact medical education communities in Eastern North Carolina and beyond.

Mission

To provide insightful knowledge and information to support decision making, quality improvement, data management, and educational strategies at Brody School of Medicine.

Welcome Message

COVID-19 pandemic transformed our social, cultural and individual lives, and I'm sure we all learned the importance of adaptability and resilience. For ODAS, not much changed in our work environment, but we continue to progress in meeting our mission and supporting Brody.
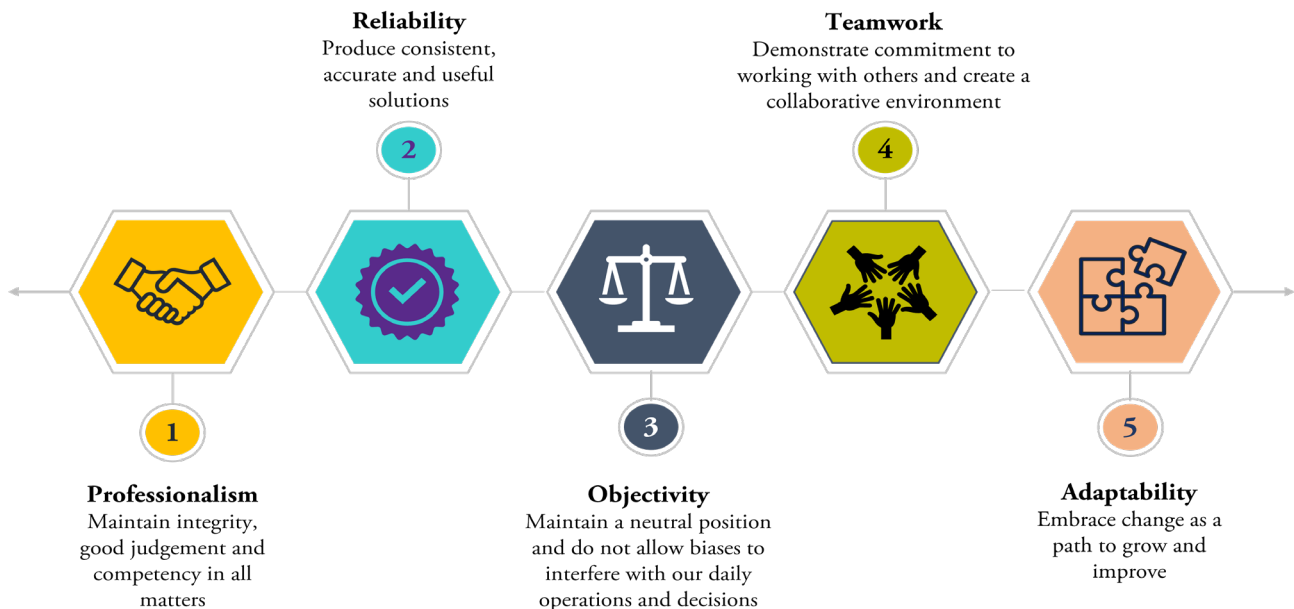
With our projects this year, ODAS had the opportunity to strengthen partnerships all across ECU. The 2022 Data Retreat brought us together to openly discuss our data struggles, identify areas we can improve, and learn from each other. I feel proud of the work ODAS does in our day-to-day, the progress we have had in the 3 years since we started, and the impact of our work. But all of the success is due to the dedication, hard work, and teamwork from our staff, the continuous support from our leadership, and the various collaborations each of our initiatives bring.

We are looking forward to our team's progress continuing, and as Edward Everett Hale once said, "coming together is a beginning; keeping together is progress; working together is success."
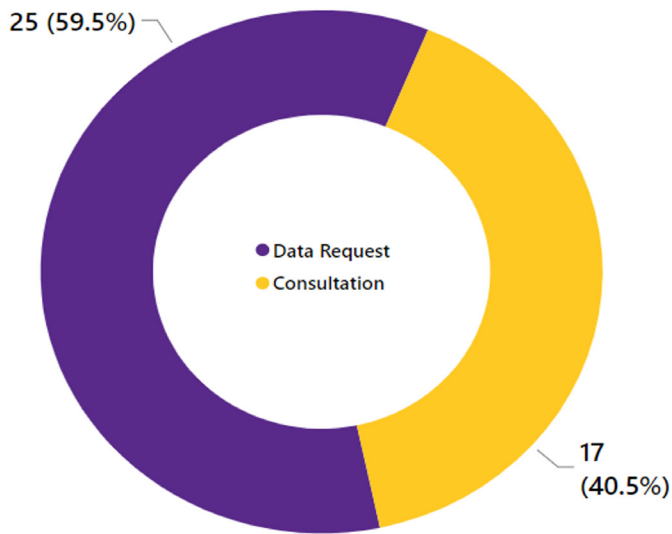
Jhojana Infante Linares
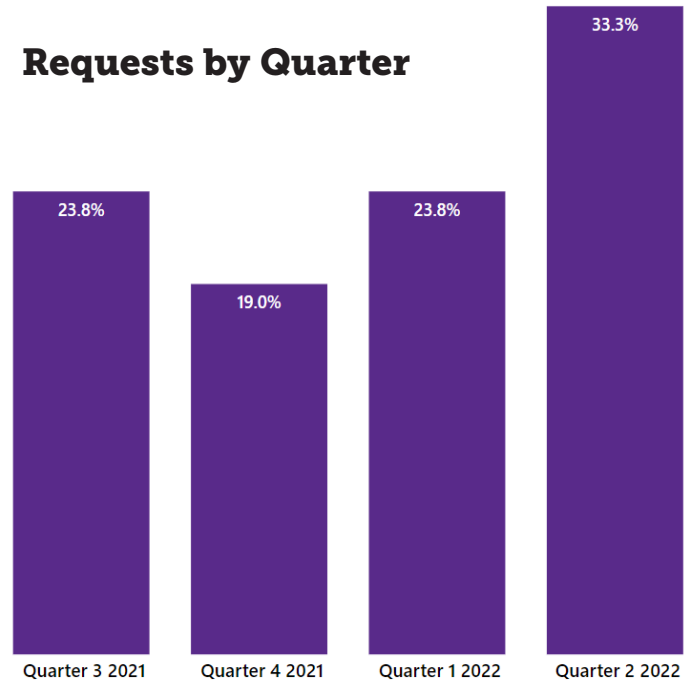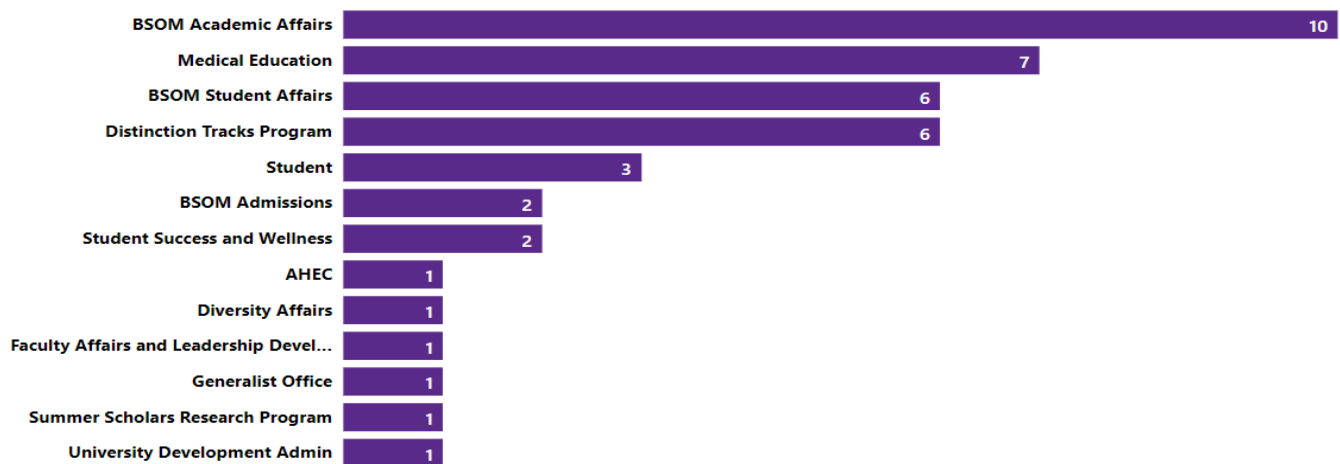
Jhojana Infante Linares
Director

Core Values

Reliability
Produce consistent, accurate and useful solutions

2

Teamwork
Demonstrate commitment to working with others and create a collaborative environment

4

1

Professionalism
Maintain integrity, good judgement and competency in all matters

3

Objectivity
Maintain a neutral position and do not allow biases to interfere with our daily operations and decisions

5

Adaptability
Embrace change as a path to grow and improve

ODAS Fact Sheet

Requests by Type

25 (59.5%)

- Data Request
- Consultation

17
(40.5%)

Requests by Quarter

Quarter 3 2021	Quarter 4 2021	Quarter 1 2022	Quarter 2 2022
23.8%	19.0%	23.8%	33.3%

Requests by Office/Department

Office/Department	Count
BSOM Academic Affairs	10
Medical Education	7
BSOM Student Affairs	6
Distinction Tracks Program	6
Student	3
BSOM Admissions	2
Student Success and Wellness	2
AHEC	1
Diversity Affairs	1
Faculty Affairs and Leadership Devel...	1
Generalist Office	1
Summer Scholars Research Program	1
University Development Admin	1

Yearly Trends

- ● Increase ● Decrease ● Total

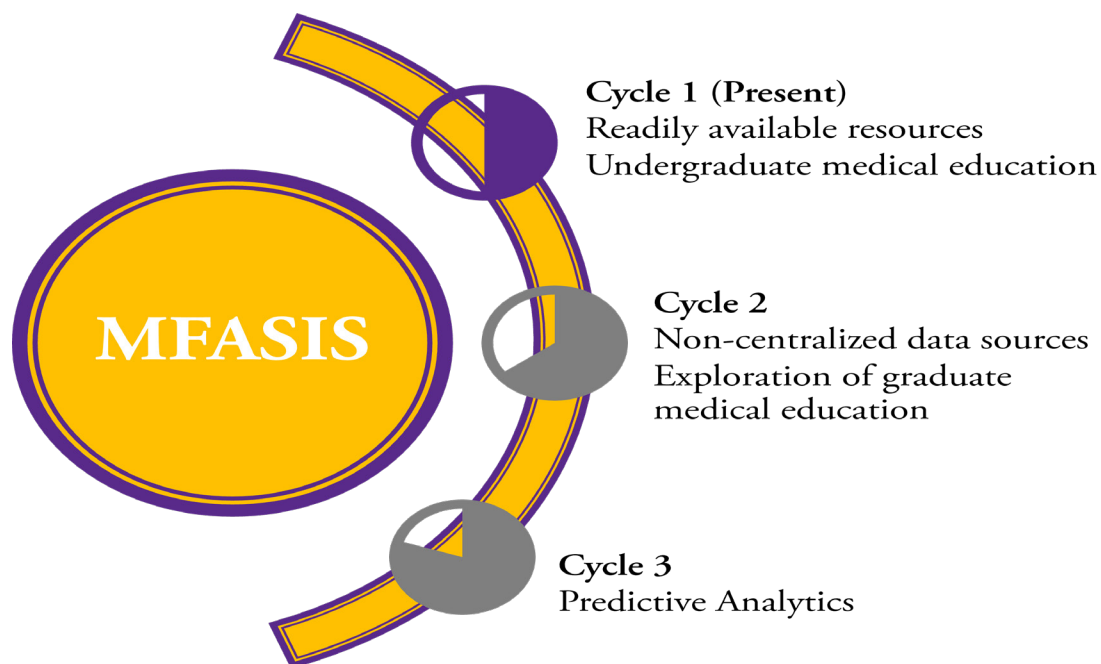| 2018-2019	2020	2021	Total
16	31	42	89

Educational Data Warehouse

The educational data warehouse (also known as MFASIS - Medical Faculty and Student Information System) is a repository of data from various educational applications used at Brody School of Medicine (BSOM). It provides a centralized platform to integrate data from multiple applications, like the learning management system, student information system, and computer-based testing, allowing users to see learners' progression in their medical education from admission to graduation and beyond.

Cycle 1 (Present)
Readily available resources
Undergraduate medical education

Cycle 2
Non-centralized data sources
Exploration of graduate
medical education

Cycle 3
Predictive Analytics

BSOM Admissions Data & Reporting (Completed)

Create process and store data in Operational Data Storage for admissions data collected via WebAdmit. Develop reports for operations and public dashboards.

Clinical Student Performance (In-Progress)

Develop reporting views and dashboards to track students' performance during the clinical phase of the undergraduate medical education curriculum.

Continuous Improvement Initiatives

ODAS participates, coordinates, and aids in measuring improvements in the quality of the medical education program. Consultation services are available for partners to engage in process and quality improvement of day-to-day operations and programming.

2022 ECU Data Retreat

The retreat was sponsored by IPAR (Instituional Planning, Assessment and Reserach) at ECU. This year, it was centered on data quality for Health Sciences data quality. ODAS staff participated as planning committee members, presented sessions on Brody School of Medicine and the medical curriculum, and facilitated various sessions.

Digital Learning Improvement Plan Pre-Meeting Reflection (LIPPMR)

Create electronic process using REDCap to standardize, facilitate, and improve notifications of academic difficulty and completion of the LIPPMR process for students and course/clerkship directors.

Residency Application Data Collection

Using Canvas, create a process for students to submit data regarding residency application interviews for advising and outcomes reporting.

Distinction Tracks Quarterly Review Form

Combine the different Distinction Track (DT) quarterly review form into a single REDCap form to optimize workflow and data collection and analysis.

AHEC Continuing Medical Education Data

Evaluation on quality of data collected from various instruments used to assess grand rounds and other courses/events. Provide recommendations to improve the data collection process and data management.

Reports & Visualizations

ODAS develops and maintains a wide range of reports and visualizations. We provide solutions that enable our BSOM community to access data from multiple systems and create visualizations to share information across departments and the general public. Our goal is for report users to gain valuable insights into the educational data by revealing and communicating patterns, trends, and correlations.
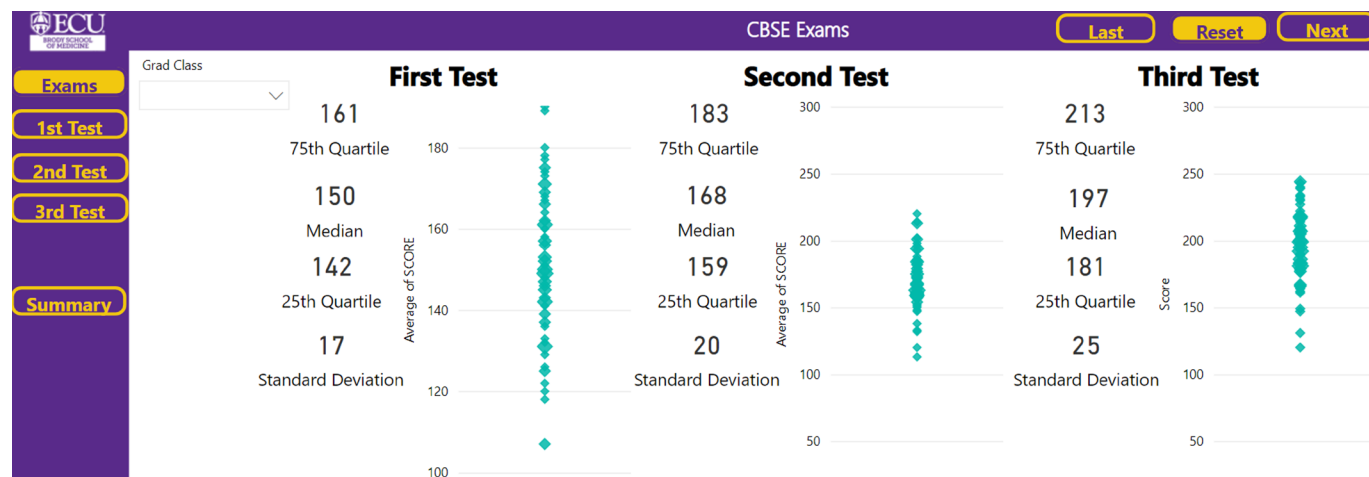
Digital Admissions Card

Report designed to digitalized candidate paper card used by admissions during the review process and to present candidate information to BSOM Admission Committees.

CBSE Comparison Report

Track student performance in 1st, 2nd, and 3rd attempt of NBME Comprehensive Basic Science Examination. Report assists with analysis of student performance across attempts and cohorts.

CCSE Progress Testing Report

Presents results and analytics on students' performance on the Comprehensive Clinical Skills exam. Results are compared with previous years and exam attempts from progression testing.

REPORTS & VISUALIZATIONS

Clinical Experiences Log

Report to review required observations and procedures students have completed in each clerkship. It optimizes the process of distributing information to clerkship directors and coordinators.

Matriculating Student Questionnaire (MSQ) Dashboard

Visualization to present annual and year to year trends of results from the AAMC MSQ.

Resident Readiness Survey Report

Presents results from the survey conducted by AAMC for residency program directors to assess residents after their first year.

Additional Projects

ODAS participates, collaborates, partners with, and supports other offices across BSOM on initiatives.

Admissions Demographics Data

Update and correct race and ethnicity, and citizenship records in Banner. Create crosswalk between WebAdmit and Banner integrations. Project aim to improve data quality of admission records in Banner.

Admissions Variable and Student Performance

Analyze a series of variables identified during the admissions process and determine correlations with academic peformance in the first block of the medical curriculum.

CCSE vs Step 2CK

Analysis to assist with intepretation of CCSE scores with correlation with Step 2 Clinical Knowledge prepareness.

Class Ranking Scenarios

Evaluate and identify effects of specified scenarios in proposed changed to class rankings calculations. Assistance requested by the Executive Curriculum Committee workgroup on student wellness.

Course Evaluations Pre-Post Pandemic

Assist with data collection of comments from course evaluation for research project aim to identify how the COVID-19 pandemic changed medical education and learning.

CSA Scoring Analysis

Analyze OSCE historical data to determine passing thresholds. It helps inform on score for remediation of OSCEs used to replace Step 2 Clinical Skills exam. Analysis was conducted for the OSCE Utilization Workgroup.

Additional Projects

Historical Faculty Evaluations

Extract, load, and transform data extracted from faculty evaluation collected in Qualtrics to store in the Operational Data Storage (ODS).

Mentoring Advice Program Survey Results

Report and analyze results of pre-post program surveys for the faculty mentoring program conducted by the Office of Faculty Affairs and Leadership Development at BSOM. Standardize instruments in Qualtrics to develop longitudinal reports and analytics on program outcomes.

NBME Historical Data Retrieval

Retrieve scores from NBME reporting sites and load records to expand historical records of exam results in MFASIS.

NBME Threshold Review Analysis

Review a series of thresholds to determine passing percentiles for NBME clerkship exams, evaluate each threshold's effect on passing exam results during the M3 year, and analyze correlations between NBME scores and Step 2 exams.

Student Satisfaction Survey

Assist with administration and reporting survey results to measure student satisfaction with various aspects of the medical curriculum and student services. Survey results used for BSOM response to LCME accreditation.

Student Seating Tracking

Create a form and process in REDCap to record student seating arrangements in course lectures. Data collected assisted with contact tracing tracking during the COVID-19 pandemic.

Presentation & Publications

ECU Analytics Development Community

Title: A way to manage survey data

Authors: Rehfeld, Otto, Smith, Jedediah S., Infante Linares, Jhojana L., Stroup, Scotty, Yeduri, Huma, Molina, Hector

Presenters: Rehfeld, Otto, Smith, Jedediah S., Infante Linares, Jhojana L.

Summary: Presentation on how the authors develop a way to manage data collected from surveys, import and transform survey data in centralized operational storage, demonstrate report examples, and recommend best practices.

2022 Love Data Week

Title: What is data analytics? Types, uses and examples

Authors: Infante Linares, Jhojana L., Rehfeld Otto, Smith, Jedediah S.

Presenters: Infante Linares, Jhojana L., Rehfeld Otto, Smith, Jedediah S.

Summary: The session defines data analytics and provides examples of how the Office of Data Analysis and Strategy utilizes data analytics in our day-to-day operations to support our medical education programs.

2022 AAMC Information Technology in Academic Medicine Conference

Title: Who's working on that request? Case study on the creation of a centralized data request process

Authors: Infante Linares Jhojana L., Smith, Jedediah S., Rehfeld Otto

Presenter(s): Smith, Jedediah S.

Summary: Beginning as an effort between IT and institutional planning offices, their cooperation catalyzed developing a centralized data request form and related processes. This poster reviews the impacts this one change had on areas like customer service, resources allocation, data governance, consultation services, and the development of other processes related to service/data requests.

Presentation & Publications

2022 AAMC Information Technology in Academic Medicine Conference

Title: Creating student clinical performance reports: wrangling data and processes

Authors: Smith, Jedediah S., Infante Linares Jhojana L., Rehfeld Otto

Presenter(s): Smith, Jedediah S.

Summary: In this poster, the Office of Data Analysis and Strategy at Brody School of Medicine describes the development of a suite of reports visualizing student clinical performance data. This project has several intended versions of reports tailored to meet each target audience's needs (administration, advisors, course/clerkshi p directors, and students). Points of discussion include successes and challenges our team experienced in these endeavors. Most notably, lessons from this case study underline the need to constantly work to design st andards for day

Title: Role of governance, standards, and vendor relationships in building data-informed medical schools*

Authors:Ahmed, Toufeeq, Becker Pauline, DiGiacobbe, Gia, Macfarlane Helen, Patton, Johnmarx, Russell Irina, Youm Julie

*Presenter: Smith, Jedediah S.

Summary: Presenter invited to discuss contributions from CAP data standards workgroup from AAMC MedBiquitous.

Campbell, K., Bright, C., Corral, I., Tumin D., Infante Linares J. L. (2022) Increasing Underrepresented Minority Students in Medical School: a Single-Institution Experience. Journal of Racial and Ethnic Health Disparities. https://doi.org/10.1007/s40615-022-01241-6

Our Team

Jhojana Infante Linares, Director
Master of Science Engineering Management

Mrs. Infante Linares has experience in data management, reporting, and analysis in various industries and has worked in higher education institutions for the past eight years.

In her current role, she supports the Brody School of Medicine in the development of an educational data warehouse and providing tools for data-driven decision-making and continuous process improvement.

Memberships: Association of Institutional Research, AAMC Group on Information Technology (Data Driven Academic Medical Centers workgroup), EDUCAUSE

Jedediah Smith, Data Analyst
Master of Science Instructional Design and Technology

Mr. Smith has worked with educational datasets and technologies throughout his two decades of experience in public education.

His current role is to assist the Brody School of Medicine in the analysis and visualization of data, mainly focused on supporting internal and external stakeholders with reporting, data management, and communication related to outcomes.

Memberships: AAMC Group on Information Technology (various workgroups), EDUCAUSE, AAMC MedBiquitous (CAP Data Standards Workgroup)

Otto Rehfeld, Data Entry Clerk
Bachelor of Science Information Technology

Mr. Otto Rehfeld has worked with data entry and management during his time in the Air Force and as a manufacturing manager for a board game company.

Currently, he assists Brody School of Medicine students, staff, and faculty by managing data entry and creating data visualizations to inform decision making.

Memberships: AAMC Group on Information Technology

Acknowledgements

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