



1200 N. Telegraph Road. Bldg. 36E, Pontiac, Michigan 48341
 Telephone: 248 975-9704 Fax: 248 975-9723 Website: www.ocmca.org

**OCMCA Stroke Systems of Care Special Study
 2018 - Year End Report**

March 7, 2019

Kathy Wahl, BS, MSN, RN
 Director
 Michigan Department of Health & Human Services (MDHHS)
 Bureau of EMS, Trauma, & Preparedness (BETP)
 Division of EMS and Trauma
 P.O. Box 30207
 Lansing, MI 48909-0207

Dear Ms. Wahl:

Please allow this letter to serve as the 2018-year end report of the Oakland County Medical Control Authority's (OCMCA) Stroke Systems of Care Special Study to the State QA Task Force and the Bureau of EMS, Trauma, & Preparedness.

As indicated in our previous reports to the QA Task Force, the OCMCA has developed a case review process for this Special Study that includes detailed analysis of the FAST-ED Stroke Severity Scale Scoring Checklist, the EMS radio report to hospital, the patient care report (PCR) and the Hospital Outcome Data Sheet of each case included in the study. Each is objectively assessed to identify the strengths, weaknesses and lessons learned of each case.

2018 – Year End Data:

In 2018, there were a total of 39 patients that were determined to have a differential diagnosis of stroke by the Bloomfield Township Fire Department. The OCMCA PSRO Committee and QI staff has reviewed the data of each case. The tables below provide an overview of the 2018 study findings.

TOTAL REPORTED CASES		
Total cases	39	100%
LVO strokes	7	18%
Ischemic (non-LVO) strokes	15	38%
Hemorrhagic strokes	7	18%
Stroke mimics / False positives	10	26%

VERIFIED STROKE / FALSE POSITIVE RATE		
Total cases	39	100%
Stroke confirmed at ED	29	74%
Stroke mimic / False positive detected at ED	10	26%

VERIFIED STROKE / FALSE POSITIVE BREAKDOWN		
Total stroke mimics / false positives	10	100%
Seizure	4	40%
Infection	2	20%
Hypoglycemia	1	10%
Alcohol poisoning	1	10%
Exacerbation of Parkinson's Disease	1	10%
Cardiogenic shock	1	10%



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FAST-ED / NIHSS ASSESSMENT COMPARISON		
Total number of cases that meet the following criteria:		
<ul style="list-style-type: none"> Confirmed stroke at ED FAST-ED score and form completed by EMS NIHSS score by physician at ED 	23	100%
FAST-ED assessment correlated with NIHSS	18	75%
FAST-ED assessment did NOT correlate with NIHSS	5	25%

FAST-ED SCORE ≥ 4 / < 4		
Total number of cases that meet the following criteria:		
<ul style="list-style-type: none"> EMS determined a differential diagnosis of stroke FAST-ED score and form completed by EMS 	30	100%
FAST-ED score of ≥ 4	16	53%
FAST-ED score of < 4	14	47%

Total number of cases that meet the following criteria:		
<ul style="list-style-type: none"> EMS determined a differential diagnosis of stroke and a FAST-ED score of ≥ 4 	16	100%
Hemorrhagic strokes	5	31%
LVO strokes	4	25%
Non-LVO ischemic strokes	4	25%
Stroke mimic / false positive	3	19%

Total number of cases that meet the following criteria:		
<ul style="list-style-type: none"> EMS determined a differential diagnosis of stroke and a FAST-ED score of < 4 	14	100%
Non-LVO ischemic strokes	9	64%
Stroke mimic / false positive	2	14%
LVO strokes	2	14%
Hemorrhagic strokes	1	7%

LVO / MECHANICAL THROMBECTOMY (MT) RATE		
Total LVO strokes	7	100%
Total LVO stroke patients that received MT	3	43%

ISCHEMIC STROKE tPA ADMINISTRATION RATE		
Total ischemic strokes	22	100%
Total ischemic stroke patients that received tPA	3	14%

PATIENT TRANSFER RATE		
Total cases	39	100%
Total number of patients transferred to another facility	1	3%

Sharing study findings:

The OCMCA has continued to make available all related study findings with the Bloomfield Twp. Fire Department (BTFD), Beaumont Hospital Royal Oak and St. Joseph Mercy Oakland. The BTFD continues to share all outcomes with the applicable EMS personnel for educational purposes. In addition, both hospitals continue to review the outcomes and provide feedback. It should be noted that all participants have been very thorough and thoughtful throughout this study. It has been a pleasure working with all entities involved.



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Study Expansion:

The OCMCA is considering an expansion of the study to include additional LSAs and hospitals. The OCMCA will provide the State with detailed information if and when we decide to expand the study.

2019 OCMCA Stroke Conference:

This conference will be held on May 3, 2019 from 10:00 a.m. to 4:30 p.m. at St. Joseph Mercy Oakland Hospital at their Anthony M. Franco Communications Center. The conference brochure PDF is attached. As you know, the OCMCA invested extensive resources to develop education and a stroke QA/QI process that empowers EMS providers to improve their ability in all aspects of stroke patient assessment, detection and management. During this conference, the OCMCA will share these resources and the current QA/QI findings from our special stroke study in an effort to support ongoing improvement across stroke systems of care throughout the region. Please join us as we present the OCMCA's 2019 stroke educational resources and special study data findings. All EMS provider levels are welcome to attend, as well as nurses, physicians, stroke coordinators, other hospital staff, MCA administrators, and MDHHS representatives.

Please contact the OCMCA with any questions.

Sincerely,

Steve McGraw

Steve McGraw, DO
EMS Medical Director
Oakland County Medical Control Authority