



# The Post-COVID Capacity Prescription for Health Systems

## Adult Medical Observation Units (MOBS)

**In the past**, medical institutions simply required physical space to provide high-quality patient care. With the onset of COVID, many institutions struggled underneath the burden of increased patient volume, increased patient acuity, and staff shortages. In response to this challenge, many facilities implemented COVID units and minimized the number of elective procedures offered. As medical care marches further and further away from the onset of COVID many healthcare institutions continue to struggle with staff shortages and how to efficiently utilize available beds within a single facility or across a cohort of facilities. Emergency rooms continue to be occupied by “boarded patients” who have been accepted for admission, but no physical bed is available. Patient stagnation in the emergency room quickly leads to patient dissatisfaction



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both by the waiting patient who has been admitted as well as by the patient presenting into the emergency room check-in area. Some facilities have implemented triage areas in waiting rooms in order to deal with the insufficient emergency room beds which can result from suboptimal staffing of the hospital wards. **Implementing an adult medical observation (MOBS) unit** can facilitate patient movement through the healthcare system while providing high-quality care. Optimally, this would also increase patient satisfaction with the healthcare experience by limiting the time a patient is “waiting for a bed.” Finally, observation units can decrease strain on hospitalist services and in some cases may be able to improve the patient's condition more rapidly so that he/she can be discharged home.

Observation (OBS) patients are those who usually require **less than 48 hours of hospitalization**. They can be located anywhere within a hospital although some facilities find the best way to care for observation patients is to have them in one location. Additionally, some institutions utilize specialized observation units (Cardiac OBS, chest pain OBS, Neuro OBS). Patients placed in these units often meet specific diagnostic criteria and may be managed by a specialist instead of a hospitalist. Whether OBS patients are located in designated areas or not, in order to efficiently and effectively care for observation patients the health care team needs to be well informed regarding available resources and function in a proactive manner. The old method of “rounding once a day” cannot apply to an OBS patient. As the OBS clock ticks by patients should be reassessed and additional procedures or interventions should be performed. By frequent patient re-assessments the provider can decide as quickly as possible if the patient **1) can discharge or 2) requires further care that extends beyond the typical OBS timeframe**. Given the need for frequent assessments and interventions, placement of OBS patients in a single location is the best geographical solution. The healthcare team that consistently occupies that geographic space can be educated on the specific needs of typical OBS patients and the capabilities of the facility. Utilizing a large rotational pool of providers is not the best method of care in an OBS unit.

In the following scenarios, the beneficial impact of an adult medical OBS (MOBS) unit will be discussed in more detail. MOBS units may not have adequate staff to care for patients who are debilitated, unable to ambulate or have certain psychiatric conditions. Specific exclusion criteria must be communicated to the healthcare team who recommends a patient for the MOBS unit as well as those who occupy the MOBS unit. Additionally, a patient who is identified as needing placement in a nursing home or swing bed should be excluded from the MOBS unit in most cases. This is not to say the excluded patients cannot be placed in observation status in a different geographical area outside the MOBS unit. Nursing and ancillary staff within the MOBS unit may simply not have the time or capabilities to properly care for a mental health patient or one who is chronically bedbound. A MOBS unit is unlikely to have enough security resources to accept patients who are suicidal or psychotic. However, a MOBS unit may be able to care for patients who have unintentionally overdosed (medication-induced hypoglycemia or bradycardia are two good examples).



## < 48 Hours of Hospitalization

**Patient Re-Assesment**

☐ Discharge

☐ Further care required

## Scenarios

- A** - Straightforward MOBS Patients
- B** - Complex MOBS Patients
- C** - Overflow OBS Patients
- D** - Overflow Inpatients
- E** - Transfers to MOBS
- F** - Direct admit to MOBS from clinic
- G** - Transfer to MOBS from a facility outside the healthcare system

## Straightforward MOBS Patients: →

These patients usually have a brief and straightforward medical plan (examples 2 and 3). Others (example 1) may have unique situations and putting them in a MOBS bed would be best for patient safety as well as reduce the risk of presentation back to the ER within a short time.

**1. A 70 y/o widower who lives alone** presented to the ER at 1800 with a friend. She had a **mechanical fall** while watering flowers on her porch with her neighbor. Her neighbor drove her to the ER. She **takes Eliquis for paroxysmal atrial fibrillation, 81mg aspirin, and lisinopril for hypertension. She did not lose consciousness and recalls the events surrounding the fall.** She has **normal sinus rhythm** on her EKG with a rate of 80. Her complete blood count, basic metabolic panel, and CT head are **all unremarkable.** She has a **hematoma on the posterior vertex.** She has no other evidence of injury. The time is 2000 and **she complains of headache.** The patient has **no local family,** and her neighbor has left the ER because she "cannot drive in the dark."

She is **admitted to the MOBS unit.** Her headache is treated **with Tylenol and one dose of hydrocodone.** She feels better in the morning and has **maintained normal sinus rhythm** on the monitor by 0700 the following day. At **0800 she is discharged,** and her neighbor drives her home. She is to **follow up with her primary care provider** in 2 days.

### Discussion:

This patient lives alone, takes anticoagulation, and has a head injury without loss of consciousness. She has no evidence of acute neurological or cardiac events. It is late in the evening, and she lives alone. Certainly, she could be discharged home but considering she lives alone, has a head injury, and takes anticoagulation it would be best to observe her for several hours.

**TOTAL MOBS UNIT TIME 12 HOURS.**



**2. A 48 y/o male** presents to the ER via ambulance at 1400 with **complaints of severe midsternal chest pain.** He was at a cook-out with some friends. He **developed sudden onset chest pain when he got choked on a Kielbasa sausage.** His friends called 911. In the emergency room, he admits he and his friend had a contest over who could eat the most sausages in one minute. He was **also consuming beer.** He has **no**

**medical problems and only takes occasional Goody's powders for aches and pains.** He is active on his job as a landscaper. He is **mildly tachycardic, salivating, and having frequent belching alternating with dry heaves.** He is **given morphine for pain, Zofran for nausea, and IV Pepcid.** His EKG reveals **sinus tachycardia,** his complete blood count shows **macrocytosis,** his complete metabolic panel shows **mild elevation of his transaminases,** and his chest radiograph is **unremarkable. A food bolus is suspected** as the cause of his chest pain. **Gastroenterology is consulted** but will not be available to perform an EGD for at least 2 hours.

He is **admitted to the MOBS unit.** He required **additional doses of morphine** and a **few doses of sublingual nitroglycerin** to help with esophageal spasms. An **additional troponin** was obtained at 3 hours which was normal. He had an EGD performed at 1800 with **successful removal of a food bolus.** He was **discharged home on a liquid diet for 24 hours.** He left the unit at 2200 with a **prescription for a proton pump inhibitor.**

### Discussion:

This patient had a food bolus requiring gastroenterology intervention. He was found to have esophagitis and counseled on avoiding "eating contests" as well as reducing his alcohol intake. He was successfully treated and able to be discharged with GI follow-up in 4 weeks.

**TOTAL MOBS UNIT TIME 8 HOURS.**



**3. A 44 y/o female** presents from her primary care clinic to the ER via private vehicle at 0900. She **was told to come to the ER** because she **needed a transfusion.** Her **only complaint was fatigue.** She has a **history of uterine fibroids** and admitted that she **did not follow up with her gynecologist** after a previous hospitalization for **anemia around 3 months ago.** According to the records, her **hemoglobin and hematocrit were 10 and 30 prior to that hospital discharge** (after receiving 3 units of PRBCs). Today her **H & H are 5.5 and 20.** She continues to have heavy periods that occur every 3 weeks and last for around 10 days. She was given a **prescription "for a hormone pill" at discharge but did not get it filled.** She has no other past medical history. She works as a teacher and does not use tobacco or alcohol. She is tilt positive in the ER with a resting cardiac rate of 110. **A CT pelvis is obtained with no abnormalities except for large uterine fibroids.** Her INR, basic metabolic panel, and UA are **all unremarkable.** She is stool occult blood negative and denies hematuria,



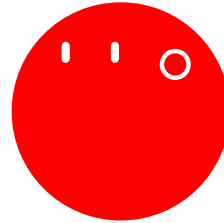
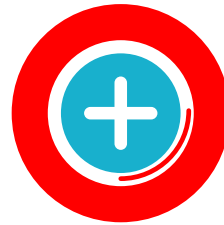
*GI symptoms, melena, or hematochezia.*

*She is **admitted to the MOBS unit** and **transfused 2 units of PRBCs**. While awaiting her blood transfusion she is given 1 liter of normal saline. Her **tachycardia resolves** and she can now ambulate without having orthostatic symptoms. She **tolerates the transfusion well** and is given a prescription for an oral contraceptive. She is **to follow up with her gynecologist in 5 days** and is **discharged at 1900**.*

### **Discussion:**

This patient has known uterine bleeding and requires a transfusion. She has symptomatic anemia with a source. Her symptoms quickly improved with transfusion, and she was counseled on the importance of her follow-up appointment to discuss long-term options of treatment for her uterine bleeding.

**TOTAL MOBS UNIT TIME 10 HOURS.**



## Complex MOBS Patients:



These patients may require additional testing, serial lab work, or monitoring for a period of time.

**1. An 84 y/o right-handed male** presents to the ER at 1400 via ambulance for **dysarthria and left arm weakness**. He reports that **his arm felt heavy last night when he went to bed at 2100**. This morning when he was talking on the phone to his daughter, she noticed his **speech was “staccato-like.”** He admits to having **numbness off and on for the past several weeks in his left arm**. He states it usually lasts a few hours. His **medical history includes diastolic congestive heart failure** with preserved ejection fraction, chronic kidney disease stage III, hypertension, COPD, and previous skin cancer. His speech is clear in the emergency room. He has **mild dysesthesias to light touch on the left forearm**. His EKG reveals normal sinus rhythm with left ventricular hypertrophy with a rate of 80. His blood pressure is 165/ 90. His CT head, chest radiograph, CBC, and INR are all within normal limits. His Serum creatinine is 1.6 and at his baseline. He **took 325mg of aspirin before coming to the ER**. He takes **atorvastatin, lisinopril, metoprolol, and furosemide**. His initial NIH score is 1.

An **MRI brain is ordered**, and he is **admitted to the MOBS unit at 1500**. He has serial neuro exams. At 1800 he **develops slurred speech and left arm weakness**. NIH score is now 5. **MRI is then obtained which reveals an acute infarct**. Neurology is **consulted and the patient is switched to inpatient status** and transferred to the hospitalist service at 1900.

### Discussion:

This patient had risk factors for stroke and described recurring symptoms very concerning for neurological cause over the previous few weeks. Clearly, this patient warrants further investigation beyond the initial work-up which includes serial neurological exams by the healthcare team. Prior to the MRI, he had a change in his neurological exam which prompted an emergent MRI. In this patient, the MOBS unit was able to continue the care plan until a definitive diagnosis could be made and the patient then be admitted as inpatient with the diagnosis of acute stroke. In this patient, the ER was able to move the patient to the MOBS unit quickly; thus, allowing another patient to occupy the ER room while this patient continued to receive appropriate care and monitoring for stroke.

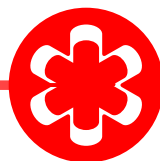
**2. A 50 y/o female with obesity and COPD** presents to the emergency room for **wheezing at 1900**. She works as a grill cook at a local restaurant and **smokes 1 pack of full-flavor cigarettes per day with a few marijuana blunts each weekend**. She has been using **her albuterol MDI more frequently over the past 2 days**. She saw her **primary care provider 3 days ago** and was given **a Medrol-dosepak, a decadron shot, and guaifenesin tablets**. Her O2 sat on arrival is 92% on room air. Her chest radiograph demonstrates peribronchial thickening with no discrete lobar pneumonia. **She has wheezes anteriorly with some rhonchi that clear with coughing**. Her WBC is 12,000. She is afebrile. Her sputum is light tan. Her basic metabolic panel is **unremarkable**.

She is **given 4 back-to-back albuterol treatments** with improvement of her wheezing. She is also given **80mg of IV Solu-medrol**. She **continues to wheeze but is now producing more sputum**. She tells you that she needs to be back at work in 3 days. She **is admitted to the MOBS unit at 2200**. She is given **albuterol nebulization treatments every 4 hours with chest physiotherapy**. She is **continued on Solu-medrol and given IV labetalol for elevated blood pressure** as a result of the IV corticosteroids. The following day **she feels much better**, her wheezing improved, and she is mobilizing more mucus. Her room air O2 sat is 97% after ambulation. **She is given a work excuse for 1 day and discharged at 1800**.

### Discussion:

This patient has chronic pulmonary disease with an acute exacerbation that can likely be improved in a relatively short timeframe. She could have been treated in the ER over many hours and sent home but this would have slowed down ER productivity and flow. Despite initial management in the ER she continued to have symptoms. In this patient, the ER was able to “free up a bed space” and the patient was able to continue to get care that would allow her to return home and return to work soon. This patient easily demonstrated how the MOBS unit can prevent an admission and facilitate ER flow.

**TOTAL MOBS UNIT TIME 20 HOURS.**



**TOTAL MOBS UNIT TIME HOURS 4 HOURS. TOTAL HOSPITAL LENGTH OF STAY 3 DAYS.**



## Overflow OBS Patients:

This patient may qualify for an existing specialty OBS unit; however, when that unit is at capacity the MOBS unit can take the patient as overflow.

**1. A 48 y/o male** presents to the ER at 0800 via ambulance for **chest pain**. He **developed sudden onset midsternal crushing-type chest pain** while at work. He is a roofer and **smokes 1 pack of cigarettes a day**. He has **no known medical issues**. His father died of a myocardial infarction at the age of 55. His older brother had CABG at the age of 45. He is active on his job and **admits to having episodes of chest pressure over the last 3 months while at work**. The pain occasionally radiates to his **left jaw and lasts up to 20 minutes**. It is occasionally associated with nausea. He finds relief by **taking a few aspirin and resting**. His EKG demonstrated normal sinus rhythm without ectopy. His blood pressure is 165/95. His cardiac and pulmonary exams **are normal**. However, he has a **Frank's crease and periorbital xanthomas**. His initial troponin is negative, and his complete blood count, basic metabolic panel, and chest radiograph are **all normal**. The **ER provider calls for a bed in the chest pain observation unit at 0930**, but the **unit is at capacity and has no potential discharges within the next few hours**.

The **patient is admitted to the MOBS unit at 1000** and is seen by the cardiologist within an hour. Due to the patient's risk factors and family history, **he is taken for cardiac catheterization**. He has diffuse coronary vessel disease not amenable to intervention. He **is placed on a statin, daily aspirin, and metoprolol XL**. He is **counseled** on diet modification, smoking cessation, and given a prescription for nicotine patches. He is **discharged at 1800 and given a one-week appointment with a primary care provider**.

### Discussion:

This patient would be ideal for a chest pain obs unit; however, the unit was at capacity. By moving the patient to the MOBS unit, this prevented an unnecessary admission to the hospital and the patient was able to be closely monitored prior to and immediately after cardiac catheterization. Similar to the food bolus example above, MOBS unit staff can be utilized to help with patient monitoring after a procedure (cardiac catheterization, endoscopy, interventional radiology procedures).

**TOTAL MOBS UNIT TIME 8 HOURS.**



**2. A 40 y/o obese female** presented to the outpatient surgery unit **for elective right shoulder surgery**. Her shoulder injury **was a complication of a mechanical fall six months ago**. She has been **on hydrocodone daily for pain control**. She has hypertension treated with **amlodipine and obstructive sleep apnea with nightly CPAP machine**. She undergoes surgery which **lasts 45 minutes longer than expected**. She remains in the recovery area due to somnolence and a 2 Liter nasal cannula oxygen requirement. Her husband tells the orthopedics doctor **he does not feel comfortable taking her home in this shape**. At 1400 the orthopedist calls the nursing supervisor to see what can be done. **The patient is in no distress and arouses to physical stimuli**.

The **patient is placed in the MOBS unit at 1600**. She is now **more alert and can sit on the side of the bed but still requires 2 Liters of O2**. She is able to stand and needs **little assistance**. She is continued on oxygen and is given CPAP overnight at her home setting. She is given **additional hydrocodone for pain**. By 1100 the next day she is on room air and can ambulate with no decline in her O2 saturation. She is instructed on incentive spirometer use prior to discharge. **Her husband is happy she was able to be monitored overnight** and even says, "If I would have taken her home last night, I would have called 911 in the middle of the night."

### Discussion:

This patient has sleep apnea, takes opiates, and is obese. All of these increase the risk of postoperative complications including atelectasis and prolonged somnolence from intravenous sedation utilized for the orthopedic procedure. MOBS patients can come from a variety of settings including the outpatient surgery service. Had the patient not been placed in MOBS and gone home, it is highly likely the husband would have called EMS services. By placing this patient in MOBS the family members' concerns were heard and acted upon, and the patient received appropriate monitoring in the post-operative setting. Furthermore, by moving the patient out of the surgical recovery area, the nursing staff were able to clock out at their scheduled time.

**TOTAL MOBS UNIT TIME 19 HOURS.**



## Overflow Inpatients:



This patient may meet inpatient criteria (sometimes barely) but is expected to improve within a very short period of time. Utilizing the MOBS unit for this type of patient can help offload an overwhelmed inpatient service whether based on actual bed availability or staff shortages. Furthermore, patients with chronic conditions who require frequent hospitalization (although brief) can be placed in OBS to prevent a “30-day bounce back.” These patients require MOBS medical staff that can prioritize what can be improved in a short period of time (< 24 hours) and understand what needs to be followed up in the outpatient setting.

**1. A 67 y/o female presents to the ER via private vehicle at 1100 from her primary care clinic. She presented to the clinic for fatigue, dyspnea, and weakness. She has metastatic breast cancer and is currently undergoing chemotherapy. She has a recurring left pleural effusion that has been drained by interventional radiology three times within the past 8 months. Both her oncologist and primary care provider are in the same medical system as the hospital. A chest radiograph reveals recurrence of her pleural effusion on the left and is essentially the same as the previous radiograph 3 months prior. She is on home oxygen at 2 liters and has a history of hypertension and COPD. Her oxygen saturation is 96% on 2 liters. She is normotensive and has no EKG abnormalities. Her labs reveal anemia a bit worse than her baseline without thrombocytopenia or leukopenia. She has mild acute kidney injury as well as low magnesium and potassium, but she takes HCTZ. CT chest is negative for pulmonary embolism and demonstrates no evidence of pleural fluid loculation. She is afebrile. Her oncologist is notified and would like for the patient to be transfused and have a thoracentesis for symptomatic relief. At 1400 the ER provider calls for inpatient admission, but no beds are available, and 12 patients are in line ahead of her for medical beds. The patient does not want to be sent to another facility “away from my own doctors.” Interventional radiology can perform a thoracentesis “sometimes later today.” The blood bank reports that her blood “will take a while to match” because she has antibodies. They hope to have 2 units of packed red blood cells for her within the next 8 hours.**

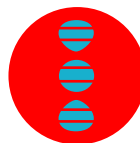
**The patient meets inpatient criteria and does not want to be transferred to a hospital outside her preferred healthcare system. The MOBS physician accepts the patient at 1500 with the understanding that the patient**

**may need to be converted to inpatient depending on her response to therapy and how quickly her interventions can be completed. She does well in the MOBS unit and has a thoracentesis at 1800. Her first unit of blood is completed the following morning at 0200 and the second unit at 0600. She is given intravenous magnesium and potassium overnight. The following morning the patient feels much better, has no dyspnea, and asks to go home. She is discharged at 0900 and thankful that her care could be completed “at the place I like best.”**

## Discussion:

This patient meets inpatient criteria but her preferred hospital (where she presented to the ER) is at capacity. She has a chronic medical problem that requires frequent interventions (blood products and interventional radiology procedures). Despite her meeting inpatient criteria, the patient is placed in the MOBS unit where she can hopefully receive the treatment she needs in a short period of time and return home. Certainly, she could decompensate and require movement out of the MOBS unit but a patient such as this is also very likely to improve. She has been transfused in the past and had thoracentesis in the past without complications. Furthermore, she does not want to be transferred to another hospital. By placing her in the MOBS unit she is able to receive the care she needs at her preferred hospital. Also, by moving her out of the ER to the MOBS unit she did not occupy an ER bed for an extended period of time. In this scenario, had this patient not been transferred to the MOBS unit she would have occupied the ER bed for more than 12 hours.

**TOTAL MOBS UNIT TIME 18 HOURS.**





**2. A 75 y/o male presents to the ER from a nursing home via ambulance at 2000. He choked while eating coffee and donuts during the Saturday night movie marathon at the nursing home. He had one episode of emesis that was observed by the nursing staff. Soon afterward he became short of breath and was placed on oxygen until EMS arrived. He did not lose consciousness. He has a history of GERD and Parkinson's disease. The nursing staff report that he has "no problems with his mind, he just walks slow and has the shakes." On arrival at the ER his O2 saturation is 84% on room air but 98% on 1 Liter. He has a nonproductive cough. He denies any complaints other than wheezing. He has no history of pulmonary disease but worked in a paper mill for 45 years "around the worst stuff you could ever breathe." His lab work reveals mild dehydration and hypokalemia. CXR and CT chest demonstrate pneumonitis vs early patchy pneumonia on the right. He has no fever. When he ambulates his O2 sat drops to 78% on room air and he becomes dyspneic. He has no cardiac history. Old records within the hospital system reveal a normal ECHO 6 months ago as well as a normal nuclear stress test. He participates in daily yoga at the nursing home. The nursing home where the patient resides usually sends all their patients to the current hospital.**

**The ER provider calls for an inpatient bed at 2200. Based on his presentation he barely meets inpatient criteria. Due to staff shortages, the inpatient service is at capacity. A bed is available at a competing hospital across town. The MOBS provider is asked about accepting the patient. The patient is transferred to the MOBS unit at 2300. He was given supplemental oxygen and respiratory therapy worked with him overnight on incentive spirometry and flutter valve. He was not given antibiotics but did receive albuterol nebulization treatments. By 2000 on the following day, he is off oxygen and can ambulate without desaturation. He still has a mild cough but performs a bedside swallow test with ease. His lung exam demonstrates mild wheeze that clears with coughing on the right. He is discharged at 0700 on day 3 back to the nursing home with instructions to follow up with speech therapy at the facility. He is given an incentive spirometer and an albuterol inhaler.**

### Discussion:

This patient met inpatient criteria, but no bed was available at the preferred facility. He was placed in the MOBS unit and given appropriate respiratory

treatments. He clinically improved within 23 hours however the nursing home did not want him to return to the facility after 2000. He was able to be discharged back to the nursing home the following morning. This scenario illustrates that the MOBS unit can function to treat patients that meet inpatient criteria and have a good functional status. By placing this patient in the MOBS unit, it prevented him from being sent to another facility that did not have access to his records. This prevented loss of income for the hospital system and allowed the patient to stay within the system where he usually receives medical care. Finally, he had a long stay within the observation unit but given his improvement and the time limitation for return to the nursing home he was best served by remaining in the MOBS unit. A transfer to the inpatient service at hour 24 for an additional 8 hours of care would not be the most efficient use of hospital resources. This patient would be an outlier for the MOBS unit; however, the outlier is justified in this scenario.

**TOTAL MOBS UNIT TIME 32 HOURS.**





## Transfers to MOBS:



These patients are transferred from a sister site within the healthcare system. Usually, this means transfer to a larger facility with more resources (specialty consults or MRI capabilities, for example). The MOBS accepting providers usually have access to the EMR of the smaller site.

**1. A 51 y/o female presented to a small community hospital via private vehicle at 0900. She complains of midespigastric pain, dark stools, and nausea. She has been seen several times within the past year at a local clinic as well as the ER for similar complaints. She missed several appointments with a gastroenterology clinic 40 miles away. She consumes 5 beers per day and smokes 2 cigars per day. She has hypertension, gout, and rheumatoid arthritis. She takes amlodipine, colchicine, prednisone, and naproxen daily. She explains she missed the gastroenterology appointment because she "can't pay for the gas." She has frequent burning-type chest pain that is often relieved by "a few gulps of that liquid chalky stuff."**

The ER nurse practitioner obtained a hemocult that was negative. The patient is in no distress and is not hypotensive or tachycardic. Her labs reveal iron deficiency anemia with a hematocrit several points lower than one obtained in the ER one month ago (25 vs 32). The patient is given intravenous pantoprazole and ondansetron with a GI cocktail with improvement in her symptoms. Her other lab work is unremarkable except for mild elevation of transaminases. A CT abdomen is obtained with no acute abnormalities other than mild cirrhosis. Her INR is 0.9 and her platelets are normal.

The community hospital does not have gastroenterology and any blood products that need to be given must be transported via courier from the larger, sister hospital. At 1130 the NP called the sister hospital to ask about transfer due to the need for transfusion as well as gastroenterology consultation and possible EGD. The patient received intravenous saline during transport.

The patient was transferred via ambulance from the community hospital to the MOBS unit. The patient arrived at 1400 and the gastroenterologist was contacted. A repeat Hct was 23. An EGD was performed at 1600 which demonstrated a duodenal ulcer with no evidence of bleeding as well as diffuse gastritis with mild esophagitis. The patient is transfused 2 units of packed red blood cells that complete at 2200.

Repeat Hct the following morning is appropriately improved, and the patient's symptoms have improved. She is discharged at 1100 after she is observed to have no further symptoms and tolerates a regular diet. She is instructed to follow up with gastroenterology in 4 weeks and her primary care provider (who has access to the electronic records) in 2 weeks.

## Discussion:

This patient required a higher level of care from the community hospital. She has a problem for which she has sought care numerous times but failed to follow up for definitive diagnosis (with the gastroenterologist). The best course of action at this time is to determine a diagnosis and give definitive treatment. In this case, the patient is hemodynamically stable and meets observation criteria for a GI bleed. To minimize duplication of care, the patient can be transferred directly from the community ER to the MOBS unit within the larger, sister hospital. If needed the patient could be seen again by the ER provider at the larger hospital but unnecessary unless there is a decline in the patient's condition during transport. The patient is quickly seen by the specialist upon arrival at the MOBS unit and a procedure is performed.

## TOTAL MOBS UNIT TIME 21 HOURS.



**2. A 60 y/o male presented to a community hospital via EMS for shortness of breath at 0800. He was on BiPAP on arrival from the field. He ran out of his furosemide a week prior and has been going to a jambalaya festival every day for the past 3 days. He has a history of systolic congestive heart failure with an ejection fraction of 30%, chronic atrial fibrillation on warfarin, and COPD. He does not wear home oxygen but is prescribed several inhalers. He admits to drinking a few beers each day at the festival. He sees a cardiologist associated with the sister hospital.**

His initial O2 sat in the field was 78% but improved to 98% on BiPAP. His blood pressure is 190/100 mmHg. His chest radiograph demonstrates pulmonary edema. His EKG shows afib with a rate of 90. His troponin is negative, serum creatinine at his baseline of 2.3, and BNP of 6000. His remaining labs are normal, and he has an INR of 3.1. He has 3+ pitting edema to his thighs and diffuse crackles

throughout all lung fields with tachypnea. A **catheter is placed**, and he is given 80mg of IV furosemide and 0.5 inches of **nitropaste are applied to his chest wall**. Within 2 hours he has diuresed about 800mL. The NP in the **ER called to have the patient admitted** but the hospitalist at the community hospital thinks the **patient warrants cardiology and pulmonology evaluation**. The patient's **dyspnea improves**, and he is **transitioned off BiPAP to 4 L of O2 by nasal cannula**. At 1100 the NP calls to see if this patient can come to the MOBS unit of the sister facility.

The **patient arrives at 1300 to the MOBS unit on 4 L O2** and with a catheter. He is **quickly weaned to 2 Liters**. He **receives additional doses** of 80mg of IV furosemide at 1500 and 2100. By the following morning, he has **diuresed a total of 3.5 Liters**. His serial troponins are negative. His dyspnea is **much improved**, and he is now on room air with an O2 sat of 95%. Repeat labs **demonstrate hypokalemia**. He is ambulated in the MOBS unit and maintains an O2 sat of 92%. His blood pressure is now 135/80 with afib at a rate of 65. He is given **oral potassium and a prescription for potassium and furosemide at discharge**. The heart failure nurse for the cardiology clinic **sees the patient prior to discharge and makes a 3-day follow-up appointment**. The patient is discharged at 1100.

### Discussion:

This patient was refused admission by the hospitalist at the community hospital due to concerns about his cardiopulmonary status. The patient was transferred to the MOBS unit after appropriate treatment was initiated by the NP in the ER. He quickly improved and was able to be seen by the CHF nurse who works with his cardiologist. Despite his initial BiPAP requirement, he was able to be transitioned to room air in less than 24 hours. This patient is a good example of how a MOBS unit can function to keep a patient within a hospital system but not put a strain on specialty services (cardiology and/or pulmonology).

**TOTAL MOBS UNIT TIME 22 HOURS.**



## Direct admit to MOBS from clinic: >>

These patients do not meet inpatient criteria and have been seen in a primary care or specialty clinic. The MOBS provider may not have access to the patient's records in this situation.

**1. A 45 y/o male presented for a follow-up appointment to his primary care provider. He was seen four days prior for cough, wheezing, and fever. He was prescribed a Medrol-Dosepak and amoxicillin for bronchitis and told to return to the clinic if he was not improved. He has a history of asthma and GERD. He takes a long-acting steroid inhaler, albuterol MDI and omeprazole. He reports compliance with the antibiotic and steroid prescribed a few days ago. In the clinic his temperature is 101, he is tachypneic, and his O2 sat on room air is 94%. A chest radiograph is obtained which demonstrated patchy pneumonia. His flu and COVID tests are negative in the clinic. He has a WBC of 15,000 and wheezing on exam.**

**His primary care provider calls the hospital for admission and because the patient does not meet inpatient criteria the MOBS provider is notified. The patient is accepted and arrives to the MOBS unit at 1400. He is placed on IV ceftriaxone and given nebulized albuterol and IV solu-medrol 60mg every 8 hours. Overnight the patient's wheezing improves, and he is now afebrile. He is given a second dose of ceftriaxone prior to discharge and written prescriptions for a 5-day prednisone taper, cefuroxime antibiotic, and an albuterol MDI. He is instructed to return to his primary care provider in 5 days. He is discharged at 1100 on day 2 of observation.**

### Discussion:

This patient was seen in the clinic and failed outpatient treatment for his pneumonia with asthma exacerbation. He is young without many comorbidities and has a high likelihood of improvement within 24 hours. Therefore, he was appropriate for the MOBS unit. The MOBS provider did not have access to the patient's clinic chart, but the primary care provider sent a copy of the clinic note with the patient. A MOBS unit does accept some risk in accepting patients directly from clinic if they are misrepresented by the clinic provider. Patients may prefer to be a "direct admit" which allows them to bypass the ER and any associated wait time. This is certainly understandable and a reasonable approach

to admission as long as the clinic provider does not misrepresent the patient. Doing so may lead to patients presenting to the MOBS unit who are much sicker than described.

## TOTAL MOBS UNIT TIME 21 HOURS.



**2. A 60 y/o male presented to his gastroenterology clinic at 1700. He has a history of GERD, Schatzki ring, and oral tobacco dependence. He has required esophageal dilation in the past. Over the past 2 weeks, he has noticed progressive dysphagia, nausea, and frequent belching. He does not take NSAIDs. He has not experienced melena or hematemesis. He is seen by the NP in the gastroenterology clinic. The gastroenterologist would like for the patient to be admitted for symptom control and plan for an EGD in the morning.**

**The gastroenterology clinic NP calls for admission. The MOBS provider accepts the patient who arrives at 1900. Basic lab work is obtained and within normal limits. He is placed on IV pantoprazole and IV ondansetron overnight. He is made NPO at midnight and an EGD is performed at 0700. The patient has successful esophageal dilation and is monitored for a few hours after his procedure. His upper GI symptoms are resolved, and he tolerated a soft diet. He is discharged home at 1000.**

### Discussion:

This patient was seen in a specialty clinic and due to the late hour of his appointment an EGD could not be performed easily on that day. He was placed in the MOBS unit and his needed procedure was performed early the following morning. This scenario demonstrates the value of a MOBS unit to specialty providers who have a patient who either needs a procedure the next morning or who needs rapid symptom control prior to a procedure.

## TOTAL MOBS UNIT TIME 15 HOURS.





## Transfer to MOBS from a facility outside the healthcare system:

This type of MOBS admission may be the riskiest from a length of stay standpoint. However, in many situations, this would allow a patient who is not connected with the MOBS unit healthcare system to make a connection. This type of admission should be closely monitored for abuse by transferring providers/ systems. Usually, the MOBS provider would not have access to the patient's chart and would rely on information dispatched with the patient.

**1. A 42 y/o female presents to an ER not associated with the MOBS healthcare system with complaints of nausea, dysuria, and left flank pain at 1800. She has hypertension and takes HCTZ. She has hematuria, fever, and foul-smelling urine. Urinalysis demonstrates casts and red cells. A CT pelvis is obtained and demonstrates left-sided nephrolithiasis with mild obstruction and hydronephrosis. Her labs reveal a WBC of 20,000, acute renal injury, and dehydration. She is given IV hydromorphone, ondansetron, and 2 liters of normal saline. The urologist who usually takes call at the facility is on vacation with no backup coverage. The ER provider calls the MOBS hospital to see if the patient can be transferred for urology consultation. The MOBS provider speaks with the ER provider at the referring facility and agrees to accept the patient. The MOBS provider suggests the patient get blood and urine cultures prior to transfer as well as a dose of IV gentamycin.**

The patient arrives at the MOBS unit at 2200. She is given additional IV fluids, labs are obtained, and she is continued on IV gentamycin. The urologist sees the patient at 0600 the following morning and performs stone retrieval with ureteral stent placement. The patient's symptoms quickly improve. She is continued on IV fluids. Prior to her discharge at 2000 her abdominal pain, nausea, and dysuria have all significantly improved. She is tolerating a regular diet, her WBC is now 11,000 and her renal function has returned to baseline. At the time of her discharge, her blood and urine cultures are pending but she is given prescriptions for oral ciprofloxacin, hydrocodone, and ondansetron. She has a follow-up appointment with the urologist in 3 days who will follow up on the culture results.

of patients from outside facilities can quickly lead to increased revenue for a health system especially when procedures and consultants are involved. Appropriate use of the MOBS unit could easily translate to increased use of the health system by outside referral sources as well as directly by patients. This patient was able to bypass the ER and go directly to the MOBS unit to be seen by a provider. This helps prevent ER backlog and likely increases patient satisfaction. Educating specialists on the value of a MOBS unit will help ensure the MOBS unit receives appropriate patients and functions at high capacity.

### TOTAL MOBS UNIT TIME 22 HOURS.



**2. A 36 y/o male presents to an ER not associated with the MOBS unit via ambulance after having a witnessed syncopal event while at a local park. He was attending a wedding party and according to a friend, "ate very little and drank all day." According to the friend, he has no known medical problems and takes no medications. He is a medical student. A CT of the head is negative and basic lab work reveals dehydration and hypokalemia. His EKG interpreted by the physician at the ER, "looks a bit wide but I think it's okay." The ER provider calls the MOBS hospital about a transfer at 1700. The ER is unable to accept the patient due to a backlog of patients. The MOBS physician is contacted about whether or not this patient can be directly accepted to the MOBS unit. The patient is accepted and given IV fluid boluses and IV potassium supplementation during transport. The patient arrives to the MOBS unit at 1900.**

Upon arrival, the patient can carry on conversation, has tachycardia with a rate of 110, and is in no distress. Soon after being placed on the monitor, he has two brief episodes of tachycardia with a rate up to 160s. An EKG is obtained and the QRS complex has a delta wave. The MOBS provider speaks to the cardiologist on call and the patient is accepted to the cardiac critical care unit at 2000.

### TOTAL MOBS UNIT TIME 1 HOUR.



## Discussion:

This patient needed a specialist who was not available at a facility outside the MOBS health system. Acceptance



## Discussion:

This patient warranted further evaluation, but the ER is unable to accept the patient due to being at capacity and having boarders in the ER. The patient arrives to the MOBS unit and is quickly determined to have an AV reentrant tachycardia. This patient did not remain in the MOBS unit but for a brief amount of time but because the patient was accepted to the MOBS unit a diagnosis could be made and appropriate urgent consultation obtained with cardiology. Had the MOBS unit not accepted this patient, he likely would have gone to another facility; thus, the MOBS health system would have lost revenue. Generally speaking, the MOBS unit should be occupied by patients who require at least several hours of monitoring and/ or intervention. If patients are discharged within a few hours of arriving in the MOBS unit they may have been better served by being discharged from the ER. This patient's short stay, however, is justified because the patient was rapidly connected to the needed consultant service.





## Review

The above examples are intended to highlight specific situations where a MOBS unit can be of great value to both the patient and the health system. Since patients can arrive to the MOBS unit at any hour a provider is needed at all times. An efficient way to run a MOBS unit (depending on the overall capacity of the unit) is to have 24-hour coverage by either nurse practitioners and/or physician assistants. A supervising physician can be available via phone or by telehealth platform. The providers need to be comfortable with both emergency and hospital medicine as the MOBS unit will function in both roles. Patients who may have historically been observed in the ER and then discharged may now be monitored in the MOBS unit (concussions, for example). A MOBS unit needs a dedicated nursing team and depending on resources ancillary staff to include phlebotomist, respiratory therapy, and case management.

**One key point to remember is that each hour in the MOBS unit needs to be justified and utilized** (even if this is just an hour of monitoring).

By analyzing the admission and discharge diagnosis and reasons for conversion from the MOBS unit to another service (hospitalist, cardiology, ICU, etc.) the unique characteristics and needs of the local community can be better understood and hopefully accommodated. Additionally, the MOBS unit leadership team must determine and optimize wait times for procedures and turnaround times for reports (MRI and ECHO are two common procedural needs). Finally, the time needed to obtain a consultant and the recommendations to be documented must be monitored closely. A MOBS unit can be at capacity and become paralyzed by long wait times for procedures or consultants. If this occurs, methods should be put in place to prioritize the MOBS patients. Failing to do so will turn the rapid turnover MOBS unit into a standard hospitalist service.

Some insurance providers now require patients to be initially placed in observation status when admitted to the hospital (except for ICU and certain COVID admission). If the patient meets inpatient criteria but insurance mandates observation status initially these patients would be excluded from the MOBS unit. The exception to this exclusion would be when the hospital is at capacity and the MOBS unit can meet the specific needs of the patient (Subheading D above). One final and unique discussion about a MOBS unit to consider is whether or not the MOBS unit can accept patients

who require isolation (influenza and COVID). A MOBS unit with the capabilities to care for moderately sick COVID patients would be of great value to most health systems. These patients may have unique needs for their discharge which would require additional ancillary help. Specifically, they may require home health or home oxygen which is usually a task for case management. A straightforward elderly patient with mild COVID who has dehydration and minimal respiratory needs would be a good patient to select for the MOBS unit if the unit has the capabilities to prevent infection of other patients occupying the unit.

## Conclusion

A MOBS unit can make a significant impact on a single healthcare facility or a cohort of facilities by improving patient flow and maximizing bed utilization. Optimally, two or three patients would occupy the same physical bed space within a 24-hour period. The benefit of a MOBS unit to patients is that they continue to receive high-quality care and can hopefully be dispositioned to home or a specialist service within a relatively short period of time. An additional benefit of the MOBS unit is to hopefully improve provider, nursing, and ancillary staff satisfaction primarily by decreasing patient boarding across the system. A properly functioning MOBS unit can be a very rewarding practice location. When the healthcare team participates in rapid evaluation, assessment, and treatment of patients many will find this rewarding. When patients are seen as “waiting for a bed” or “waiting for a disposition” this often leads to dissatisfaction not only for the healthcare team but also for the patient. By improving the mechanics of patient delivery, a MOBS unit can easily be a game-changing event.



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for expert help to see if a MOBS unit  
**is right for your health system.**



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