

Coverage and Reimbursement for Emergency Medical Services Care Delivery Models and Uncompensated Services

Reports required under Senate Bill 682, January 2019

Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model

Minor Definitive Care Now Program Pilot

Baltimore City, Maryland

Mission: To pilot a public-private collaboration that provides West Baltimore individuals with medical and social support for improved health

Vision: Improved health for individuals in West Baltimore, reduced health care utilization and decreased costs



I. Background

Emergency Departments (EDs) across the country devote a disproportionate share of staff and financial resources to providing non-urgent patient care. In 2010, the RAND Corporation estimated that between 14 and 27 percent of all ED visits could be safely treated in an alternative health care setting, saving the system \$4.4 billion annually.¹ Similarly, the Centers for Disease Control and Prevention found that approximately 34% of ED visits nationally were for semi-urgent or non-urgent complaints.² When low acuity patients rely on EDs for routine medical care, this contributes to longer wait times, patient dissatisfaction and limited ability to care for higher acuity patients. While ED wait times for non-emergent complaints average an hour nationally, Maryland has one of the longest wait times in the country, with low acuity patients waiting between 2.5 and 4 hours on average before receiving definitive care.³ ED overcrowding has been directly associated with negative patient outcomes such as, increased mortality, intensive care unit (ICU) admissions, and greater lengths of stay in the hospital.⁴

In FY17, the Baltimore City Fire Department (BCFD) received just under 155,000 calls for emergency medical services (EMS), which resulted in approximately 100,000 patient transports to local area hospitals. This equates to one patient every 5.2 minutes, making Baltimore City the second busiest EMS system in the nation, per capita. Internal analyses revealed that 35% of the EMS calls received in FY18 were for non-emergency health needs that could be safely treated outside the hospital context. While EMS resources are dispatched responding to other non-emergency situations, patients undergoing life-threatening events experience delays before receiving necessary care. In FY18, there were approximately 31,000 alpha and bravo level calls that resulted in transport (as identified through the International Academies of Emergency Dispatch® (IAED™) Medical Priority Dispatch System™ (MPDS®) protocol) across the City of Baltimore.

West Baltimore is located in the area bounded by North Avenue to the north, Carey and Ostend Street to the south, Maryland Avenue, Chase Avenue, Park Avenue, Hopkins Place, and Sharp Street to the east and Carey Street and Ostend Street to the west (see Attachment 1). Some of the neighborhoods located in West Baltimore include Harlem Park, Sandtown-Winchester, Druid Heights, Madison Park, Franklin Square, Union Square, Poppleton and Upton. The population of West Baltimore is approximately 137,000 compared to the total Baltimore City population of 622,454. The average life expectancy in West Baltimore is 68.6 years (compared with 73.6 years for the entire city). A recent comprehensive Community Health Needs Assessments for West Baltimore conducted by the University of Maryland Medical Center, LLC (UMMC) identified significant needs in the population, including lack of access to primary care, low health literacy, high unemployment, low median income, excessive tobacco use, and lack of transportation.

¹ Weinick, R., Burns, R. & Mehrotra, A. (2010). Many emergency department visits could be managed at urgent care centers and retail clinics. *Health Affairs*, 29(9), 1630–36.

² Pitts, S., Niska, R., Xu, J. & Burt, C. (2008). National hospital ambulatory medical care survey: 2006 emergency department summary. *National Health Statistics Reports*, 39, 2008-1250. Retrieved from <http://www.cdc.gov/nchs/data/nhsr/nhsr007.pdf>

³ Centers for Medicare & Medicaid Services. *Hospital Compare Website*. Retrieved May 14, 2018, from <http://www.medicare.gov/hospitalcompare/search.html?AspxAutoDetectCookieSupport=1>

⁴ Singer, A., Thode, H., Viccellio, P. & Pines, J. (2010). The association between length of emergency department board and mortality. *Academic Emergency Medicine*, 18(12), 1324-1329.

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Such factors, compounded by the complexity of individuals' lives, which inhibits access to health care, results in high utilization of EMS and EDs among West Baltimore residents.⁵ EMS response that includes expanded treatment options for minor care may help address some of the needs of the citizens of West Baltimore through extending and facilitating health care access within the 911 system. Enhancing capabilities to treat low acuity 911 calls, without transport, could optimize the care for patients and help address the daily challenges faced by the City's EMS system, EDs, and hospitals.

Due to changing federal and state health care delivery priorities, policies and incentives, and building from lessons learned from other jurisdiction's Mobile Integrated Health (MIH) and EMS Alternative Destination initiatives, the BCFD and UMMC are seeking to develop a process for improving the management of appropriate low-acuity patients through a novel BCFD/UMMC health care delivery platform.

EMS ED offloading times have increased in recent years with direct implications for EMS resource availability. High offloading times restrict the number of EMS and Fire resources that are in service and available to respond to individuals in need of emergency transport. Elevated offloading times also have implications for patient safety, by delaying time to antibiotics, pain management and definitive care. It is projected that the Minor Definitive Care Now (MDCN) Pilot Program will remove over 2,000 individuals from the emergency system annually by providing quality, on-scene care at a reduced cost to low-acuity patients, lessening the burden on the City of Baltimore's Fire and EMS service, and EDs. In addition, the MDCN Pilot Program is expected to reduce overall ED wait times. Additionally this initiative will improve EMS unit availability by avoiding unnecessary transports to the ED. For example, avoiding 8 patient transports per day on each of the 5 days of the week during the MDCN Pilot Program is expected to result in 1,566 additional hours of BCFD EMS unit availability annually.

II. MDCN Pilot Program Goals

Primary Goals

1. To optimally support the health of individuals in West Baltimore who seek care through the 911 system;
2. To deliver quality health care for low acuity patients who consent to receive care as part of the MDCN Pilot Program;
3. To provide value to the health care system in West Baltimore; and
4. To optimize the operations of the Baltimore City Fire Department.

Secondary Goals

1. To preserve limited EMS and ED resources for life threatening emergencies and disasters;
2. To enhance health system integration and appropriate utilization among individuals in

⁵ University of Maryland Medical Center (2016). *Community health needs assessment* (2016). Retrieved From: <https://www.umm.edu/-/media/umm/pdfs/about-us/community-outreach/umm-c-hna-executive-report-fy2015.pdf>

- West Baltimore; and
3. To decrease EMS/ED utilization for non-emergent conditions.

III. Program Scope

To more appropriately address the non-emergent health care needs of West Baltimore residents and provide value to the health system, BCFD and UMMC propose the MDCN Pilot Program. This pilot program is part of the West Baltimore Mobile Integrated Healthcare project supported and funded by the Maryland Health Services Cost Review Commission (HSCRC). The objective of this pilot program is to assess the impact, accuracy and safety of providing low-acuity patients, identified by the IAED™ MPDS® protocol as an 'Alpha determinant code Basic Life Support,' with immediate on-scene care by a two-person team comprised of a BCFD MDCN Paramedic provider and one of the following Advanced Level Providers (ALP): a UMMC Nurse Practitioner (NP), a Maryland-licensed physician affiliated with UMMC with board certification in emergency medicine ("Physician"), or a UMMC Physician Assistant (PA) (referred to collectively as the "MDCN Team"). Throughout this MDCN Pilot Program, BCFD will continue to dispatch typical emergency response resources to all 911 calls for EMS. The BCFD EMS response unit personnel will exercise the clinical judgement under the existing Maryland Institute for Emergency Medical Service Systems (MIEMSS) Maryland Medical Protocols for Emergency Medical Services Providers ("MIEMSS Protocols") to determine if a patient is of the appropriate priority level to offer consent to receive minor definitive care on scene through the MDCN Pilot Program. The UMMC ALP shall not direct the BCFD MDCN Paramedic to perform any skill or medical intervention that is not within his or her scope of practice, nor provide "medical consultation" as referenced in the MIEMSS Protocols. All on scene minor definitive care provided as part of the MDCN Pilot Program will be free of charge for the patient.

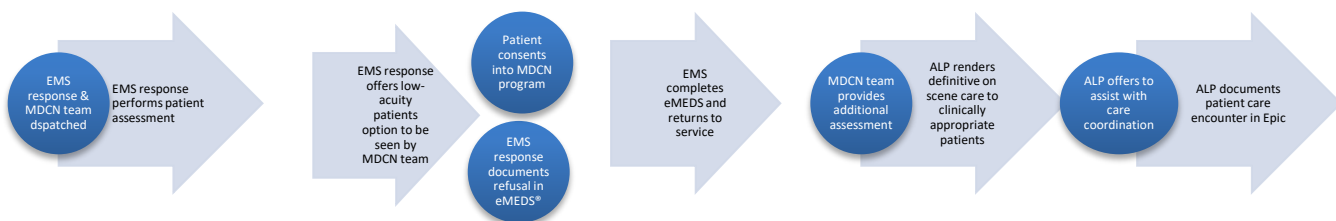
IV. Response Steps

1. When a 911 call response for EMS service is dispatched, the MDCN Team will respond to the scene concurrently with the typical BCFD EMS response unit to alpha-level calls within the UMMC and Midtown Campus patient catchment areas.
 - a.) In the event that the MDCN Team arrives prior to the BCFD EMS response unit, the MDCN Paramedic will approach the patient and follow the steps described below.
2. Once on scene, BCFD EMS response personnel will perform a patient assessment as is typically done per MIEMSS Protocols. The MDCN Team will stand by and the UMMC ALP will not approach the patient until they receive direction from the BCFD EMS response personnel.
3. If a patient refuses EMS care and transport, a patient refusal form and eMEDS® report should be completed per MIEMSS Protocols while on scene.
4. If the patient is determined to meet the criteria as low acuity and is therefore an eligible candidate for the MDCN Pilot Program (as defined Section IX 4), the BCFD EMS response personnel will offer the patient the option to be seen by the MDCN Team.
5. If the patient accepts the offer to be seen, the BCFD EMS response personnel will then signal to the ALP that they may approach the patient.
6. The MDCN Team will request patient consent (see Attachment 2) to provide minor definitive treatment on scene.
7. Once consent is provided, patient information, including information collected by the EMS response personnel can then be shared with the ALP.
8. The EMS response personnel will return to service. If the MDCN Team determines that the patient needs to be transported and the patient decides they want to be transported, or if for

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any reason, the patient decides they want to be transported, the MDCN Paramedic will radio the Public Safety Answering Point (PSAP) for an EMS transport unit. After requesting the unit, the BCFD MDCN Paramedic will perform any advanced life support skills, as defined by the MIEMSS Protocols for EMS Providers, to provide all necessary care within their scope of practice, until additional EMS providers arrive on scene and assume patient care and transport to the closest appropriate hospital. Any care rendered under the MIEMSS Protocols will be documented in a report in eMEDS®.

9. The MDCN Team performs any additional assessment and if indicated, the ALP will render treatment (see Formulary in Attachment 3). The MDCN Paramedic may assist with patient assessment (e.g., vital signs, pulse oximetry), and the ALP will provide treatment associated with the MDCN Pilot Program.
10. The ALP may also offer to assist patients with setting up clinic appointments. The Operations Center, located at UMMC, may call and connect patients to appropriate care, either inside or outside of the University of Maryland Medical System Corporation's (UMMS) system, depending on need, preference, and insurance status of the patient.
11. The MDCN Team documents the patient care encounter in the UMMC electronic health record system ("Epic"). If at any time during the encounter the patient refuses further assessment or treatment, the refusal must be documented in Epic.



V. Patient Inclusion Criteria

Indications necessary to be eligible to participate in the MDCN Pilot Program include:

1. Low-acuity patients, identified by the IAED™ MPDS® protocol as an 'Alpha determinant code Basic Life Support,' who meet additional criteria outlined in the MDCN protocol below; AND
2. Patients with an incident address that falls within the geographic boundaries of the UMMC or Midtown Campus catchment areas; AND
3. Patients who call 911 during hours when the MDCN Pilot Program is operating (Monday-Friday, 8:00am-4:00pm) Note: The operational time window may expand if there is demonstration of benefit and adequate funding mechanism is identified.
4. Patients who consent to participate in the MDCN Pilot Program.

VI. Patient Exclusion Criteria

Per the MIEMSS Protocols for EMS Providers, patients to be excluded from the MDCN Pilot Program include:

1. Patients who decline enrollment in MDCN Pilot Program;
2. Patients who are deemed clinically inappropriate for on-scene treatment by the MDCN Team following assessment;

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3. Individuals who refuse participation by revoking written consent, verbal refusal of care at time of visit;
4. Patients who possess a language or communication barrier that inhibits the MDCN Team's ability to appropriately address the patient's needs at the scene;
5. Patients who are not able to or lack the capacity to understand the informed consent process; and
6. Patients who have not yet reached their 18th birthday.

VII. Risk Mitigation

The patient risk associated with participating in the MDCN Pilot Program is expected to be minimal, as this program is in addition to the EMS standard of care. BCFD will dispatch typical EMS resources to each patient. The MDCN Team serves as an augmentation to the present EMS system and will jointly respond to appropriate low-acuity calls within the UMMC and Midtown Campus catchment areas. Once on scene, after receiving consent from the patient to be seen, the UMMC ALP member of the MDCN Team will make the final determination as to whether or not a patient meets criteria for on scene treatment. All participation in this pilot will be voluntary. Eligible patients will consent to "opt in" to the MDCN Pilot Program and after assessment/treatment may still refuse assessment, treatment and/or hospital transport. Additional real-time safety mechanisms will be in place to ensure that no patient is placed at increased risk. These include:

1. The use of the IAED™ MPDS® protocol, which is highly accurate at determining low-acuity patients.
2. The ability to utilize telemedicine capabilities to connect with physician oversight and assist with any patient management concerns.
3. While in the field, the ALP will have access to a secure, HIPAA compliant connection via Zoom (<https://www.zoom.us/healthcare>) for medical support when necessary. The Zoom system allows for transcripts and recording of the telemedicine encounter. Any Zoom system records will be part of the UMMC patient record.
4. If at any time EMS transport to take the patient to a hospital is needed, it will be provided as described in Section IV.8.

VIII. Standardized Procedures

The Standardized Procedures, outlined below, serve two purposes:

1. to describe the guidelines for the implementation of the MDCN Pilot Program in Baltimore City; and
 2. to define the scope of practice for the ALP functioning within the MDCN Pilot Program.
- Performance of all Standardized Procedures must be within the existing requirements under the Maryland Code, COMAR, any other applicable legal requirements, and the applicable Maryland licensure boards requirements for each respective provider. These Standardized Procedures will ensure that eligible, consenting patients receive optimal care, and that affiliated health care providers clearly understand the role of the ALPs within the MDCN Pilot Program. To meet these goals, the Standardized Procedures will incorporate the following principles:
- ADAPTABILITY, in order to allow the unique needs of each individual patient to be managed appropriately;
 - FLEXIBILITY, to accommodate the rapidly changing and complex nature of health care delivery systems;

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- PRACTICALITY, in order to function within a community setting marked by diversity; and
- SPECIFICITY, to achieve the objectives of the Standardized Procedures, adhere to guidelines regulating ALP practice, and protect patient safety.

b.) Guidelines for Proper Use

It is recommended that the protocols, designed specifically for the MDCN Pilot Program by BCFD and UMMC utilizing established best practices, be used in accordance with the following concepts and guidelines:

- 1) Not all patient presentations can be covered in these protocols. Those patient presentations not covered in protocols should be evaluated and managed according to the ALP's training and experience.
- 2) The ALP's should perform only those tasks that are within their skills, competence, and scope of practice and that are consistent with the protection and safety of the health and well-being of the patient.
- 3) Any potential conflict between patient safety and written protocols should be resolved through medical consultation with the EMS Jurisdictional Deputy or Assistant Medical Director in the favor of patient safety.
- 4) All patients in the MDCN Pilot Program have the option to be transported to the nearest, most appropriate ED, regardless of whether or not that is an UMMS facility, for evaluation at any time during assessment by the MDCN Team.

c.) Protocol Logistics:

It is the intent of this document to authorize the UMMC ALP functioning within the MDCN Pilot Program, with the approval of MIEMSS, to implement the Standardized Procedures within their scope of practice.

d.) Development, Approval, Revision and Review

These Standardized Procedures have been developed and approved by the EMS Jurisdictional Deputy Medical Director and BCFD Deputy Chief of EMS with final approval by the BCFD Medical Director. If necessary, revision of the Procedures will be accomplished with approval from the MIEMSS State Medical Director.

e.) Education and Training

All UMMC Physicians functioning within the MDCN Pilot Program must maintain a current certification by the American Board of Emergency Medicine or the American Osteopathic Board of Emergency Medicine.

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Any UMMC-NP within the MDCN Pilot Program must:

- 1) Have graduated from a nationally accredited NP with a Master of Science, or higher, in Nursing, with completion of a Nurse Practitioner program;
- 2) Be licensed by the State of Maryland Board of Nursing as a NP, with no restrictions on practice;
- 3) Possess a Maryland Controlled Dangerous Substance (CDS) registration;
- 4) Possess Advanced Life Care Support (ACLS), certification;
- 5) Be an actively credentialed clinical employee of the University of Maryland Medical Center; and
- 6) Complete a MIEMSS approved Base Station course.

Any UMMC-PA within the MDCN Pilot Program must:

- 1) Have graduated from a Master's of Science Physician Assistant Training Program approved by the Maryland Board of Physicians;
- 2) Be licensed as a Physician Assistant by the Maryland Board of Physicians;
- 3) Possess certification or be eligible for certification by National Commission for Certifying Physician Assistant is required;
- 4) Hold and be named in a letter of agreement approved by Board of Physicians;
- 5) Possess ACLS certification;
- 6) Be an actively credentialed clinical employee of the University of Maryland Medical Center; and
- 7) Complete a MIEMSS approved Base Station course.

To be eligible to serve as a BCFD MDCN Paramedic in the MDCN Pilot Program, individuals must:

- 1) Have at least 3 years of experience as a BCFD Paramedic;
- 2) Demonstrate an interest in Mobile Integrated Community Health; and
- 3) Submit a formal application to BCFD and complete an internal interview process.
- 4) All BCFD EMS providers selected to participate in the MDCN Pilot Program must complete 40 hours of didactic training through the CONNECT Community Paramedic Travel Academy (<http://connectmedics.com/>). This intensive training covers topics including how to evaluate a patient's social determinants of health (e.g., transportation, food security, housing), the transtheoretical model of change as a tool to assesses an individual's readiness to act on new, healthier behaviors, as well as appropriate strategies to engage patients based on their current stage, motivational interviewing techniques, chronic disease management, mental health support, principles of trauma-informed care, and working as a patient advocate. To promote quality care, MDCN Paramedics will also be required to spend 16 hours observing health care providers in clinical settings at UMMC.

The UMMC ALP and BCFD MDCN Paramedic providers will be restricted to their respective scopes of practice set by the Maryland Board of Nursing, Maryland Board of Physicians and MIEMSS.

IX. General Procedures

1. This protocol may only be used by the ALP.
2. MDCN Paramedics will follow MIEMSS Protocols for EMS Providers.
3. Under the MDCN Pilot Program, all eligible patients will be offered the choice to “opt in” to receive on-scene definitive care. Participation in this pilot program is voluntary and will require patients to provide signed, informed consent. The on-scene treatment provided by the ALP will be in accordance with the medication and procedure list detailed in Attachment 3.
4. For inclusion in the MDCN Pilot Program, the patient must provide consent and must not have any of the following exclusion criteria:
 - a.) A chief complaint consistent with evaluation that would indicate a need for the capabilities of a full service ED
 - i.) High risk chief complaints are currently defined as dyspnea, altered mental status, syncope, chest pain, focal neurological deficits, unexplained back or abdominal pain, seizures, and sepsis (see vital sign criteria listed in Section XII below).
 - b.) Physical findings consistent with time-dependent needs for emergent assessment or stabilization
 - 1) Signs on exams that indicate a threat to airway, breathing, circulation, circulation to an extremity, disability (deficit) or deformity, as well as severe tenderness (as indicated by an assessment of airway, breathing, circulation, disability, exposure (ABCDE), etc.).
 - c.) Reasonably foreseeable signs or suspicion of any deterioration of condition (e.g. airway, breathing, hemodynamic or neurologic compromise)
 - d.) Any requirement for any advance life support (ALS) monitoring or ALS interventions
5. In order to include the patient in the MDCN Pilot Program, the MDCN Team will obtain a complete set of vital signs, medical history, and the ALP will obtain a signed MDCN Pilot Program consent form (Attachment 2). See Section IV above for response steps.
6. If the patient is stable, is deemed by the ALP to meet the criteria of the MDCN protocol, and has a disease/injury process, which can be safely treated on scene:
 - a.) The consenting patient will receive definitive on-scene care by the ALP member of the MDCN Team.
 - b.) If the patient refuses to participate in the MDCN Pilot Program, the patient’s condition deteriorates, or while on scene the patient changes their mind and declines to participate, the patient will be taken to the closest appropriate ED via ambulance. See Section IV above for response steps.
7. The MDCN Team will provide discharge instructions for each patient who participates in the MDCN Pilot Program.
8. In the event that the MDCN Team evaluates the consented patient and recommends ED transfer but the patient refuses, see Section IV for response steps.

X. Medication Management

The ALP is authorized to manage drugs and devices under the following protocols:

1. The management of drugs or devices includes evaluating, initiating, altering, discontinuing, furnishing and ordering of prescriptive and over-the-counter medications.
2. Medication evaluation includes assessment of:
 - a.) Other medications being taken.

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- b.) Prior medications used for current condition.
 - c.) Medication allergies and contraindications, including appropriate labs and exams.
3. The drug or device is appropriate to the condition being treated, and:
 - a.) Accepted dosages per references.
 - b.) Generic medications are ordered if appropriate.
4. A plan for follow-up is written in the patient's chart and provided to the patient.
5. The prescription must be written in patient's Epic chart including name of drug, strength, instructions and quantity, and signature of the ALP.

XI. Dispensing Medications

The ALP may dispense prescription drugs and devices, under the following protocols:

1. They have current prescriptive authority, including Maryland CDS registrations
2. All drugs and devices ordered are limited to the Formulary, OR are per the recommendations in the Resources listed in this document.
3. The drugs and devices ordered are consistent with the ALP's educational preparation or for which clinical competency has been established and maintained.
4. The drug or device ordered is appropriate to the condition being treated.
5. Patient education is given regarding the drug or device.
6. The name, title, and licensing number of the ALP is written on the transmittal order.
7. A physician affiliated with the MDCN Pilot Program is available during hours of operation for in person or telephone medical consultation.
8. The drug or device utilizes required pharmacy containers and labeling.
9. All appropriate record keeping practices of the dispensary are performed.
10. All other applicable Standardized Procedures in this document are followed during health care management.
11. All General Policies regarding Review, Approval, Setting, Education, Evaluation, Patient Records, Supervision and Consultation in these Standardized Procedures are in force.

XII. Medical Consultation

While it is the intent of MDCN Pilot Program to respond to low-acuity calls, if immediate patient deterioration should occur, EMS transport resources will be utilized (see Section IV.8. above).

MDCN Medical Director notification and/or emergent ALS transport to the closest appropriate ED with the following being examples of patients and scenarios that would generate ALS transport:

Acute myocardial infarction (AMI) or symptoms consistent with AMI

Acute central nervous system or focal neurologic deficits

Severe CHF

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Severe respiratory distress

O2 Saturation <90% on room air, if acute

Hypotension

Acute altered mental status, unless intoxicated

Adult heart rate ≥ 140

Emergency hypotension

Moderate to severe CHF

SBP ≥ 240 or DBP ≥ 140 at presentation (asymptomatic) with preexisting hypertension history

Adult heart rate ≥ 110 at time of disposition

The MDCN Team responds in < 14 days for same acute complaint *Does not apply to chronic recurrent complaints unless there is a change in the complaint*

Elevated BP or heart rate in pregnancy or ≤ 6 weeks post-partum

Pregnancy complications

Chest pain (potentially consistent with angina or angina equivalent symptoms)

Nonspecific chest pain age ≥ 30 with history of:

- o Hypertension
- o Diabetes
- o Smoking
- o Coronary artery disease
- o Hyperlipidemia
- o Family history of coronary artery disease by age of 60; OR

Nonspecific chest pain age ≥ 50 without risk factors

- o Abdominal pain
- o Requiring analgesic

Nonspecific chest pain age ≥ 70

- o Diabetic
- o Uncertain diagnosis

Lab Criteria:

- D-Stick –low less than 70 or greater than 300
- O2 Sat 2% less than chronic levels

Vital sign and age consult criteria

- Heart rate/minute

Adult heart rate ≥ 110

- Hypertension

Adult asymptomatic hypertension of SBP > 220 or DBP > 120 at time of disposition with history of hypertension

Adult asymptomatic SBP > 195 or DBP > 115 at disposition without history of hypertension

XIII. Analysis

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The MDCN Pilot Program metrics, detailed later in this proposal, will be compared before, during, and after the implementation of this pilot protocol to determine the ongoing impact on patients, the BCFD and the health care system.

XIV. Documentation and Data Collection

The MDCN Paramedic will document signed patient initiated refusals in eMEDS®. The MDCN ALP will document patient assessment and care data in UMMC's electronic health record system ("Epic"). If emergent management and transport is required the MDCN ALP will document the time and reason of 911 system activation in the Epic System note. The MDCN Paramedic will document patient information in eMEDS® per MIEMSS protocol.

XV. Quality Assurance/Quality Improvement

The MDCN Pilot Program is operating under the medical direction of the Jurisdictional Deputy Medical Director, upon the designation by and under the supervision and direction of the Jurisdictional Medical Director, who will ensure that triage protocols are safe and effective for each patient who participates in the MDCN Pilot Program. The Jurisdictional Deputy Medical Director and BCFD Deputy Chief of EMS, will provide oversight for adherence to pilot protocols, communication and training. The MDCN QA/QI committee (MDCN QA/QI) will meet or hold weekly teleconferences during the duration of the MDCN Pilot Program to review cases, discuss emergent trends, ensure that pilot protocols are not leading to suboptimal triage and identify areas for improvement. Any time there is an unscheduled reentry of a MDCN patient into emergency health care system, within 72 hours of receiving on scene care, this will trigger an automatic review. The MDCN QA/QI will report MDCN Pilot Program metrics to the State EMS Medical Director on a quarterly basis. Upon completion of the 18 month demonstration project period or 2,000 patients, an assessment of MDCN Pilot Program effectiveness will be conducted.

1. Pilot Metrics

Key metrics include, but are not limited to, the following:

- a.) Number and type of upgrades from on-scene care through the MDCN Pilot Program to 911 emergency transport (with information on specific signs/ symptoms, presentation, type of treatment rendered, and final diagnosis)
- b.) Number of patients that qualified for MDCN Pilot Program, the number of patients that qualified and consented to receive MDCN services, the number of patients that qualified and refused to receive in MDCN services (including reason for refusal if available)
- c.) Time from when EMS transport units and suppression units are first notified until back in service (Total call duration time – Cycle Time) for MDCN calls
- d.) Time from when MDCN units consent until back in service (Total call duration time – Cycle Time) for MDCN calls
- e.) Listing of the ALP diagnosis, treatment interventions, disposition and destination/referral and re-entry into the health care system (associated with original EMS complaint) within 72 hours. Patient satisfaction survey results:
 - 1) Was patient satisfied with the choice to receive services through MDCN Pilot Program? (Y/N)

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- 2) How does the patient rate the MDCN Pilot Program on a scale of 1-5 with 1 being the lowest and 5 being the highest
- 3) Did the patient experience any complications associated with the care received through the MDCN Pilot Program? In the event a patient reports a complication, the Ops Center will offer to assist the patient in coordinating appropriate follow-up care.
- 4) Did the patient have any complaints with the care the patient received from the MDCN Pilot Program?
- 5) Did the patient report satisfaction with the care received from MDCN Pilot Program?
- 6) Did the patient report re-entry into the health care system?
- 7) Did the patient have additional unscheduled re-entry into the health care system (associated with original EMS complaint) within 72 hours?
- 8) What are their pre-implementation performance measures (above) for the units in the MDCN Pilot Program area?
- 9) Any untoward events or formal patient complaints with detailed explanation
- 10) Any deviation or challenges of the ALP's implementation of the MDCN protocol
- 11) Average Midtown and UMMC ED wait time changes related to implementation of the MDCN Pilot Program.

2. Evaluation of Clinical Care

Evaluation of the ALP will be provided in the following ways:

Initial Evaluation

- Chart review based on written criteria.
- Informal evaluation during consultations.
- Feedback from medical oversight.
- Evaluation at the end of the MDCN Pilot Program based on written criteria.

Continuing Evaluation

- Annual evaluation based on written criteria including chart review.
- Verification of continuing education.
- Verification of current certifications.

3. Patient Records

The MDCN Team will be responsible for performing on-scene data entry of the patient's medical evaluation. The ALP is responsible for final diagnosis and treatment plan and will complete the patient medical record (Epic). Additionally, the MDCN Team will populate any QA/QI questions for each patient contact, per existing pilot proposal documentation standards. MDCN Paramedic will complete a report in the MIEMSS eMEDS® for the encounter including signed patient initiated refusal, if necessary.

4. Supervision

The ALP is authorized to implement the Standardized Procedures in this document without the direct or immediate observation, supervision or approval of a physician. Despite this, physician consultation will

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be available to the ALP at all times the MDCN Pilot Program is operating, either on-site; via telemedicine (Zoom) or phone.

5. Consultation

The ALP will be providing health care as outlined in this document. When ALP's are working in a clinical setting such as an emergency department or urgent care setting, the NP or PA would seek physician consultation for the following situations, and any other deemed appropriate:

- With stable patients when the patient conditions fail to respond to the management plan as anticipated.
- Whenever situations arise which go beyond the intent of the Standardized Procedures or the competence, scope of practice, or experience of the NP or PA.
- Any patient with acute decompensation.
- At the patient's or ALP's request.
- All emergency situations after initial stabilizing care have been started.

6. The internal quality improvement process will be managed by BCFD Office of QA/QI MDCN QA/QI Committee. The committee will consist of, but not be limited to, the following members

- a.) BCFD EMS Medical Director
- b.) BCFD EMS Jurisdictional Deputy Medical Director
- c.) BCFD EMS Jurisdictional Assistant Medical Director
- d.) BCFD Deputy EMS Chief
- e.) BCFD Battalion Chief-EMS
- f.) UMMC/BCFD QA/QI personnel
- g.) Clinical MDCN Pilot Program Manager,
- h.) UMMC Nurse Practitioner Coordinator
- i.) MDCN Paramedics from BCFD
- j.) BCFD/MDCN Pilot Program Manager

XVI. End Points

The following are the identified end points for the MDCN Pilot Program:

1. Patients are not treated optimally as defined by a need for unscheduled, unassociated with EMS complaint emergency department services less than 72 hours after MDCN disposition.
2. Value is not demonstrated through:
 - a.) No measurable operational benefit to UMMC and/or the delivery of EMS care in Baltimore City
 - b.) Financial costs associated with delivering the MDCN Pilot Program exceed benefits gained, as determined by BCFD, UMMC and/or HSCRC
3. Funding is not sustained upon the end of the grant awarded to UMMC by the Health Services Cost Review Commission.

XVII. Adoption of Results

If the MDCN Pilot Program protocol proves to be accurate, safe, and a quality care model for alpha-level patients in the UMMC and Midtown Campus catchment areas, the MDCN Pilot Program will have the

Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model

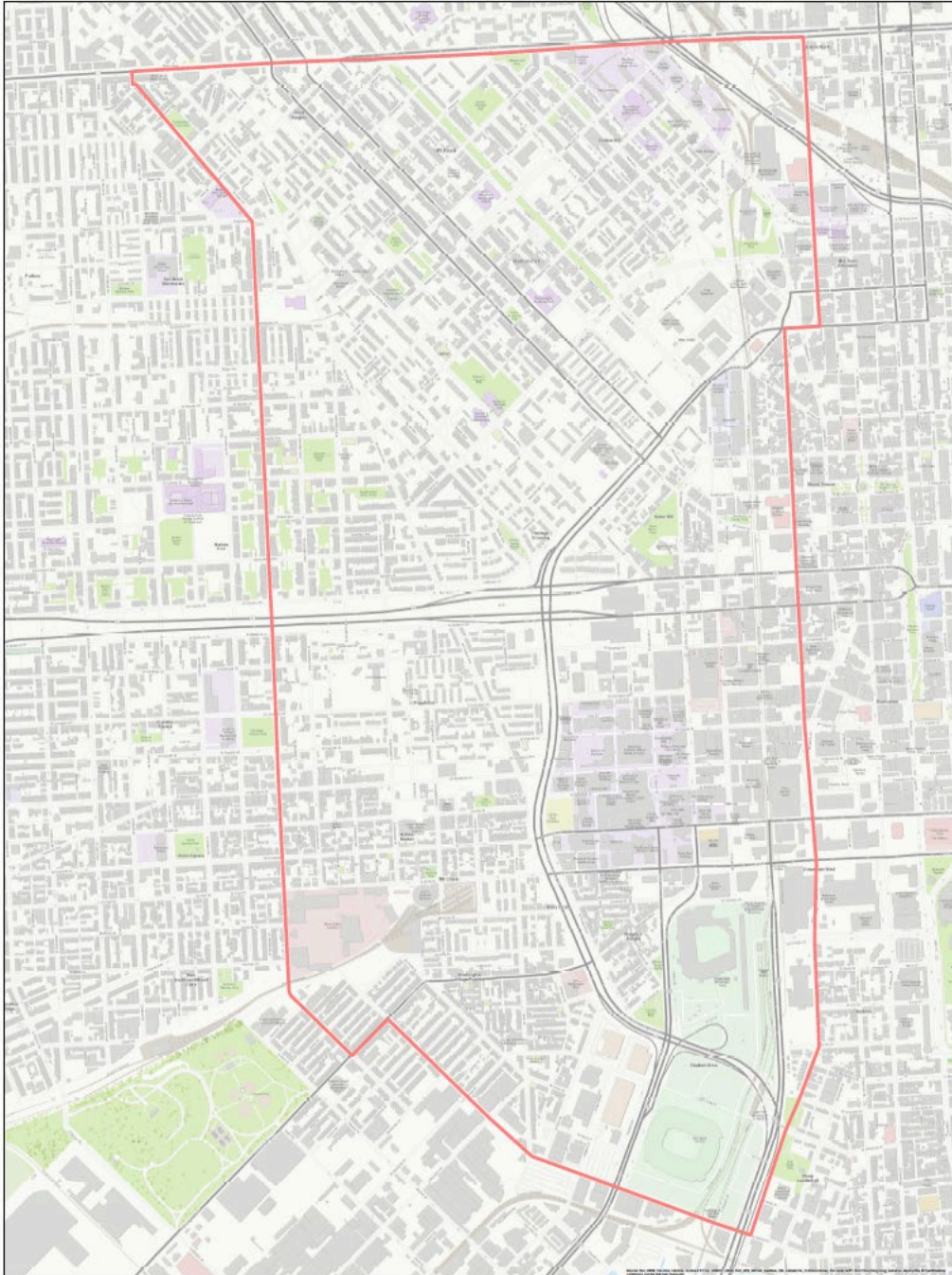
ability to expanded in scope across Baltimore and serve as a model for other jurisdictions in MD and the nation.

XVIII. Resources & Appendices

- McPhee, S. J., Papadakis, M. A., & Rabow, M. W. (Eds.). (2010). *Current medical diagnosis & treatment 2010*. New York: McGraw-Hill Medical
- American Academy of Family Physicians. <https://aafp.org>
- MIEMSS, *Maryland Medical Protocols for EMS Providers*
<http://www.miemss.org/home/ems-providers/protocols>

ATTACHMENT 1

PATIENT CATCHMENT AREA



Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model

ATTACHMENT 2

CONSENT FORM

(See attached)

Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model



**Informed Consent for
Minor Definitive Care Now**

The Baltimore City Fire Department ("BCFD") and the University of Maryland Medical Center ("UMMC") are collaborating to offer you the opportunity to participate in the **Minor Definitive Care Now ("MDCN") Program**. If you are receiving this Consent form, it means that the EMS team has determined you might benefit from the MDCN Program. The MDCN Team consists of either a UMMC Nurse Practitioner, UMMC Physician Assistant or UMMC Physician (a "UMMC Provider"), and a BCFD Paramedic. The MDCN Team can provide on-site minor care to you.

Please read this Consent carefully. Ask questions about anything that is not clear at any time.

- Receiving a medical assessment and care from the MDCN Team is completely voluntary – your choice.
- If you decide to receive a medical assessment and care from the MDCN Team, you can still stop at any time.
- No one can promise that the additional medical assessment and care will help you.
- Treatment provided on an emergency basis is not intended to be comprehensive in scope and it may be necessary for you to seek care from another physician for further diagnosis and continuation of treatment.
- Do not consent unless all of your questions are answered.

This Consent will:

- Describe the medical assessment and types of minor care that can be provided, including what services and benefits may be available to you as a participant;
- Describe how your personal health information will be treated as a participant in the Program; and
- Describe whether receiving medical assessment and care could involve any cost to you.

The Program. The MDCN Program is a community-based, cost effective health care solution designed to provide effective and efficient care outside of the hospital.

Goals. A goal of the MDCN Program is to improve minor definitive care in the out-of-hospital setting, specifically for patients like you, with minor conditions.

Receiving a medical assessment and treatment requires your agreement. A UMMC Provider and BCFD Paramedic will perform additional medical assessment and discuss the findings before asking you whether you want treatment. They will also discuss your medications, physical, social and mental health history and answer any related questions. You will not be charged for the minor care provided onsite by the MDNC Team. The services of the BCFD EMS for transportation should you decide to go to a hospital, any other services provided

Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model

by the BCFD EMS or to you at a hospital or as the result of a referral to another health care provider; however, may be billed to you and/or your insurance provider.

Primary Care Provider. Receiving medical assessment and treatment for minor care is not a substitute for seeing your primary care provider (PCP) for regular appointments. If you do not have a regular PCP, we can find one for you. **This intervention is not meant to take the place of the care you receive from any other provider, including your regular PCP.**

Photography and/or Video Record. Your UMMC Provider may need to photograph and/or record you to document a medical condition, help with the diagnosis and/or treatment of a condition. Photographs and/or recordings taken for these clinical reasons do not require your written permission.

Your Health Information. The UMMC Provider and BCFD Paramedic providing medical assessment and care to you will maintain the privacy of your health care information in compliance with Maryland and federal laws and regulations.

Questions. If you have any questions at any time, you can call: **[PLACEHOLDER FOR PHONE NUMBER]**

Consent to Participate. BY SIGNING THIS CONSENT BELOW, YOU ARE CONFIRMING THAT YOU HAVE VOLUNTARILY CHOSEN TO RECEIVE MEDICAL ASSESSMENT AND CARE FROM THE MDCN TEAM PROVIDERS DESCRIBED ABOVE AND THAT YOU HAVE READ THIS CONSENT AND FULLY UNDERSTAND IT.

IN CONSIDERATION FOR RECEIVING MEDICAL ASSESSMENT AND CARE FROM THE MDCN TEAM DESCRIBED ABOVE, YOU HEREBY WAIVE ANY CLAIM OR CAUSE OF ACTION OF ANY NATURE THAT YOU HAVE, OR MAY HAVE IN THE FUTURE, AGAINST ANY AND ALL INDIVIDUALS OR ORGANIZATIONAL PARTICIPANTS IN THE MINOR DEFINITIVE CARE NOW PROGRAM, INCLUDING BUT NOT LIMITED TO THE UNIVERSITY OF MARYLAND MEDICAL SYSTEM CORPORATION AND ITS AFFILIATES, AND THE MAYOR AND CITY COUNCIL OF BALTIMORE, ITS BALTIMORE CITY FIRE DEPARTMENT AND ITS OFFICERS, AGENTS OR EMPLOYEES; AND FURTHER, YOU AGREE TO RELEASE AND HOLD HARMLESS ANY AND ALL MEMBERS OF THE PROGRAM TEAM FROM AND AGAINST ALL DAMAGES OF ANY KIND, TO PERSONS OR PROPERTY, GROWING OUT OF OR RESULTING FROM THE MEDICAL ASSESSMENT AND CARE.

Signature: _____ Date: _____

Print Name: _____

Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model

Street Address: _____

City, State, Zip: _____

Daytime Phone: _____ Evening Phone: _____

Person Obtaining Consent. By signing below, I confirm that I have explained this form to the above-named participant and answered all of the participant's questions to the best of my ability.

Signature: _____ Date: _____

Print Name: _____ Time: _____

ATTACHMENT 3

FORMULARY

- Acetaminophen 500MG
- Amoxicillin 500MG
- Amoxil/Clav 875MG
- Antipyrine & Benc OTIC 10ML 5.4%-1.4%
- Azithromycin 250MG 1X6 tab single card
- Bacitracin
- Benzonatate 100MG
- Cephalexin 500MG
- Cyclobenzaprine HCL 10MG
- Cerumenex ear drops
- Diphenhydramine 25MG
- Diphenhydramine Spray (topical)
- Doxycycline 100MG
- Erythromycin optho ointment.5%
- Famotidine 20MG
- Ibuprofen 600MG
- Ketorolac (intramuscular)
- Levofloxacin
- Lidocaine INJ 1%
- Lidocaine VISC 2%
- Loratadine 10MG
- Meloxicam 7.5MG
- Ondansetron 4MG ODT
- Penicillin VK 500MG
- Piperocaine (ophthalmic)
- Polymyxin B (topical)
- Prednisone 10MG
- Promethazine 25MG
- Silver sulfadiazine cream
- Tramadol HCL 50MG
- Triamcinolone cream 0.1% 15GM
- Ventolin HFA 90 MCG 8 GM/60 inhaler
- TDAP INJ
-

Appendix C: Summary of Minor Definitive Care Now Program, an enhanced Treat and Release program model

SUPPLY LIST

In addition to the full BCFD Advance Life Support (ALS) equipment, the following supplies will be added:

- Syringes and needles for local irrigation and wound infiltration
- Irrigation splash guard
- Glucometer
- Single-use medical procedure trays and kits
- Eye Shield
- Ear syringes
- Ear wicks
- Ear wax removers
- Alligator forceps
- Clinical swabs, applicators, specimen collectors, sponges, pads, tongue depressors, wooden spoons, cotton balls, or cotton rolls
- Antiseptic wipes
- Splints
- Crutches
- Orthopedic supports, braces, wraps, shoes, boots, or pads
- Medical bandages, gauze, dressings, tape, swabs, sponges, and burn dressings
- Surgical sutures and staples; and removal kits
- Tourniquet
- Thermometer
- Clinical basin
- Medical bags for medical supplies and equipment; including pre-packed bags
- Medical linens (e.g., blankets, sheets, pillow cases, towels, washcloths, drapes, covers)
- Stool, stand
- Privacy screen
- Adhesive tape
- Spirometer
- Safety eye shields
- Disposable nitrile gloves
- Eyechart
- Sharps container
- Waste bin
- Headlamp
- Saline for irrigation
- Oto/ophthalmoscope
- Scalpels
- Stitch/staple removal set
- Iodoform packing - 1/4 inch x 5 yards
- Dermabond
- Irrigation splash field
- Fluorescein eye
- Woods Lamp