MAYO CLINIC

FROM NUMBERS TO NARRATIVES: WHY DATA NEEDS A STORY

A DATA STORYTELLING WORKSHOP

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Data storytelling

Structured approach for communicating data insights using narrative elements and explanatory visuals.

Data Story Steps

Through this process, we transition from data discovery (finding insights) to data communication (explaining to an audience)

Dashboards for story framing → **Data stories for impactful communications**

Asking the right questions

Problem: Students are dropping out due to burnout.

Good Basic Awareness	**Better** Context & Evaluation	**Best** Action-Oriented & Goal-Centered
How many students reported burnout last semester? How does the drop out rate last semester compare to the prior year?	Which classes had the highest dropout rates due to burnout each semester for the past 3 years? Which year of study has the highest drop out rate due to burnout?	Which class combinations correlate most with drops due to burnout? How have burnout mitigation strategies affected drop out rates over the past year?
Focused on **describing the data** as a starting point but is limited for decision-making.	Moves toward **understanding context, patterns, and data quality**.	Aims for **actionable insights and application to practice**, connecting data to decisions to improved outcomes.

Case study: Actionable insights that matter (10 minutes)

Objective: Practice asking better questions that lead to meaningful and actionable insights.

A. Context Brief

- Medical students are already using generative AI. Faculty express concern
- Leadership must decide whether to formally integrate AI literacy into the Medical Education curriculum

B. Scenario

- Imagine you are given 5 minutes at a curriculum planning committee meeting
- Audience: Medical School curriculum committee
- Goal: Help decide whether to invest in formal AI literacy training for medical students

C. Assignment

- Review **Context Brief** and **Scenario**
- Write 3 to 5 questions to guide your analysis on the post-it notes provided

- Review the **Sample Story Points** worksheet for potential story points

Sample Story Points

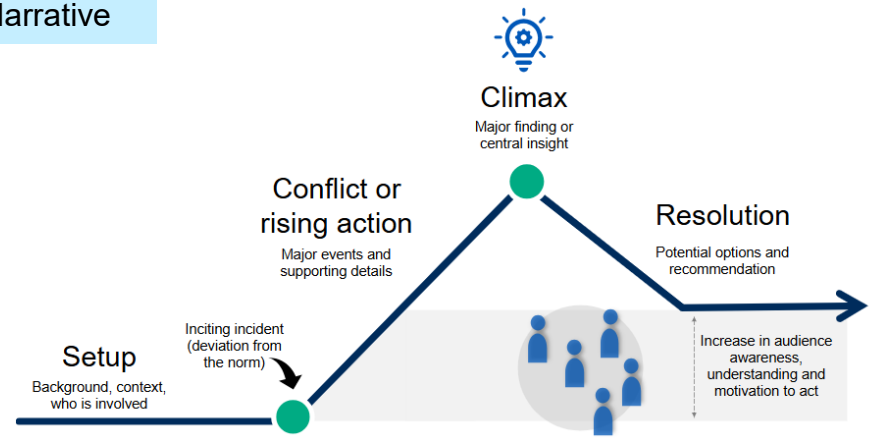
Adoption	Desire
78.9% of medical students report using generative AI[6] 53% use it weekly[6] (n=167)	93.8% favor structured AI training[2] (n=3018)
AI used primarily for learning support (review, summaries, practice questions)[6] (n=165)	355 out of 388 (91.5%) agreed training in AI would be useful for their future.[2]
29% of faculty and 38% of students report that they don't use Gen AI tools.[5] (Student n=506; Faculty n= 68)	92.8% of respondents are willing to learn how to use Gen AI for practice integration in the future[6] (n=165)
School Readiness	**Demand & Need**
93% of osteopathic medical schools in the U.S. do not have established AI policies.[4]	67% of faculty concerned about reliability but only 15% of students share this concern[5]

Craft your narrative (15 minutes)

Medical students are already using generative AI. Faculty express concern. Leadership must decide:

Should AI Literacy be formally integrated into Medical Education?

A. Narrative



1. **Clarify your target audience:** What are their needs and interests?
2. **Identify your story climax:** What is the major finding or central insight? Your “aha” moment.
3. **Determine setup and inciting incident:**
   - What background info is important for the audience to understand.
   - Why is this important now?
4. **Connect inciting incident to climax:** What rising action or supportive details are needed?
5. **Identify recommendations or info needed** to inform decision-making.
6. **Remove non-essential info:** What can be removed from the main story and added to an appendix?

B. Visuals

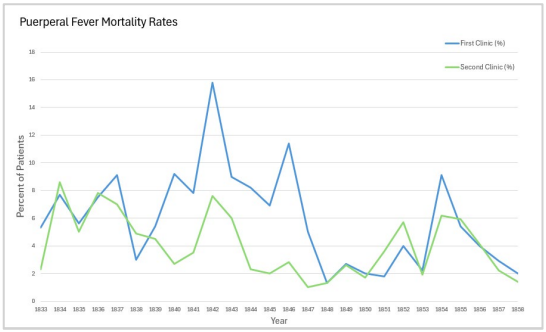
1. Identify the right metric

- Totals
- Unique count
- Calculated metric/rate
- Percentage change
- Difference or variance

Handwashing improved mortality rate by >50%

2. Select the right chart

- Bar/column chart - comparison
- Line chart – trends
- Pie/donut, tree map - composition
- Scatter Plot– relationships
- Pareto chart – vital few



3. Enhance with visual design & narrative elements

- Reduce clutter
- Intentional color use
- Arrows, lines, icons
- Headings
- Annotations & call outs