Final Thoughts & Reflection

Building this ER dashboard was a great reminder that **clarity beats complexity**. Turning messy, fast-moving ED data into a simple story—*when pressure builds, where flow stalls, and what to fix first*—made the work feel useful, not just analytical.

What mattered most. The linchpin wasn't a fancy model; it was **clean definitions** (e.g., Registration vs. Arrival as the start of wait), a tidy **star schema**, and a handful of **trustworthy KPIs**. Once those were solid, patterns snapped into focus: predictable daily/hourly peaks, a 50/50 admission split that explains boarding, and a referral mix that begs for standardized pathways.

Surprises.

- The **stability of peak windows** was striking—perfect for demand-shaped staffing.
- Small operational nudges (Provider-in-Triage, quick registration, fast-track x-ray slots) likely move the needle **more than** new dashboards ever could.
- **Communication** matters: perceived wait drops when patients see progress and get simple updates.
- The size of the **"Declined"** demographic bucket isn't just a data issue; it's a **trust** and **access** issue.

What I'd do differently next time.

- Lock metric definitions with stakeholders **before** design starts.
- Pull **inpatient bed/boarding timestamps** in v1 (not v2), since downstream capacity quietly drives front-door waits.
- Ship a **mobile huddle view** on day one; it keeps the conversation grounded in the work.
- Stand up a tiny **data quality page** (missingness, outliers) to stop debates about the numbers early.

Skills I strengthened. Modeling in Power Query/DAX, designing accessible visuals in a calm blue theme, writing plain-English tooltips, and structuring a README that doubles as a lightweight **data dictionary** and **governance guide**.

Ethics & equity. Healthcare data is personal. De-identification, least-privilege access, and careful language aren't "extras"—they're table stakes. I also want to keep an eye on **equity**

(are waits systematically different by language, age, or race?) and make sure improvements help everyone.

What success looks like. Not a prettier report, but **fewer minutes waiting**, **more patients seen on time**, and **fewer boarded admissions**—tracked with control charts so we can tell real improvement from noise.

What's next. I'd love to run a 90-day PDSA cycle around the recommendations: PIT + Fast Track + demand-shaped staffing + diagnostics SLAs + inpatient huddles. Then layer in **arrival forecasting** and **what-if staffing overlays**, only after the basics are reliably in place.

In short: this was a fun, meaningful project to build—and even more exciting to *use*. The data already tells us where to push; now it's about partnering with the floor to turn those signals into smoother flow and better patient experiences.