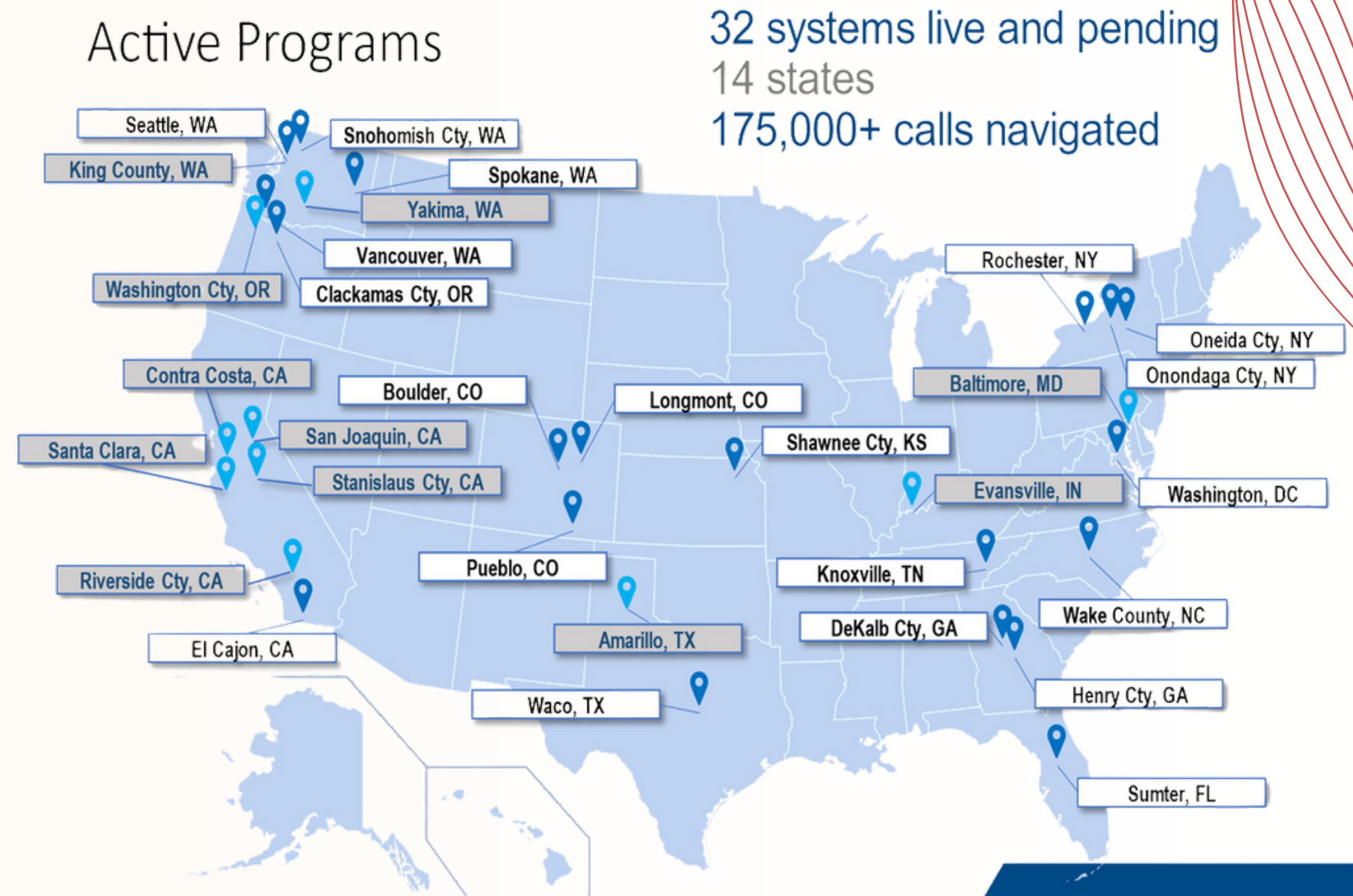HEARTLAND FIRE & RESCUE

NURSE
NAVIGATOR

Right collaboration,
Right care,
Right caller,
Right now.

AMBULANCE
CITY MANAGERS
CLINICS
COMMUNICATIONS AUTHORITY
ELECTED OFFICIALS
FIRE DEPARTMENT
MEDIA
MEDICAL DIRECTOR
NURSE NAVIGATOR (GMR)
GROSSMONT HEALTHCARE DISTRICT
SAN DIEGO COUNTY EMS

DATA SUPPORT

- GMR Nurse Navigator success elsewhere

- Field experience of low level calls

- QA analysis by GMR and Central Dispatch

- Literature studies

Active Programs

32 systems live and pending
14 states
175,000+ calls navigated

Seattle, WA
Snohomish Cty, WA
King County, WA
Spokane, WA
Yakima, WA
Vancouver, WA
Washington Cty, OR
Clackamas Cty, OR
Rochester, NY
Oneida Cty, NY
Onondaga Cty, NY
Contra Costa, CA
Boulder, CO
Longmont, CO
Baltimore, MD
Santa Clara, CA
San Joaquin, CA
Shawnee Cty, KS
Evansville, IN
Washington, DC
Stanislaus Cty, CA
Riverside Cty, CA
Pueblo, CO
Knoxville, TN
Wake County, NC
DeKalb Cty, GA
El Cajon, CA
Amarillo, TX
Henry Cty, GA
Waco, TX
Sumter, FL

Global Medical Response

Reprioritization of 911 Emergency Medical Calls Using Historical Clinical Data

Veer D. Vithalani, MD, FACEP, FAEMS[1,2]; Greg Scott, MBA[3]; Christopher Olola, PhD[3]
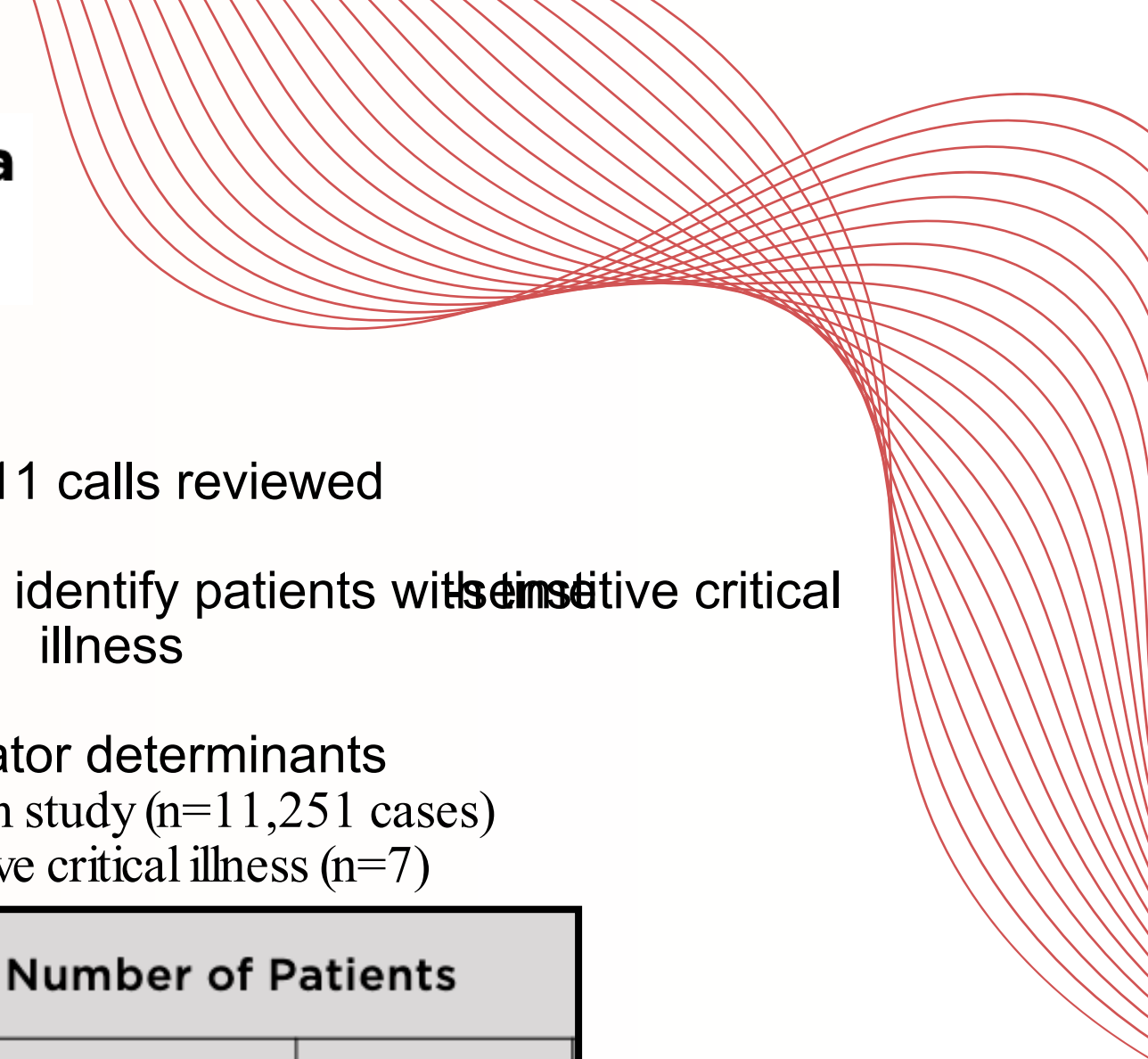
EMD Protocol	n	Critical	
2. Allergies (Reactions) / Envenomation	278	0	
3. Animal Bites / Attacks	22	0	
4. Assault / Sexual Assault / Stun Gun	81	0	
5. Back Pain	139	0	
10. Chest Pain / Chest Discomfort	411	0	
11. Choking	124	1	
13. Diabetic Problems	622	0	
16. Eye Problems / Injuries	121	0	
17. Falls	582	1	
18. Headache	211	0	
19. Heart Problems / A.I.C.D.	57	0	
20. Heat / Cold Exposure	121	0	
21. Hemorrhage (Bleeding) / Lacerations	337	0	
24. Pregnancy / Childbirth / Miscarriage	102	0	
26. Sick Person (Specific Diagnosis)	6,545	3	
27. Stab / Gunshot / Penetrating Trauma	1	0	
30. Traumatic Injuries (Specific)	464	0	
31. Unconscious / Fainting (Near)	1,033	2	
	11,251	**7**	**0.062%**

- 119,751 911 EMD triaged 911 calls reviewed
- Dallas Metroplex
  - Compared with ePCRs to identify patients with time-sensitive critical illness

- Matching HFR Nurse Navigator determinants
  - 82 of 92 found with values in study (n=11,251 cases)
  - Rate of 0.062% time-sensitive critical illness (n=7)

EMD Dispatch Priority Level	Number of Patients	
	Overall (N=11,9751) n	Critical (N=1,534) n (%)
Echo	1,186	404 (34.1)
Delta	28,647	832 (2.9)
Charlie	31,088	217 (0.7)
Bravo	36,344	58 (0.2)
Alpha	21,387	17 (0.1)
Omega	1,099	6 (0.5)

Vithalani V., Scott G., Olola C. "Reprioritization of 911 Emergency Medical Calls Using Historical Data". *Annals of Emergency Dispatch & Response*. 2021;9(2):20-32.

EXCLUSION

- Age less than 18

- Third party callers

- Life-threatening injury or illness

- Incarcerated/detained

- Drugs/alcohol impairment

- Pregnancy >20w, with OB complaint

- Homicidal or suicidal

INCLUSION

2. Allergies / Envenomations

3. Animal Bites / Attacks

4. Assaults / Sexual Assaults

5. Back Pain

10. Chest Pain

11. Choking

13. Diabetic Problems

16. Eye Problems

17. Falls

18. Headache

19. Heart Problems

21. Hemorrhage / Lacerations

23. Overdose / Poisoning

24. Pregnancy

26. Sick Person

27. Stab / Gunshot

30. Traumatic Injuries

31. Unconscious/Fainting
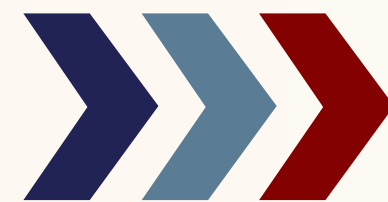
Alpha level
Omega level

Specific
determinants

NURSE NAVIGATOR

LEVELS	#	DETERMINANT DESCRIPTORS
D	1	**Unconscious** or **Arrest**
	2	**Not** alert
	3	**DANGEROUS** body area
	4	**Large** animal
	5	**EXOTIC** animal
	6	**ATTACK** or multiple animals
B	1	**POSSIBLY DANGEROUS** body area
	2	**SERIOUS** hemorrhage
	3	**Unknown** status (3ʳᵈ party caller)
A	1	**NOT DANGEROUS** body area
	2	**NON-RECENT** injuries (≥ 6hrs)
	3	**SUPERFICIAL** bites

A	1	**NOT DANGEROUS** body area
	2	**NON-RECENT** injuries (≥ 6hrs)
	3	**SUPERFICIAL** bites

INCLUSION *EXAMPLES*

2. Allergies / Envenomations
- No difficulty breathing or swallowing
- Spider bite

INCLUSION *EXAMPLES*

26. Sick Person (non priority ALPHA)
- Fever/chills
- Nausea
- Transportation only
- Unwell
- Vomiting

26. Sick Person (non priority OMEGA)
- Boils
- Bumps
- Can't sleep
- Can't urinate (without and pain)
- Catheter (urinary, no hemorrhage)
- Cut-off ring request
- Deafness
- Defecation/diarrhea
- Earache
- Enema
- Gout

- Hepatitis
- Hiccups
- Itching
- Nervous
- Object stuck
- Object swallowed
- Painful urination
- Penis problems
- Rash/skin disorder
- STD
- Sore throat
  - without difficulty breathing
- Toothache (without jaw pain)
- Wound infected
- No priority symptoms
- Fever/chills
- Nausea
- Other pain (non-OMEGA)
- COVID suspected

QUALITY ASSURANCE/IMPROVEMENT

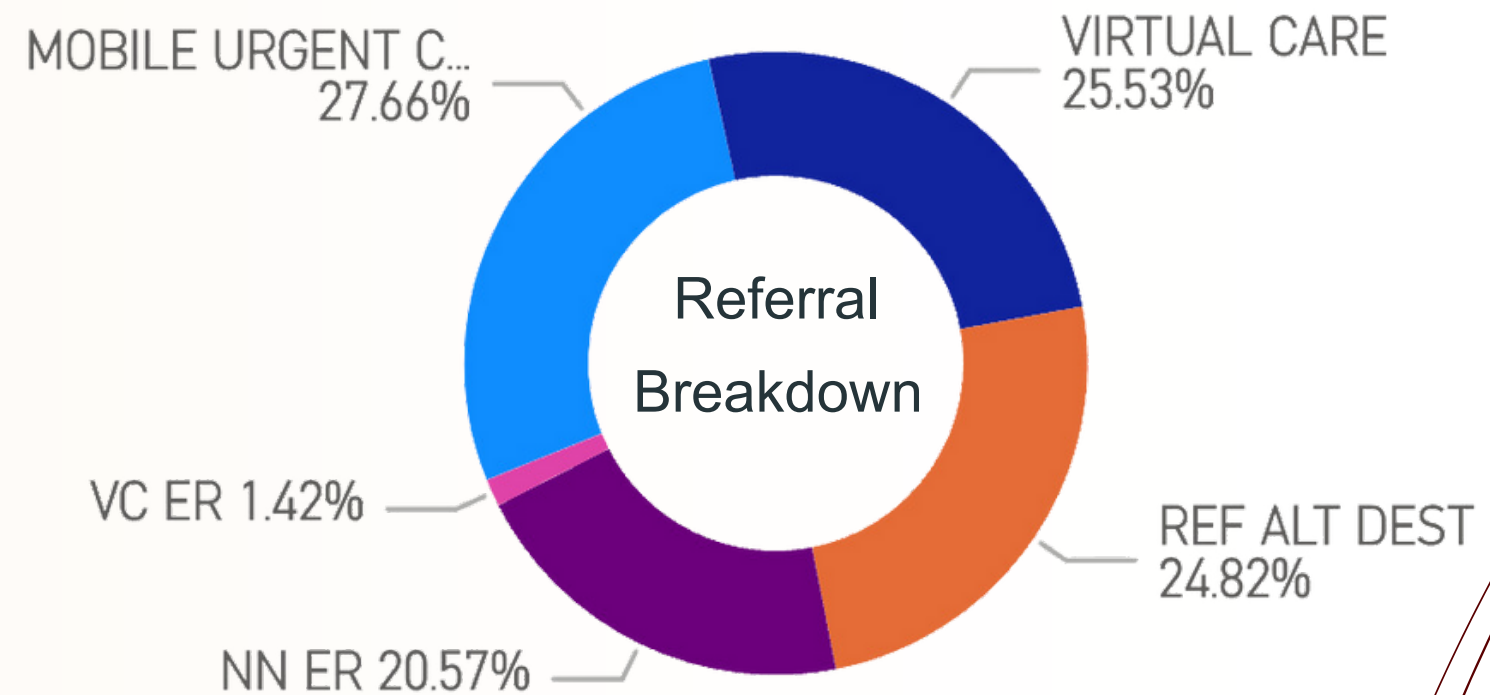| Run Number	Date	Dispatch Determinant Code / ProQA Code (list)	Optional: Dispatch Determinant Suffix Code (list)	Detail Line Utilized by RN Navigator / ProQA Code (list)	Patient Impression (text)	Disposition (list)	Patient Destination (text)	Referred Back to 9-1-1 System by RN Navigator (Y/N)	Optional: Reason for 9-1-1 Referral (text)	Repeat 9-1-1 Call within 5 Days? (Y/N)	Optional: Patient Outcome - Appointment Follow Through (Y/N)	Optional: Patient Outcome - Higher Level of Care (Y/N)	Optional: Patient Outcome - Hospitalized (Y/N)
Collaboration /Data collection from: CADs, GMR Nurse Navigation, Heartland and AMR Dispatch and Grossmont Clinics							Meetings with GMR Nurse Navigation : •Nurse Navigation Volume/Dispositions •Referral Destinations •Patient Satisfaction •Telephony Metrics •Complaint/Issue Management •Case Discussions •Updates						

DISPATCH QUALITY ASSURANCE/IMPROVEMENT

- What determinant codes were NN transfers

- How many times the same code was used

- How many calls an ambulance was requested and which ones ended in a transport

- Calls from same person within 48 hours

proQADeterr	COUNT	AMB REQ	ARRIVED AT HOSP
13A01	1	1	1
17A02G	2	2	1
17A03	1	0	0
18A01	1	1	1
21A01T	1	0	0
26A01	4	1	1
26A04	3	1	1
26A06	2	0	0
26A07	1	0	0
26A08	5	1	1
26A10	1	0	0
26A11	2	1	1
26O05	1	0	0
2A02	1	0	0
30A03	1	0	0
31A01	1	1	1
Grand Total	**28**	**9**	**8**

PROGRAM OUTCOMES

Disposition

- 809 patients
- 62% diverted from of immediate ambulance dispatch

Overall Dispositions

- BLS 0 Sent to HCFA 274 (33.87%)
- BLS 1-5 Sent to AMR 189 (23.36%)
- SELF-CARE 169 (20.89%)
- MOBILE URGE... 41 (5.07%)
- VIRTUAL CARE 36 (4.45%)
- REF ALT DEST 35 (4.33%)
- ALS Sent... 31 (3.83%)

Referral Breakdown

- VIRTUAL CARE 25.53%
- REF ALT DEST 24.82%
- NN ER 20.57%
- VC ER 1.42%
- MOBILE URGENT C... 27.66%
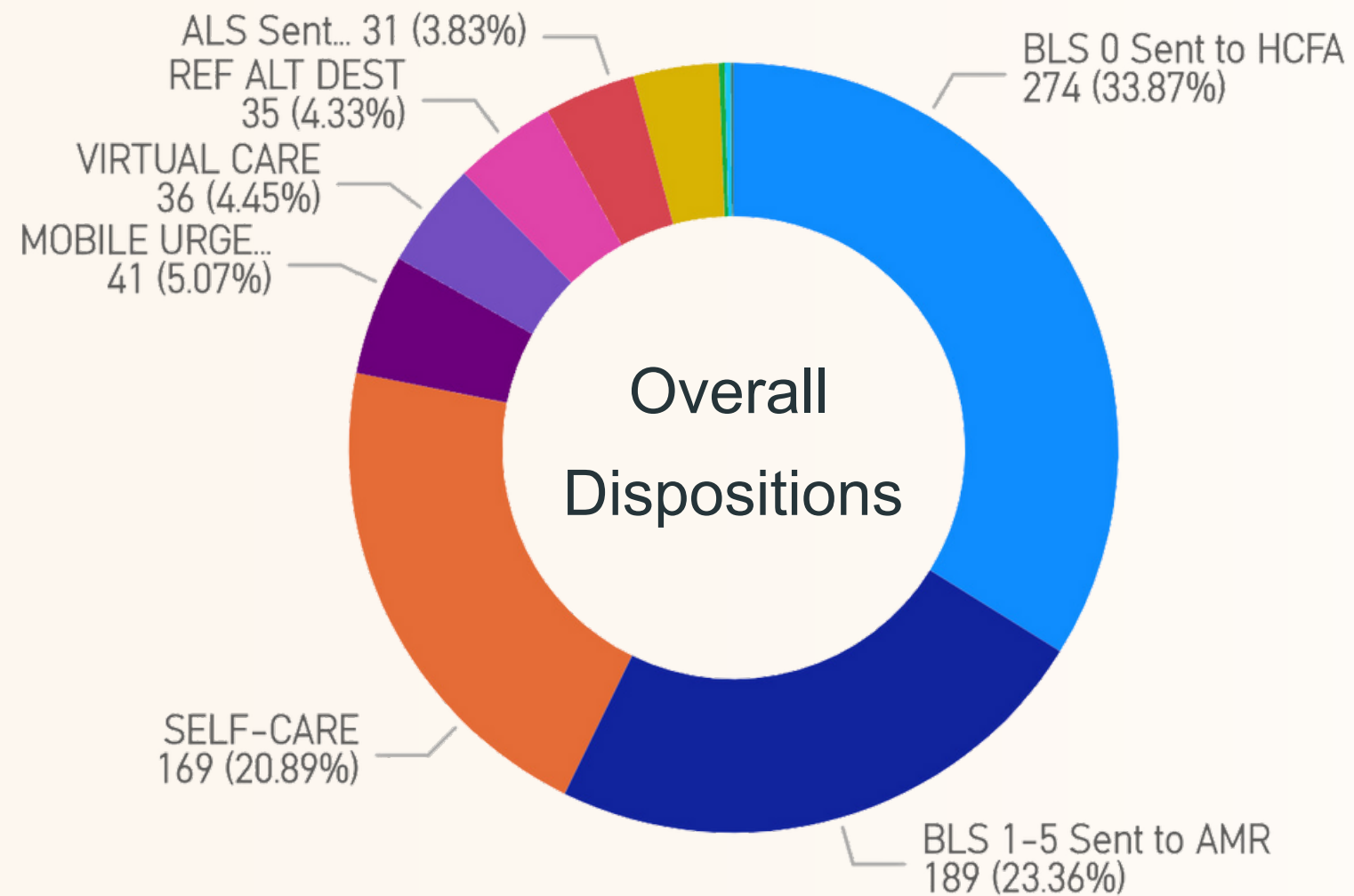
1/31/23 -
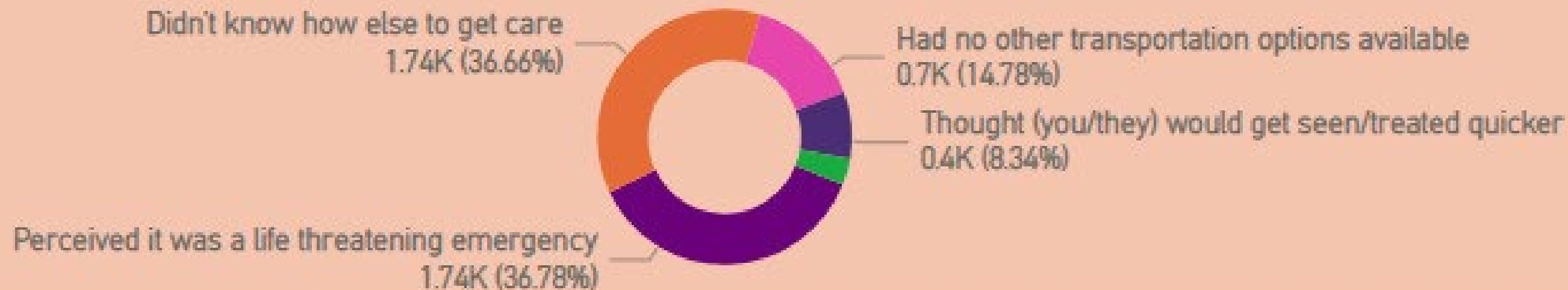10/21/24

PATIENT
FEEDBACK

patiet satisfaction score 94%

Which of these statements best describes why you accessed 9-1-1?

Didn't know how else to get care
1.74K (36.66%)

Had no other transportation options available
0.7K (14.78%)

Thought (you/they) would get seen/treated quicker
0.4K (8.34%)

Perceived it was a life threatening emergency
1.74K (36.78%)

- NEXT PHASE
- TIPS FOR THOSE INTERESTED IN STARTING

Right collaboration,
Right care,
Right caller,
Right now.