OUR PATIENTS OUR PEOPLE OUR STEWARDSHIP

PINEVILLE RESPONSE CONFIGURATION UPDATE

February 2024

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OVERVIEW

- Why: Appropriate resource allocation & patient prioritization
- What: Resource type, mode, and time targets
- When: Effective April 17, 2023
- Who: Collaborative project under guidance of Medical Direction
  - Medic Agency Board of Commissioners/Medical Control Board
  - Charlotte Fire Department
  - Mecklenburg County Fire Departments/ETJs
  - Charlotte-Mecklenburg Police Departments
  - County law enforcement agencies

PUBLIC OUTREACH PRE-LAUNCH

- 16 formal meetings/presentations (all county districts)
- Traditional media & paid social media campaign
- Public resource website w/ language translation feature
- Promotional partnerships with Mecklenburg County, towns/city government, first responder partners, and the Charlotte-Mecklenburg Community Relations team (bilingual outreach)
- Ongoing focus of 911 education

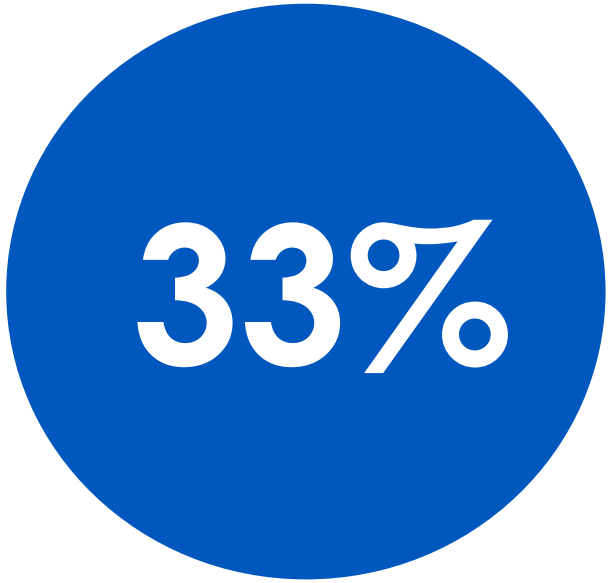
PREDICTIONS

- No adverse impact to patient outcomes
- Improved resource alignment based on patient condition
- Reduction of lights and sirens responses
- Reduction of traffic accidents
- Reduction of first responder volume

CHANGES POST-LAUNCH

- Maintained feedback mechanism with first responders and employees
  - Resulted in updates to Standard Operating Guidelines
- Re-classified 6 call types to a higher priority response
  - Modified 32 sub-determinants
- Discontinued practice of dispatching an ambulance prior to understanding patient's condition
- Data management

IMPACT: Medic involved traffic accidents



33% reduction in Medic-involved traffic accidents responding with lights and sirens (**2.25 average per month** pre-response configuration vs. **1.5 per month** post-response configuration)

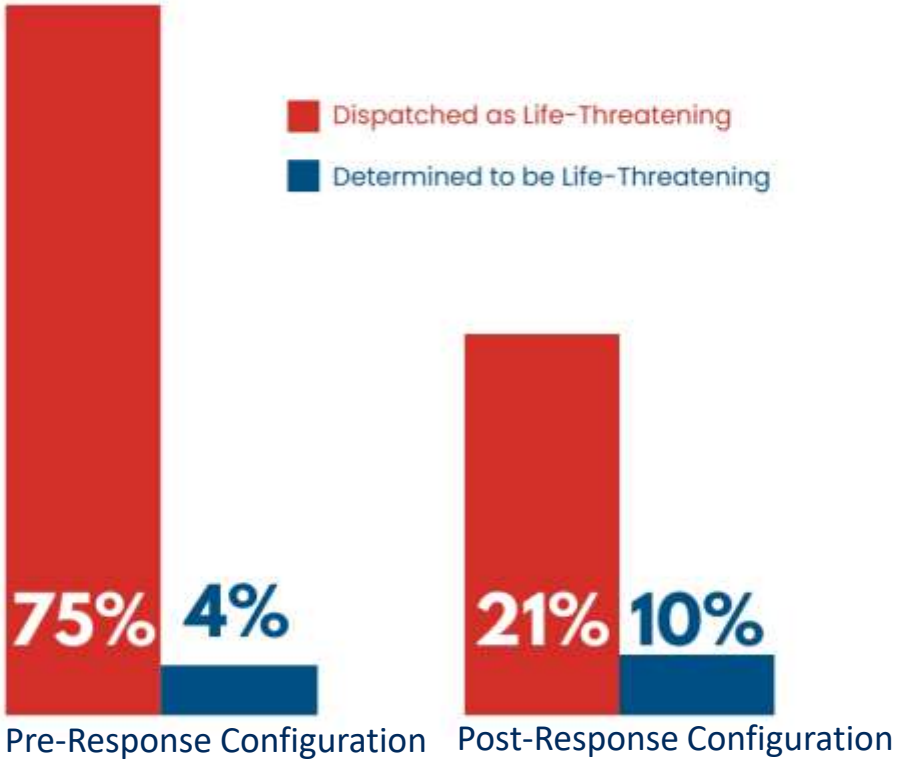
Medic does not have access to first responder data regarding lights & sirens responses or traffic accidents

Data compares Pre-Response Configuration April 2022-March 2023 vs. May 2023-December 2023

IMPACT: Medic Lights & Sirens Responses & Transports

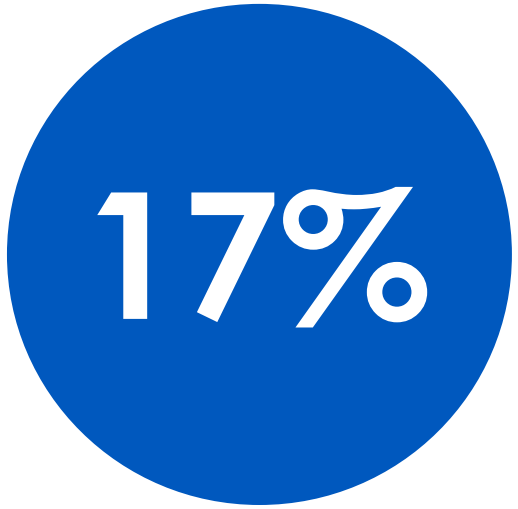
- Pre-response configuration, Medic responded to **9,506** 911 calls with lights & sirens on average per month vs **2,772** per month post-response configuration; a reduction of **71%**

Prediction: 72%



Data compares Pre-Response Configuration April 2022-March 2023 vs. May 2023-December 2023

IMPACT: First Responder Volume & scene times



A seventeen percent decrease of the number of EMS 911 calls fire departments responded to countywide

Prediction: 10%

One minute and 18 second increase to the amount of time fire departments were on scene for EMS 911 calls countywide

Prediction: ≤ 0:02:00

Volume Data includes May-Dec 2022 vs. May-Dec 2023

Scene Time Data compares Pre-Response Configuration April 2022-March 2023 vs. May 2023-December 2023

Data includes county first responders only; Medic does not have access to Charlotte Fire Department data

IMPACT: First Responder Scene Time

Department	Pre Config (Apr 22- Mar 23)	Post Config (May-Dec 2023)	Change
Carolina	0:15:43	0:17:35	0:01:52
Cooks	0:16:40	0:20:09	0:03:28
Cornelius	0:15:17	0:16:50	0:01:32
Davidson	0:17:26	0:18:52	0:01:26
Huntersville	0:14:27	0:15:13	0:00:45
Idlewild	0:18:38	0:20:54	0:02:15
Long Creek	0:17:37	0:17:33	-00:00:04
Matthews	0:17:00	0:18:53	0:01:53
Mint Hill	0:19:15	0:21:02	0:01:47
Pineville	**0:14:57**	**0:17:03**	**0:02:06**
Robinson	0:17:07	0:17:56	0:00:49
Steele Creek	0:20:04	0:18:47	-00:01:18
West Meck	0:17:30	0:18:14	0:00:44
Overall	**0:16:36**	**0:17:54**	**0:01:18**

Each county fire department is impacted differently due to call volume affecting sample size

IMPACT: Call Volume

Volume Change Pre/Post Config						
	Total	Total EMS	Total Fire	Total Arrival	Total EMS Arrival	Total Fire Arrival
Carolina	-18%	-18%	-20%	-21%	-19%	-28%
Cooks	-7%	-16%	10%	-6%	-13%	10%
Cornelius	-12%	-23%	4%	-14%	-22%	-1%
Davidson	-4%	-16%	11%	-9%	-15%	2%
Huntersville	-9%	-15%	7%	-9%	-13%	3%
Idlewild	-21%	-24%	-18%	-21%	-23%	-14%
Long Creek	-9%	-16%	15%	-10%	-17%	18%
Matthews	-13%	-17%	-4%	-15%	-18%	-12%
Mint Hill	-9%	-10%	-8%	-12%	-13%	-11%
Pineville	**-17%**	**-20%**	**-9%**	**-16%**	**-19%**	**-6%**
Robinson	-16%	-20%	-8%	-16%	-22%	8%
Steele Creek	-6%	0%	-16%	-4%	1%	-18%
West Meck	-8%	-16%	15%	-12%	-17%	7%
Total	-11%	-16%	-2%	-13%	-16%	-4%

Each county fire department is impacted differently due to call volume affecting sample size

IMPACT: Call volume

Predicted vs Actual Call Volume Percentages							
Response Time Standard	**10:59**	**15:00**	**30:00**	**60:00**	**90:00**	**ON/OP/OC**	**FROR**
% of call volume pre-change	20%	48%	0%	23%	1%	2%	6%
Predicted % of call volume	19%	18%	25%	10%	.1%	9%	19%
Actual % of call volume post change May 2023-Dec 2023	21%	31% (13% no FR)	21% (11% no FR)	14%	1%	<1%	12%

ON=Omega Nurse Line, OP = Poison Control, OC = Behavioral Health Crisis Line, FROR=First Responder Only Responses

IMPACT: First Responder Only Responses

Pre Response Configuration April 22 to March 23	Total Count FROR	% With Medic Dispatched
CFD FROR	9013	55%
County Fire FROR	0	0%
Post Response Configuration May 23 to Dec 23	**Total Count FROR**	**% With Medic Dispatched**
CFD	9299	41%
Carolina	23	28%
Cooks	40	35%
Cornelius	196	25%
Davidson	91	25%
Huntersville	489	24%
Idlewild	164	30%
Long Creek	57	30%
Matthews	256	33%
Mint Hill	168	29%
Pineville	**231**	**31%**
Robinson	80	16%
Steele Creek	125	0%
West Meck	78	7%
Total	**11297**	**39%**

Morbidity

Is Medic appropriately treating patients with the most serious conditions?

Mortality

Has the rate of mortality increased?

CLINICAL IMPACT: Low acuity responses resulting in a high priority transport

PRE-RESPONSE CONFIGURATION APRIL 2022-MARCH 2023	
Total Transported P1	244
Total Low Acuity Calls	39,623
% Low Acuity That Go P1	.6%

POST-RESPONSE CONFIGURATION MAY-DECEMBER 2023	
Total Transported P1	424
Total Low Acuity Calls	43,399
% Low Acuity That Go P1	.98%

- 911 calls categorized as non-life threatening that resulted in a high priority response happened .98% of the time after Response Configuration launch, which is ***better than predicted***.

P1 = Priority one; life-threatening calls

Low acuity = Non-life-threatening calls

CLINICAL IMPACT: Cardiac Arrests

Month	Total Cases	Total ROSC
May 2022	78	27
June 2022	72	27
July 2022	75	22
Aug 2022	60	18
Sep 2022	82	26
Oct 2022	74	22
Nov 2022	87	31
Dec 2022	97	25
Total	**625**	**198**

Month	Total Cases	Total ROSC
May 2023	71	27
June 2023	74	26
July 2023	71	27
Aug 2023	75	27
Sep 2023	91	29
Oct 2023	59	23
Nov 2023	79	29
Dec 2023	81	28
Total	**601**	**216**

Medic achieved ROSC **36%** of the time post-response configuration changes vs. **32%** pre-response configuration. Medic continues to perform well above the national average of **27%**

National data sourced from the Cardiac Arrest Registry to Enhance Survival (CARES) 2022

ROSC = Return of Spontaneous Circulation; the percentage of time there is a restart of a sustained heart rhythm after a cardiac arrest

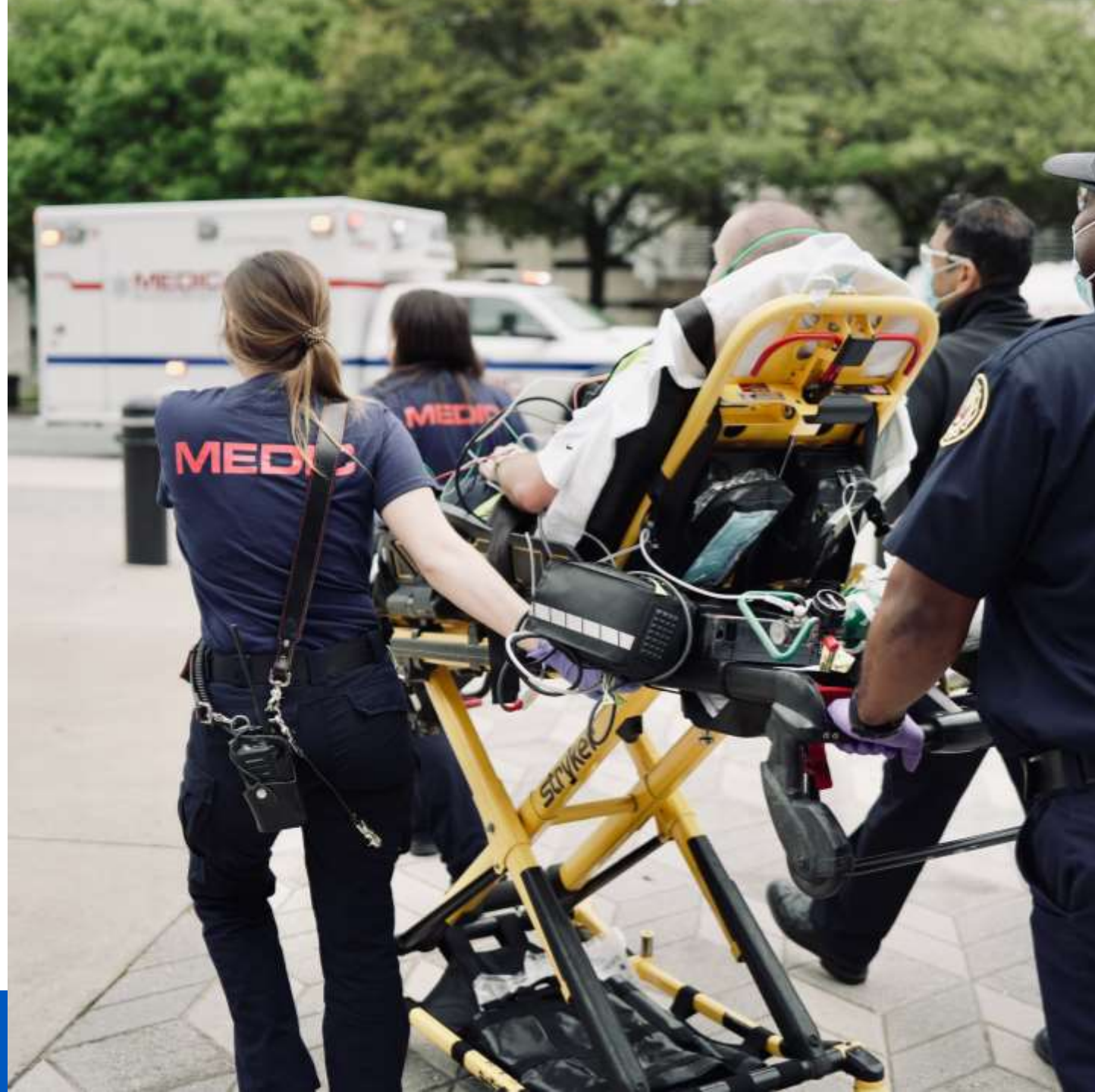
CLINICAL IMPACT: Mortality

	May-December 2022	May-December 2023
Mortality Count	1027	890
Total 911 Patients	82,179	83,346

- Medic has seen no significant change in the number of patients with documented termination of resuscitation prior to transport post-response configuration change.

OVERVIEW: Outcomes

- ✓ No adverse impact to patient outcomes
- ✓ Improved resource alignment based on patient condition
- ✓ Reduction of lights and sirens responses
- ✓ Reduction of traffic accidents
- ✓ Reduction of first responder volume



QUESTIONS
MEDIC
Mecklenburg EMS Agency
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