



Chesterfield Fire and EMS
Medication Exchange Program
April 2025



Background Information

Chesterfield County

- Population: 394,825¹
- Size: ~437 sq. miles

Fire and EMS Department

- ~600 career uniformed members
- 21 career fire stations
- Fire-based EMS service delivery
 - 21 fire engines (ALS)
 - 19 ambulances (ALS or BLS)
 - 3 peak demand ambulances (BLS)
 - 4 volunteer EMS agencies (ALS or BLS)

1 – Cooper Center estimate as of July 1, 2024

Medication Exchange Program Overview

Registered Locations

- 8 Fire stations
 - Selected by proximity to EDs
 - All AICs have access
 - Unique user ID/PIN
- Logistics warehouse
 - Backup/surplus storage

Designated Locations

- All other fire stations
 - Drug kits locked in apparatus cabinets



Registered Locations

- **Vending Machines**
 - Controlled substances
 - Out-of-box (OOB) medications
 - High-cost EMS supplies
- **Lockers**
 - Exchange of drug kits
 - Return of controlled substances
 - Storage for larger items (monitors/ventilators)
 - Return for expired OOB medications



Local Partnership

- A Chesterfield County pharmacy is used for medication restocking
 - Transactions are recorded by the vending machine software
 - The software reports are reconciled with the PCRs
 - Target Solutions is used for monthly reconciliation for drug kits on the apparatus
- Pharmacy technicians drive to the 8 registered fire stations twice per week
- Monthly service fees are paid per drug kit

Lessons Learned

- Ensure an adequate supply of drug kits before going live
- Ensure depth of personnel to troubleshoot issues
 - Hardware
 - Software
 - Procedures
 - Processes
- Implement a streamlined re-ordering process
 - Manual reconciliation across multiple software platforms is time-consuming
 - Automate if possible

Lessons Reinforced

- Ensure all associated procedures are updated and accurate
- Provide adequate reference materials to the end users
 - User guides
 - FAQs
 - Troubleshooting contact list
- Provide a feedback platform for the end users





Washington County Life Saving Crew

Serving you since 1952

Washington County Life Saving
Crew: Drug Kit Transition

Lieutenant Robert Ponton BS, EMT-P
Medications Officer



A Little Bit of Background...

- Washington County Life Saving Crew (WCLSC) is a paid agency (one station) that employs 3 full time shifts in conjunction with part time day and night rotations.
- Normal dayshift staffing during the week includes 2-3 ALS ambulances. Night shift is typically composed of 2 ALS ambulances.
- Staffing is augmented by Washington County Emergency Services, where I am also employed.
- Approximately 60 “members” are rostered.
- Primary response area is the town of Abingdon extending into Washington County.
- WCLSC currently responds to over 4,000 incidents per year

Drug Exchange: Out With The Old

- A one-for-one trade for used medication boxes, including “RSI” boxes was performed at Johnston Memorial Hospital in Abingdon, VA.
- Boxes were stocked with IV supplies and Southwest Virginia EMS Council protocol-based medications.
- A paper sign-in/ sign-out sheet was utilized.
 - A similar format was adopted by our agency.
 - A copy of the PCR was provided by our crews at the hospital to the pharmacy for exchange.
 - RSI boxes had limited expiration date timelines due to storage.
 - Ex. Succinylcholine

Preparation: In With The New

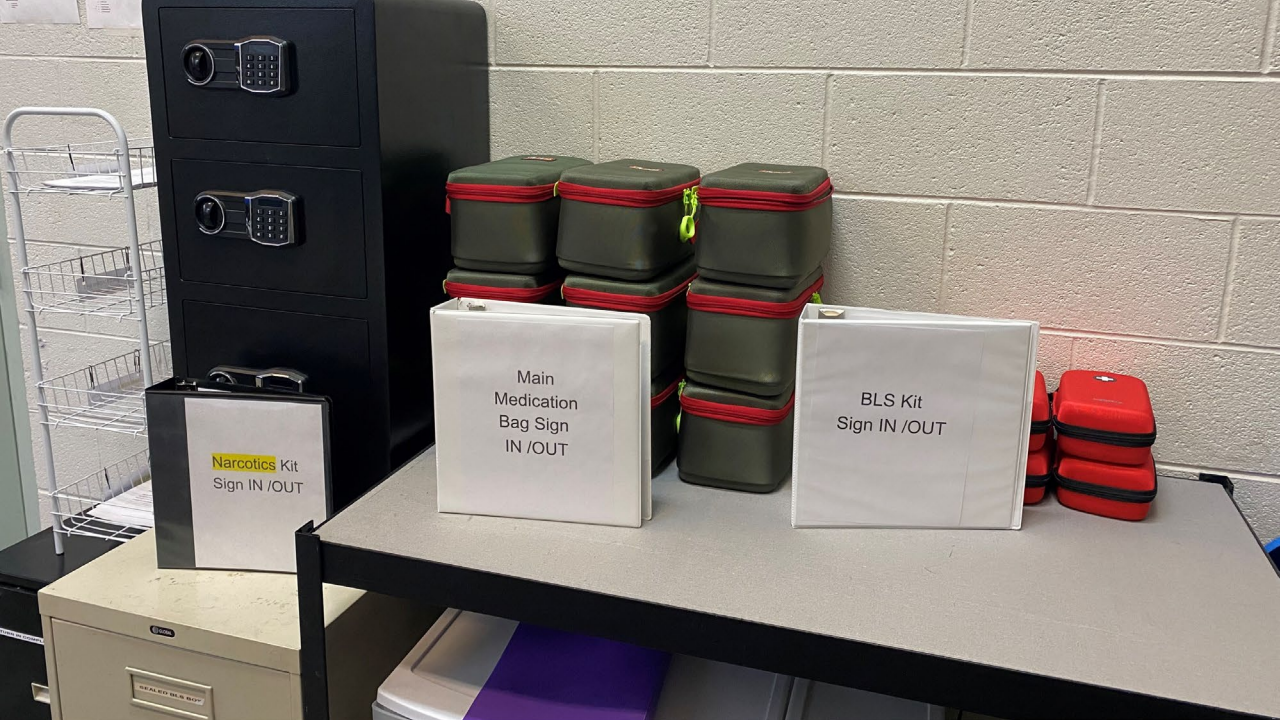
- The current supply room was chosen and modifications were made.
 - Cabinet was converted to hold extra medications
 - 2 Wall-mounted locked containers were installed to house wasted drugs.
 - The door lock is pin number based, individualized to each provider.
 - Security system installed.
- Virginia Board of Pharmacy was contacted with an inspection request.
- The Virginia Board of Pharmacy Controlled Substances Registration Inspection Report was used to prep the space.
- DEA request was made after passing inspection. Approval followed a couple of weeks later.



The Transition and Our Process.

- The agency opted for a vending machine system of tracking, stocking, and restocking medications.
 - ~\$11,000
- Biometric fingerprint access.
- Restricted to appropriate level of care.
- IQ Tech tracks usage/ vending.
 - Includes open/ closed door
 - Failed attempt
 - Access denied
 - Amount vended
 - Running count on medications/ par levels





Our New Medication Bags: Avoiding Overlap

- BLS with all 10 EMT – B level medications
- Main medication bag
- Narcotic Kit (including RSI drugs)

Controlled Substances: Schedule II and Beyond

DEA Form 222 was requested and sent via mail within a couple of weeks.

- Used specifically for schedule II medications (Fentanyl)
- Boundtree has an example form

Schedule III and above are ordered using similar method as other medications but DEA address must be on file with the DEA number.

- Ketamine, Midazolam, etc...

Current Operations: Restocking and Securing Our Drugs



- Crew restocks their own medications
- 2 lock method for narcotics
- Coded drug cabinet and seal
- Redundancies with paperwork
 - Online truck check
 - Waste forms paper and PCR
 - Physician approval form
 - Dual verification for vending machine
 - 2 signatures on inventory sheets

Putting it All Together: Daily Crew Routine

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•
Provider signs out appropriate bags at the beginning of their shift.

Sign-in/out sheet is utilized out of correct binder.
- Truck check is filled out with the same information.

If the seal is broken, the bag is restocked, and a new inventory sheet is filled out. The bag is retagged with “new seal” documented on the paperwork. New expiration recorded ON THE SEAL.

End of shift, bags are signed back in.

Only advanced providers have access to the narcotic safe (excluding extra inventory) and waste form is filled out for narcotics used.

Any sheets are turned into appropriate file in the cabinet.

Paperwork and Organization

Washington County
Life Saving Crew
Main Medication Bag Inventory Sheet
V1.1 3/18/2025

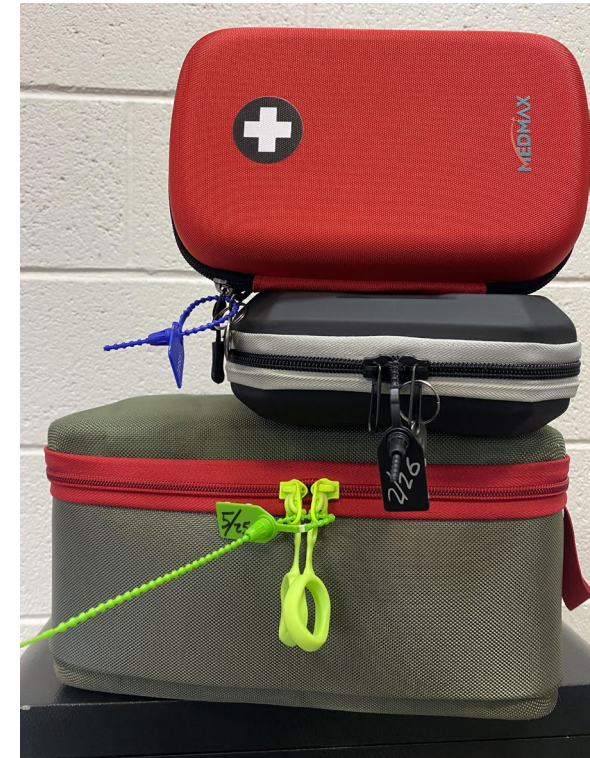
Medication Name	Quantity Used	Total Quantity Required to Restock	Expiration
Dopamine (Bag)		/1	
D 50% (25 g Vial)		/1	
Sodium Bicarbonate (50 mEq Vial)			
Lidocaine 2% (100 mg syringe)			
Calcium Carbonate (1g syringe)			
Epinephrine 1:10,000 (1:10 prefilled syringe 1mg)			
Atropine (1 mg prefilled syringe)			
Zofran (4mg vial)			
Diphenhydramine (50 mg vial)			
Solu-Medrol (125mg vial)			
Amiodarone (150mg vial)			
TXA (1,000 mg vial)			
Adenosine (6mg vial)			
Heparin (5,000-unit vial)			

V1.1 3/18/2025

Furosemide (40mg vial)	Metoprolol (5mg vial)	Clopidogrel (1 tablet)	Ketorolac (30 mg vial)	Epinephrine 1:1,000 (1:1 breakable ampoule 1mg)	Magnesium (1 g vial)	Naloxone (2mg Syringe)
/1	/3	/1	/1	/3	/2	/2

DATE: _____
BAG TAG NUMBER (METAL TAG): _____ OLD SEAL NUMBER: _____
NEW SEAL NUMBER: _____ UNIT NUMBER: _____
CAD NUMBER(S) FOR THE CALL(S) WHEN BOX WAS USED: _____
FIRST DRUG(S) TO EXPIRE: _____
EXPIRATION DATE: _____
Names: _____ Signatures: _____
AIC: _____ AIC: _____
Partner: _____ Partner: _____
Additional: _____ Additional: _____
COMMENTS/ DISCREPANCY: _____

*The AIC is ultimately responsible for the inventory and restocking of all medications within the drug bags/ boxes.



Pros and Cons

Cons

- **Cost**
 - Initial drug orders amounted to greater than \$10,000
- Backorders
- Paperwork (specifically C-II)
- Expiration tracking
- Discrepancy risk

Pros

- **Customization**
 - WCLSC has authored more than a dozen agency-specific protocols in the last 2 years.
 - Ex. Behavioral emergencies, respiratory emergencies, IV pump use, trauma, etc.
- Turn around times
- Scope of Practice
- Independence



Open For Future Discussion

We welcome any questions or insight regarding our agency-based pharmacy.