

# Pharmacy and the MOD<sup>®</sup>

## Medication on Demand (MOD<sup>®</sup>) Overview



MOD<sup>®</sup> is a physician-ordered oral patient controlled analgesia (PCA) device for use in hospitalized patients receiving prn oral pain medications.

The device is:

- An FDA approved electronic secure device
- Attached to an IV pole at the patient's bedside for easy access
- Accessed by the patient swiping a Radio Frequency Identification (RFID) wristband that has been securely programmed into the device.

When the appropriate lockout interval has passed, the green light on the device illuminates to notify the patient that the medication is available whenever the patient needs a dose. The patient obtains a dose by:

1. Touching the pain scale on the device to record their level of pain.
  2. Swipe the RFID wristband near the pain scale and the tray will rotate to present a single dose of medication that the patient can easily remove and self administer.
  3. Device memory records the date, time and pain score for each dose.
- ❖ The nurse RFID card can override the program and present an extra dose of medication to the patient for a "now" dose if ordered.

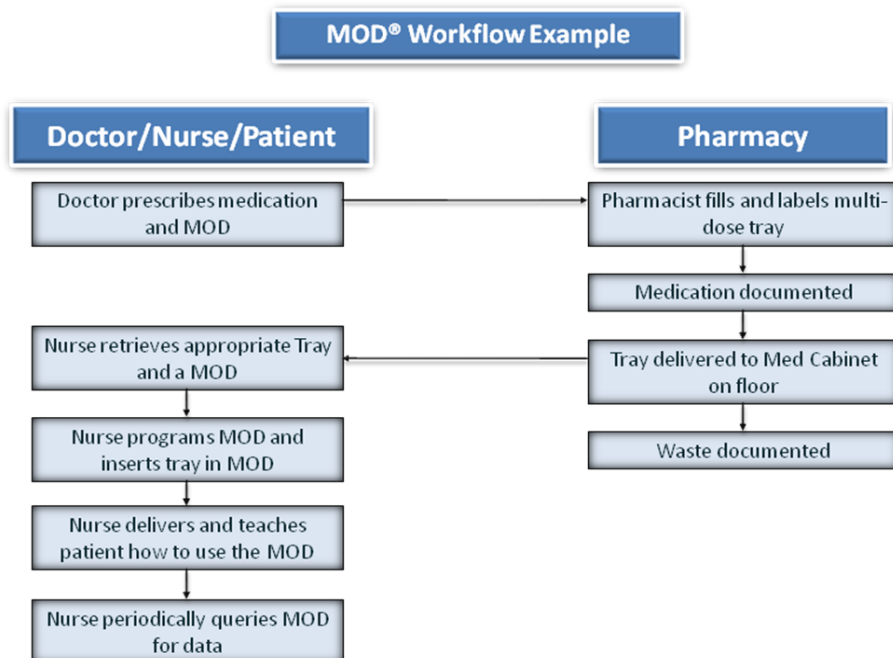
## Security Features

Security features have been built into the device to prevent diversion.

- Breakaway two piece secure top with spill proof cover and underlying seal.
- Actions are recorded in device memory including:
  - patient date and time of medication removal
  - recorded pain scale
  - nursing override dosing data
  - dates and times of top openings for tray replacements.
- MOD<sup>®</sup> is locked to a steel support tray; IV pole clamp attached with a proprietary tool supplied with the device.
- Medication tray label easily viewed through the clear device top.
- Transparent MOD<sup>®</sup> top allows visual inventory by nursing and pharmacy.
- Medication access is only by the nurse RFID card or patient RFID wristband.
- Audit of chart data against device data is possible from device data in cumulative memory.

## MOD<sup>®</sup> Workflow in the Hospital

MOD<sup>®</sup> hospital workflow is almost identical to that of the IV PCA Device. MOD<sup>®</sup> multidose trays contain eight identical doses of the same oral pain medication whereas the opioid syringe for the IV PCA device contains multiple doses of intravenous pain medication.



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## MOD<sup>®</sup> Trays and Sealers

MOD<sup>®</sup> trays fit precisely into the MOD<sup>®</sup> dispenser wheel. Trays are composed

of a high-gloss, transparent pharmaceutical grade rigid material approved for pharmaceutical blister packaging where an improved water vapor and oxygen protection is required (spec sheet upon request). The tray material is quality controlled and tested in accordance with GMP standards.

Each 13 cm diameter round tray contains eight slots for medication, a clip recess site and four rounded projections which fit into the appropriate dispenser wheel openings on the MOD<sup>®</sup> to secure the tray into the device. The tray sealers are composed of a Mylar material with 3M nontoxic adhesive applied to secure the sealed trays during storage. Once the MOD<sup>®</sup> tray is loaded into the device, the adhesive top is removed for patient access to the medications when the tray turns.

## Filling and Labeling MOD<sup>®</sup> Trays

MOD<sup>®</sup> trays are filled, labeled and sealed in the pharmacy for distribution. The four tray loading platform is available for pharmacy



loading. Each tray should be packaged and labeled according to hospital policy. Labels should be 3.5 cm x 3.5 cm or smaller to fit within the center recess of the tray. The appropriate label should be affixed directly to the tray before the sealer is applied, including barcoded labels, if applicable. This step facilitates continued tray label visualization once the tray is loaded into the MOD<sup>®</sup> device. A patient-specific label can be affixed upon dispensing if required.

## Charging

Charges should be captured pursuant to hospital policy. Charge capture may vary depending on whether or not a hospital charges on dispense or on administration. Medication doses not used are wasted using a work flow similar to the IV syringe contents that may not be fully used with an IV PCA pump. Hospital policies for wasting oral controlled substances should be followed when wasting doses.

## Storage in the ADC on the Patient Unit

MOD<sup>®</sup> trays can be stored in automated dispensing cabinets (ADCs) on the patient care units. Filled labeled MOD<sup>®</sup> trays can be stored vertically as well as flat in the drawer.

## Expiration of Packaged Medications

Based on FDA Guidance documents, repackaged medications into MOD<sup>®</sup> trays can be dated as one year from the date of the packaging unless the true expiration date of the medication is sooner.

<http://www.fda.gov/cder/guidance/6169dft.htm>

## Pharmacy Data Integration

MOD<sup>®</sup> can be used in any hospital regardless of its level of pharmacy documentation from paper to full electronic data integration.

MOD<sup>®</sup> is a Cerner Certified Medical Device and integrates into Cerner software. In collaboration between Cerner and Avancen, MOD<sup>®</sup> data can be directly uploaded into the medical record using the CareAware<sup>™</sup> software and the Cerner MDBus for routing information. Using a bidirectional approach, available in some institutions, the MOD<sup>®</sup> device can be remotely programmed using the pharmacy orders when the device barcode and device medication tray barcode validation is accomplished.

Avancen is working to directly integrate MOD<sup>®</sup> data into other EMR vendor programs.

## Reporting

Data is easily queried from the MOD<sup>®</sup> software and can be used clinically for refining pain management. Compliance reports or audits can also be generated to track for diversion.

Data cannot be accidentally deleted. Hard reset by IT is required.

Back-up battery in the MOD<sup>®</sup> device stores data in the event of battery recharge or soft reset at the bedside.