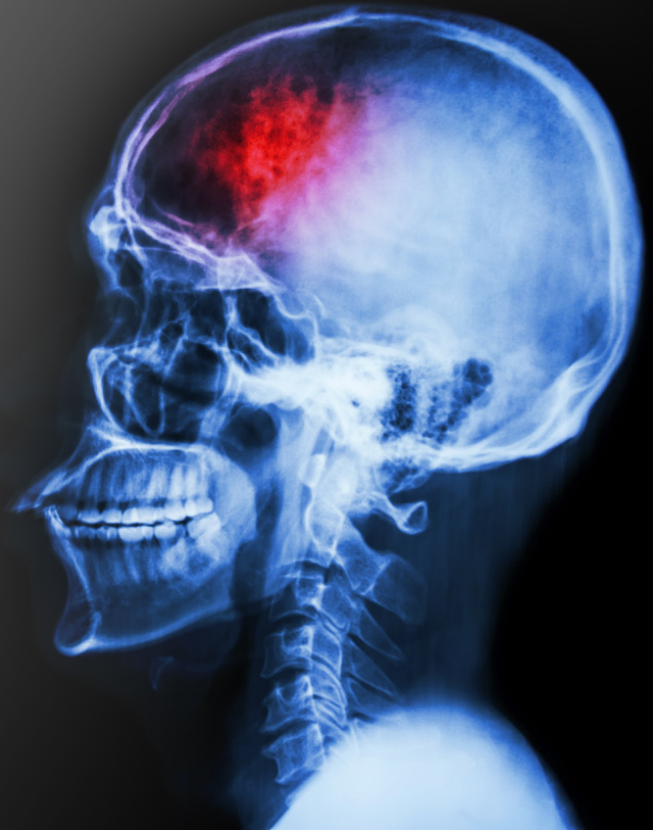# MDmetrix

CASE STUDY

An ED Confronted Racial Disparities in Stroke Care

"I didn't know that our Black patients were receiving tPA more slowly until we used MDmetrix. Our data opened our eyes, and we took action."

Medical Director, Emergency Medicine

THE CHALLENGE

An Emergency Department took pride in the quality of its stroke care, with an average arrival-to-tPA time that met key national benchmarks. But, the ED's leadership lacked any practical way to look beneath the aggregate performance of their system of care, as they raced to serve a wave of Covid-19 patients.

Hidden behind the ED's "average" tPA delivery time, however, Black patients were receiving tPA more slowly than other patients – a stark disparity in care.

How could an ED team with a deep commitment to Healthcare Equity find and address this troubling inequity in care?

FOR MORE INFORMATION, CONTACT US

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THE SOLUTION

MDmetrix's Mission Control Center was introduced as a self-service clinical performance platform. This empowered clinical leaders to dive into key quality measures, easily beaking down metrics by subgroups including race, ethnicity, language, and gender. Now, they could look across their patients to quickly find variance in care.

Stroke Patients
1,000

ANALYSIS

Over 1,000 stroke patients from 160,000 ED visits, assessed by clinical leaders in just minutes.

Time-to-tPA Disparity
20 MIN

INSIGHT

Racial inequity identified: Black patients took 20 minutes longer than white patients to receive tPA.

THE DETAILS

A clinical leader wanted to ask two simple questions: "What is our door to tPA time for stroke patients?" And, "Is our tPA time the same across racial groups?".

Before MDmetrix, this leader waited months for his regular "dashboard" reports for metrics like "time-to-tPA." Probing beneath the surface of these reports was simply impractical: manual analysis would require technical resources and free time that were out of reach, especially during Covid-19.

Now, in just two minutes, this clinical leader was able to surface his ED's average tPA time of 33 minutes, using MDmetrix. And, he easily determined that his ED's tPA performance was stable despite a Covid surge, using MDmetrix's artificial intelligence.

In just seconds more, the clinical leader probed beneath the surface – self-serve, on-the-fly. Viewing time-to-tPA by race, he was alarmed to discover an equity gap: Black patients took 49 minutes to recieve their tPA treatment, compared to 29 minutes for white patients.

Diving deeper, this leader used MDmetrix to quickly break down metrics for subsytems across the ED's stroke workflow, including time-to-bed, time-to-physician, time-to-CT. With time disparities piling up across this workflow, he could now measure the breakdowns causing the overall disparity he had discovered: 5 minutes longer for Black patients to reach a bed, 6 minutes longer to see a physician, 13 minutes longer for a head CT, resulting in a 20 minute overall disparity.

Armed with these actionable insights, the clinical leader moved rapidly. Within 30 days, his team had addressed their tPA sub-processes and successfully closed the time-to-tPA gap faced by Black patients.

49 MIN **Time-to-tPA for Black Patients**	**29** MIN **Time-to-tPA for White Patients**
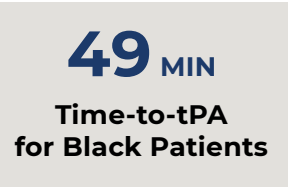
There is no quality without equity.

THE BENEFITS

- **Improve Patient Outcomes**
  Delivering equitable care is essential to ensuring that all patients can achieve their best possible outcomes.

- **Diagnose Healthcare Inequities**
  Assessing care and outcomes across subgroups is critical for any quality system, with clinical leaders identifying and addressing disparities across race, ethnicity, gender, language, and other demographies.

- **Understand Critical Subsystems**
  Understanding equity gaps in subsystems is essential for real, sustainable improvements in patient care.

- **Address Disparities In Care**
  Managing equity in care processes is not a one-time event – like all aspects of quality, equity has to be actively monitored, evaluated, and managed.

20 MIN
**DISPARITY GAP
CLOSED**

RESULT

Historically 49 minutes for Black patients to receive tPA for stroke, now 29 minutes. tPA disparity resolved.

10%
**SYSTEM
IMPROVEMENT**

RESULT

Addressing disparity improved overall system. Aggregate time-to-tPA dropped by 3 minutes.