

The Journey of Data Visualization and Dashboards to Support Effective and Data-Driven Planning

Stefanie Carter, Ed.D.

Courtney Hunt, PhD

Rachel Vaca-Lubischer, MSW, MPA

Erin Shirey, MPA

Carol Parker, Ph.D., MPH - Moderator

11/13/25



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Group on Business Affairs (GBA)
Group on Institutional Planning (GIP)
Joint Spring Meeting

Session Agenda

1. Introduction of presenters
2. Review session learning objectives
3. Overview of dashboards, data visualization, and their utility
4. Deep dive of panelist's institutions and their experiences with using data visualization and dashboards to support data-driven and effective planning
5. Group discussion and summary

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Presenters



Stefanie Carter
Dr. Kiran C. Patel
College of
Allopathic Medicine



Courtney Hunt
Houston Methodist
Academic Institute



Rachel Vaca-Lubischer
Creighton University
School of Medicine



Erin Shirey
Oakland University
William Beaumont
School of Medicine

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Session Learning Objectives

1. Understand the process for the development of metrics and data accuracy
2. Identify possible tools that can be used for data visualization to support strategic planning efforts
3. Examine common challenges with dashboard implementation and managing user feedback

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Dashboards and Data Visualization in Academic Medicine

Can support:

- Strategic Planning
- Accreditation
- Continuous Quality Improvement
- Institutional initiatives
- Other needs

Utility:

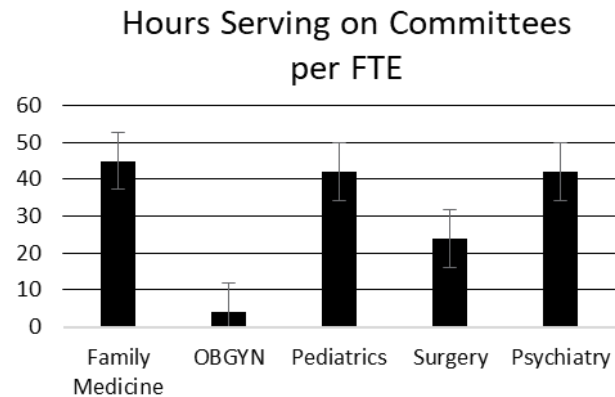
- Provides a visual snapshot of data or performance
- Distills information down, exhibiting a more digestible format beyond the narrative
- Can be shareable to leadership, stakeholders, or the public based on purpose

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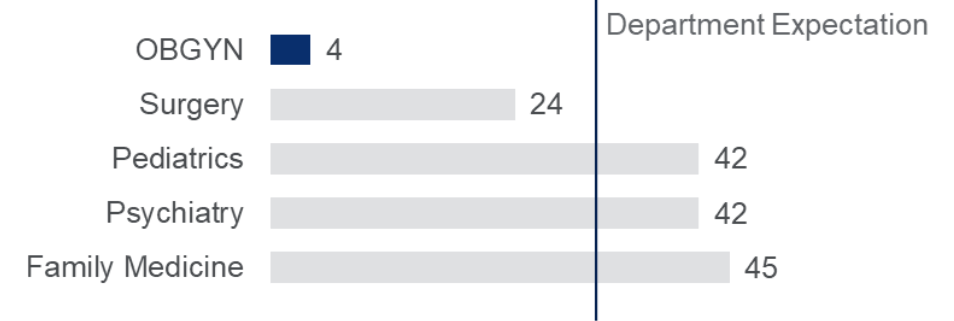
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Design data products for accessibility & utilization

- **Know your audience** - consider time, interest, data familiarity, and which data product might be best suited (dashboard, one-pager, presentation, etc.)
- **Know your message/purpose** - use data viz principals, such as color, size, and order, to provide clarity on the primary takeaway
- **Know your resources** - consider the data, time, software, and skill sets already available to you



OBGYN averaged **4 Committee Hours** per FTE,
13% of the 31-hour Department Expectation



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Questions for the audience to get us started:

1. Do you use data visualization to support work at your institution?
2. Do you have a dedicated person or office that is responsible for data visualization?

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Creighton University School of Medicine

Rachel Vaca-Lubischer, MSW, MPA
Office of Accreditation and Quality Improvement
Program Evaluation Analyst

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Creighton University School of Medicine

Private, Jesuit Catholic institution

Two campuses (Omaha & Phoenix)

Multiple Health System Partners

900+ full-time faculty (mostly Health System employed) and 1250+ contributed service faculty

250 medical students matriculate per year

Office of Accreditation & Quality Improvement



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Choose tool for your audience, message, resources



Accreditation
Accreditation Dashboard



Strategic Planning
Chair Financial and FTE
Reports



Quality Improvement
Faculty Evaluation
Results



Program Evaluation
Remediated Student
Analysis

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Pros and Cons

Tool	Pros	Cons
 Tableau	• User-friendly access to large amounts of data • Creighton Tableau Server (version management; website access; high access control) • University shift to dashboards • Highly customizable	• Limited user access due to license costs • Comfortability curve • Timely delay in data refresh/data sourcing
 Microsoft Suite	• High familiarity among faculty and staff • Ease of use • Connection between Microsoft Suite Applications	• Limited dashboarding capability • Limited speed with large amounts of data

Faculty Promotion Guide

Creighton University School of Medicine

Step 1: Select Department

Step 2: Select Faculty

Dr. Jane Smith

Department: Surgery
Rank: Associate Professor (1-1-2020)
Tenure: On Tenure Track (2-2-2021)

Scholarly Performance

Publications 4

Service Performance

Committee Hours 100

Teaching Performance

Teaching Hours 100

Promotion to Professor Guidelines

Department Type: Clinical
Rank Promotion: Promotion to Professor
Tenure Status Required: Tenure or On Tenure Track

Scholarly Performance

Guideline

Service Performance

Guideline

Teaching Performance

Guideline

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Houston Methodist Academic Institute

Courtney Hunt, PhD
Program Director, Strategic Initiatives

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Houston Methodist Academic Institute



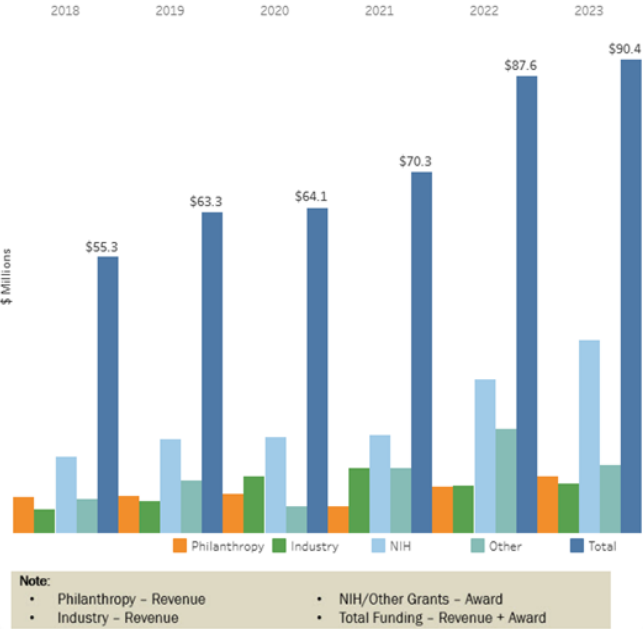
842	Faculty
2,570	Credentialed Researchers
758	Graduates and Post-docs
76	GME Programs
41,100	Learners
760	Active Clinical Trials
1,135	Active Clinical Studies
662,000	Sq.ft. Dedicated Research Space
2,150	Peer-reviewed Publications
TOP 25	U.S. domestic hospital-based research institutes
\$126M	Annual extramural funding
\$337M	Annual Research & Education Expenditures
19	Research Centers and Programs
19	Interdisciplinary departments

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Dashboards for Different Business Needs

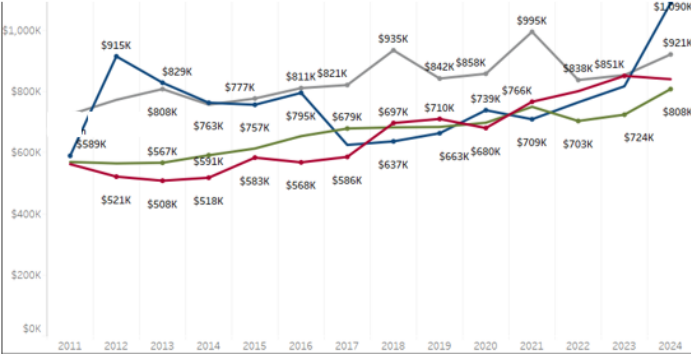
Static Annual Report

Extramural Funding By Source (\$90.4M)



Benchmarking

NIH \$ per PI



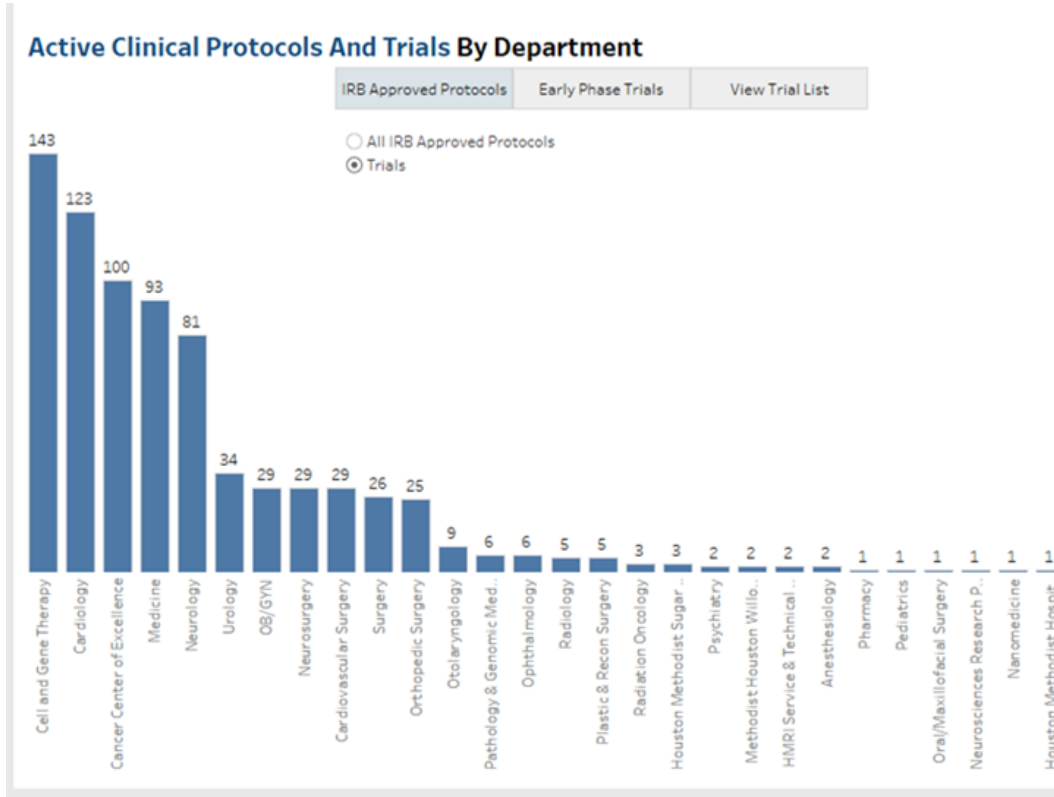
Strategic Plan Progress (New!)



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Example: Clinical Trials Dashboard



What is the question?

- Define metrics
- Engage stakeholders
 - Alignment on definition
- Design and Build Dashboard
- Validate Data

Does the dashboard answer the question at a glance?

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HMAI: Dashboard Tools

Tool	Pros	Cons
 Tableau	• Used throughout HM system • Leaders accustomed to Tableau • Central support • Some dashboards automated	• Centrally administered ○ Bandwidth ○ Less flexibility
 Clearpoint	• Self-managed • Highly customizable • Cascadable • Easily build reports • Can auto-request data updates	• Subscription service • Learning curve

Oakland University William Beaumont School of Medicine

Erin Shirey, MPA
Director of Planning, Strategy, and Partnerships

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Oakland University William Beaumont School of Medicine

Partnership: Oakland University and William Beaumont Hospital (*now Corewell Health*)

Primary Locations: Oakland University- Rochester, MI, Corewell Health William Beaumont University Hospital- Royal Oak, MI, Corewell Health Beaumont Troy Hospital - Troy, MI

Clinical Faculty: >1500

Basic Science Faculty: 40

Applicants (*as of 11/3/25*): 8,481

Annual Incoming Class Size: 125

Total Graduates (*through 2025*): 1,127

Residency Matches (*2025*): 38% MI, 16% at Corewell Health, 42% in Primary Care



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OUWB: Dashboard and Data Visualization to Support Strategic Planning

2026-30 Strategic Plan

Mission

To develop compassionate physicians who are dedicated to improving the health of their communities, collaboration, and lifelong learning.



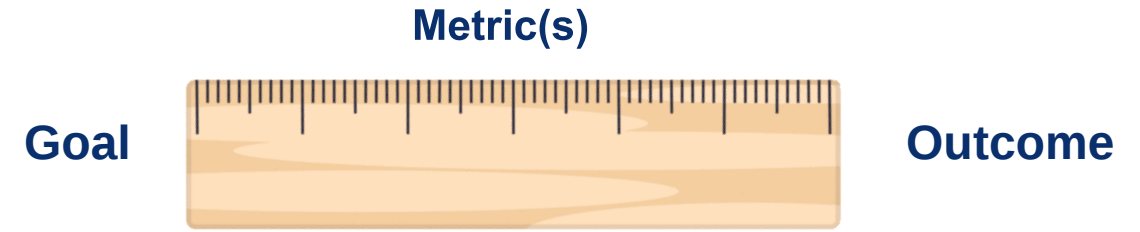
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OUWB: Strategic-Aligned Metric Development

Always keep the **outcome** and **end goal** in mind:

1. What is our intended outcome(s) of these efforts/what are we trying to achieve?
2. How do we measure if we have met or are making progress towards our outcome(s)?
3. What data is available? If not, what data would need to be collection?



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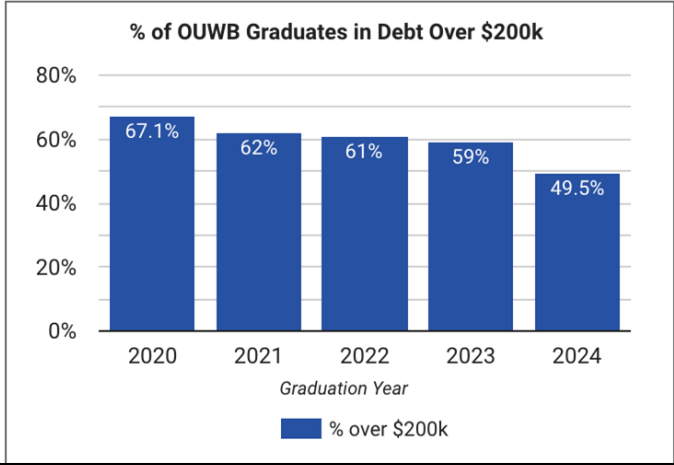
OUWB: Dashboard Tools

Tool:	Pros:	Cons:
 Sheets	• Free with University's Google platform • Easily linked to drive data visualization in Looker Studio • Limited training required	• Manually maintained data
 Looker Studio	• Free with University's Google platform • Links to Google Sheets to drive visualization • Ability to easily share with others as needed	• Platform is inflexible for certain utilities • Visualization of updates from Google Sheets can be slow • There is a learning curve to build your dashboard

OUWB: Making Data-Driven Decisions

Goal Area: Education						
Goal 5: Address the physician shortage in Michigan						
Strategy E.5.1: Assist in addressing the physician shortages and healthcare specialty needs that are relevant to the state of Michigan						
Outcome ▾	Metric	Current Year- 2025 Grads	Previous Year- 2024 Grads	Current Year vs Previous Year	Internal Goal	Current Year vs Internal Goal
Increased matriculation of Michigan resident students	Matriculating MI resident students	51%	50%	✓	50.00%	✓
Increased match rates at Corewell Health and within Michigan	Michigan Match Rate	38%	32%	✓	33.00%	✓
Increased match rates at Corewell Health and within Michigan	Corewell Health Match Rate	16%	16%	—	15.00%	✓
Key: ✓ Positive Change/Goal or Benchmark Met. ▼ Negative Change/ Goal or Benchmark Unmet. — No Change						

Goal Area: Stewardship
Goal 1: Decrease OUWB student median debt



Goal Area: Community Engagement				
Goal 1: Ensure OUWB’s infrastructure fosters and supports a climate of community engagement and service				
Strategy # ▲	Strategy	Outcome	Deadline	Status
CE.1.5	Expand support of community-based research efforts	Refined and communicated processes	null	End
CE.1.6	Establish a process to clearly define community engagement relationships	Implement and communicate definitions to stakeholders	Jan 31, 2024	Complete

Dr. Kiran C Patel College of Allopathic Medicine Nova Southeastern University

**Stefanie Carter, Ed.D.
Interim Assistant Dean, Faculty Affairs and Faculty Development
Associate Professor, Medical Education**

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NSU MD

DR. KIRAN C. PATEL

COLLEGE OF ALLOPATHIC MEDICINE

2025-26 Admissions Stats & Residency Match Results



511



Median
MCAT

3.75



Overall
Science GPA

3.79



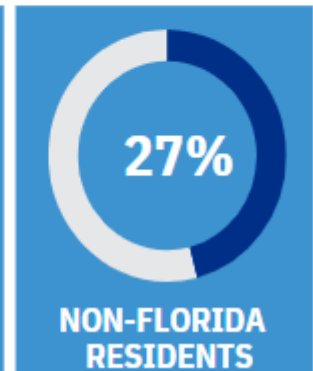
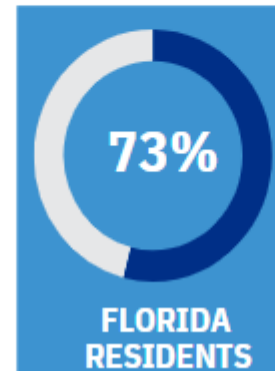
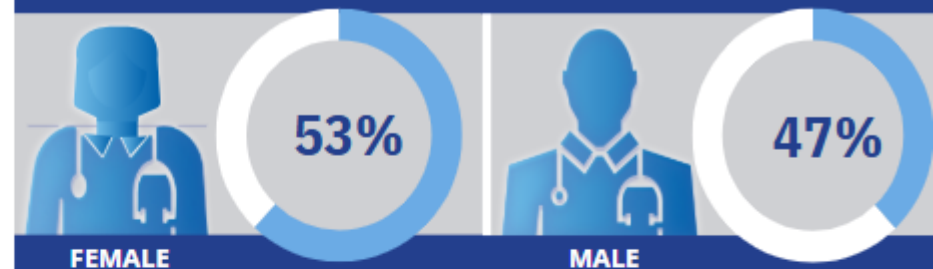
Overall
Median GPA

DUAL PROGRAMS

MD/OMFS , MD/MBA

DUAL ADMIT BS/MD

2+4, 3+4, 4+4



3,314
Applications
395
Interviews
67
Class Size

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How NSU MD Uses Dashboards/Data Visualization

- Strategic Planning
- Assessment
- Accreditation
- Continuous Quality Improvement
- Assessment



- Identify trends in faculty recruitment, retention, mission productivity.
- Analyze faculty & student performance
- Visualize financial data to optimize funding strategies
- Monitor institutional goals and benchmarks for long-term goal planning
- Analyze student performance trends
- Monitor student feedback and course evaluations
- Monitor curricular performance & Learning Outcomes

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Tools Used By NSU MD for Dashboards/Data Visualization

Tool	Pros	Cons
	• Accreditation reporting • Faculty data • Customizable • Workflow tool	• \$ - Costly • Requires administrator • IT set up support
	• Self-managed • Familiar to use • Included subscription from central	• Manual processes
	• Highly customizable • Student assessment data • Course calendar • Easily build reports	• \$ - Costly • Requires administrator • IT set up support

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Snapshots of Dashboards/Data Visualization



Faculty Activity Reporting (FAR module)

NSU

Dr. Kiran C. Patel College of Allopathic Medicine
NOVA SOUTHEASTERN UNIVERSITY

Florida

Stefanie Carter

Quicklinks

Home

Your Packets

Faculty180

Announcements & Help

Profile

Activities

Forms & Reports

Vitas & Biosketches

Find Colleagues

Account Access

Administration

Annual Review, Merit & Promotion, and Continuing Contract

Cases

Templates

Administration

Reports

Users & Groups

Reports

Activity Reports

Profile Report

Activity Input Report

Scholarly Activities

Grants

Courses Taught

Activities By Activity Classification

Administrative Reports

Ad Hoc Reports

Activity Overview - By Faculty

Activity Overview - By Semester

Faculty Classifications

Scholarly Citations

Grant Citations

Standard Vitas

Course Attachments

Prior Activity Input Forms

LCME: 2023-2024

Generate your Sisense report

REQUEST REPORT

LCME: Table 4.2-1

Departmental and faculty productivity in publications, grants, and other forms of peer-reviewed scholarship.

Review, Promotion, Tenure (RPT module)

NSU MD

Reports & Logs

Case Information

Forms

Voting Results

Search

Filter

UNIT

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☐ NSU MD

☐ Department of Medical Education

☐ Department of Population Health Sciences

☐ Department of Clinical Sciences

☐ Division of Obstetrics and Gynecology

226

226

211

8

6

1

TEMPLATE

☐ Annual Review

☐ Peer Review for Continuing Contract

☐ Promotion Review

☐ Annual Review - Department Chair

184

23

15

4

STATUS

☐ Case Complete

☐ Case is with Candidate

☐ Under Review by Department

☐ Duplicate

☐ duplicate

☐ Retired

173

7

6

2

2

1

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Snapshots of Dashboards/Data Visualization



emedley eI

Student Snapshot

CLINICAL DIDACTIC EVALUATIONS ADMINISTRATION INTELLIGENCE

March 31, 2023 - August 31, 2023
Stefanie Carter, Ed.D.

Student Name

Christina Bedley

Student Number

Email

Cohort

DOB

Grade Level

Admission Year

[Open Profile](#)
[Open CV](#)

Residency Specialty Declarations

MS1 (PI)	Primary Specialty Parallel Path Specialty	Obstetrics and Gynecology Internal Medicine Urology
MS2 (Research/SDS)	Primary Specialty Parallel Path Specialty	Obstetrics and Gynecology Combined Internal Medicine & Pediatrics Family Medicine
MS3 (HSSACS)	Primary Specialty Parallel Path Specialty	Obstetrics and Gynecology Family Medicine Psychiatry
MS4 (Yr 4 Planning)	Primary Specialty Parallel Path Specialty	- -
Final (Post Step 2)	Primary Specialty Parallel Path Specialty	- -

Match
This student does not currently have any match information.

Extensions, Leaves, Gaps, or Breaks

Advising

Advising Team

Role	Advisor	E-Mail Address
M1 Advisor		
M2 Advisor	Carter, Ed.D., Stefanie	rstefani@nova.edu
M3 Advisor		
M4 Advisor		

SPAC Referrals
+ New SPAC Referral

No data found.

PAIR Forms

Aug 19, 2024
Date: 08/19/2024
Type: Accolade
Description:

Advisor Log

Advisor Name

Sep 20, 2023 at 8:25pm

Advisor comments displayed

Reply

Advisor Name

Sep 21, 2023 at 1:26pm

Advisor comments displayed

Reply

Advisor Name

Nov 13, 2023 at 2:16pm

Advisor comments displayed

Reply

Post a new comment

Type comment here...

Academic Probations

+ New Probation

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Snapshots of Dashboards/Data Visualization



Microsoft Forms

- Collect data from stakeholders

PowerPoint

- Display data

Sharepoint

- Collaborate and share data

Word

- Basic reporting

Excel

- Analyze and share data

OneNote

- Collaborate and track ideas

Power BI

- Dashboard

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Questions for the Panelists?



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Key Takeaways

- Always keep the **outcome** and **end goal** in mind
- Involve your stakeholders early and often
- Measure what matters
- Choose tool based on audience, message, and resources
- Design data products for accessibility and utilization
- Know your limits (i.e. resources, bandwidth, and data availability)

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Contact Information



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