Appendix A – Procurement & Storage

1. Cardinal download inventory from Talyst and Pyxis

Order arrives every morning (except Sunday)

2. Other drugs manually ordered through Cardinal website

Other drugs manually ordered through Cardinal website

3. Cardinal Assist
   Pyxis specific order (pre-packed)

Cardinal Assist
Pyxis specific order (pre-packed)

4. Controlled
   Bulk meds repacked as unit doses
   Locked separately in secure ‘C-II’ cabinet

Controlled
Bulk meds repacked as unit doses
Locked separately in secure ‘C-II’ cabinet

5. Non-controlled
   Scanned and put away in assign locations (Refrigerator, Talyst, Remote Carts)

Non-controlled
Scanned and put away in assign locations (Refrigerator, Talyst, Remote Carts)

6. Pyxis refill meds picked from Central stock

Pyxis refill meds picked from Central stock

7. Tech refill Pyxis

Tech refill Pyxis

Use for preparation in Central pharmacy or satellite stock

Pyxis is filled
See ‘Appendix B’
Appendix B – Central Pharmacy Operation
(includes Decentral Floor and Zone Operations; as well as 24 hour service support)

1. Prescriber enters medication order into SCM
2. Medication order interface with Pharmacy WORx queue
3. PharmD reviews medication order in WORx
4. Order Verified By PharmD?
   - Yes: Is it accessible in Pyxis?
     - Yes: PharmacWORx label is printed
     - No: Dose is prepared
   - No: PharmD contact prescriber and clarify the order
     - Order corrected and re-entered into SCM
5. RN obtains medication from Pyxis for patient
6. Is it accessible in Pyxis?
   - Yes: Dose is prepared
   - No: Dose is verified by PharmD
     - Is the product correct?
       - Yes: Monitor patient
       - No: Pharmacy WORx label is printed
7. RN administers the dose
8. Floor tech delivers to pt. specific bin in Pyxis or designated area
   [See Appendix E]
9. Tech checks for expired/return meds
10. Dose is verified by PharmD
11. Tech returns and sorts drugs in Central
    [See “Appendix – A”]
12. Put in floor bin for delivery
13. Tech checks for expired/return meds
14. Monitor patient

5/27/2009
Appendix C – Kentucky Children’s Hospital Pharmacy Satellite

15. Prescriber enters order in SCM, which interface with WORx

16. Is patient in a pediatric location?
   No
   Yes
   Central notifies peds satellite

17. Inpatient chemo orders entered into SCM by Peds
   Heme/Onc Clinic PharmD

18. Is order correct?
   No
   Yes
   Clarify order with prescriber

19. Is med in pyxis?
   No
   Yes
   Peds pharmacist pulls up and verifies order in WORx

20. Is med in peds satellite?
   No
   Yes
   Send label to print and prepare in central pharmacy [See “Appendix – B”]

21. Prepared doses are tubed to Ped. Satellite
   Doses delivered to patient specific bins [See Appendix E]

22. RN administers the dose

23. Code?
   Yes
   Page pediatric pharmacist/resident on call to support
   No
   Monitor patient
Appendix D – Markey Cancer Center Pharmacy Operations – Inpatient and Outpatient

INPATIENT

PharmD verifies order in WORx

MD enters/writes order

Monitor patient

PharmD clarifies order with prescriber

PharmD clarifies with prescriber and changes order

RN administers the dose

PharmD pulls drugs and hands to tech to prepare

PharmD checks order again

Is order correct?

No

Send to Outpatient

Yes

Send order to central to print and prepare

[See Appendix B]

Markey Care Technician collects new doses in Central & delivers [See Appendix E]

OUTPATIENT

PharmD verifies order in WORx

-New order = 2 PharmD checks
-Old order = 1 PharmD check

Is order correct?

No

Print label

Yes

Patient Counseling by PharmD

Is order correct?

No

Delivery to patient location

Yes

5/27/2009

Appendix D – Markey Cancer Center Pharmacy Operations – Inpatient and Outpatient
Appendix E - Non-Pyxis Medication Process (A.K.A. Cart Fill)

1. Receive labels from cart fill
   - Receive new order labels after cart fill has printed
2. Compound dosage form
   - Is the medication already manufactured?
   - Yes
     - Prepare /Dispense unit dose medication
     - Place dose in cart fill bin
     - Verification of completed new order by pharmacist
     - Verification of completion against cart fill list by CPhT; high risk meds checked by pharmacist
   - No
     - New Order
     - Place dose in blue bin
3. New Order Delivery at 5 pm:
   1. Remove previous days doses
   2. Deliver new doses to pt specific bin on unit
4. From what type of label was the dose prepared?
5. Place dose in cart fill bin
6. Is the product correct?
   - Yes
     - Credit high cost doses removed from pt specific bins
   - No
     - New Order Delivery every hour:
     1. Remove previous days doses
     2. Deliver new doses to pt specific bin on unit
7. Is the label for new order or discontinuation?
   - Yes
     - Discard medication via appropriate waste container
   - No
     - Discontinued
     - Remove discontinued medication from cart bin
     - Where should returned/D’c’d medications be placed?
8. Remove medications to refrigerator
9. Reshelf medication into stock
10. Return medications to refrigerator
11. Discard medication via appropriate waste container
12. Is the medication already manufactured?
Appendix F – Role of Pharmacy Tech in Delivery

1. Tech gets prepared medications from unit bin
2. Tech delivers meds to designated areas (Pt. specific bin, Pyxis, RN, Refrigerator)
3. Tech facilitates needs of the units
4. Problem solved?
   a. Yes
      i. Task is complete
   b. No
      i. Tech involves PharmD in resolution

   i. Tech involves PharmD in resolution

   i. Tech addresses RN questions
   j. Tech waits for machine/Pyxis
   k. Tech answers the pages

   l. RN needs to use Pyxis
   m. RN requests (while in the unit)
   n. Pyxis load/refill
   o. Return to Pharmacy
Appendix G – Medication Reconciliation Process

Patient admitted

Physician and RN obtains current med list and completes Medication Reconciliation Database

RN or Physician conducts confirmation interview within 24 hours and update Medication Reconciliation Database

PhysmedD or other care provider reconciles current orders and Medication Reconciliation Database within 48 hours

Is patient transferred or discharged?

Transferred

Physician reviews Medication Reconciliation Database

Physician enters transfer orders

Discharged

Physician reviews Medication Reconciliation Database

RN contacts physician for any questions

Physician enters discharge orders

RN reconciles Medication Reconciliation Database and discharge prescription

RN transfers, communicates and sends/discusses Medication Reconciliation Database to appropriate patient/family/caregiver

RN contacts physician for any questions

RN transfers, communicates and sends/discusses Medication Reconciliation Database to appropriate patient/family/caregiver

Physician enters discharge orders
Structured Notes within SCM

- H&P Structured Note
- Orders Reconciliation Module (ORM)
- RX Writer
  - For Med History and New Prescriptions
- Discharge Summary
- Discharge Instructions

- Adult Patient Profile
- Discharge Instructions Document for patient
- Discharge Summary document for next care provider available via portal or hardcopy
Controlled Substances: Purchasing

1. C-II meds for order are faxed to another technician, for ordering on DEA 222.

2. C-II meds are ordered from Cardinal.
   - C-II meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.
   - Controlled substance totes are moved to the area beside the C2 safe until C2 safe technician can receive them and refill safe.

3. C-II meds are faxed to another technician, for ordering on DEA 222.

4. C-II meds for order are faxed to another technician, for ordering on DEA 222.

5. C-III through C-V meds for order are given to another technician for regular ordering.

6. C-III through C-V meds are ordered from Cardinal.

7. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

8. C-III through C-V meds for order are given to another technician for regular ordering.

9. C-III through C-V meds are ordered from Cardinal.

10. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

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16. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

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18. C-III through C-V meds are ordered from Cardinal.

19. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

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21. C-III through C-V meds are ordered from Cardinal.

22. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

23. C-III through C-V meds for order are given to another technician for regular ordering.

24. C-III through C-V meds are ordered from Cardinal.

25. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

26. C-III through C-V meds for order are given to another technician for regular ordering.

27. C-III through C-V meds are ordered from Cardinal.

28. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

29. C-III through C-V meds for order are given to another technician for regular ordering.

30. C-III through C-V meds are ordered from Cardinal.

31. C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.
Controlled Substances: Leaving the C2 Safe

Drugs are received and refilled into C2 safe by the C2 safe technician.

- Drugs are pulled from the C2 safe for use in manufacturing.
- Drugs are pulled from the C2 safe for use in IV room.
- Drugs are pulled from the C2 safe for floor and unit Pyxis stock-out and critical low refill. (Also for PWIN refills.)
- Drugs are pulled from the C2 safe for release to satellite pharmacies (OR and pediatric).
- Drugs are pulled from the C2 safe for patient-specific oral doses.
Controlled Substances: Manufacturing

Drugs are pulled from the C2 safe for use in manufacturing.

Technician documents receipt of bulk stock bottle narcotics on paper sheet.

Liquid unit-dose is pulled up in syringe.

Dilution is made and set on table.

Drug is counted and strip-packed.

Technician documents any wastage of narcotics.

Original stock bottle and unit dose wait on table for pharmacist check.

Pharmacist checks manufacturing documentation.

Unit dose narcotics manufactured for “stock” are received to the C2 safe in compartment #16.

Original stock bottle narcotics still containing drug are returned to the C2 safe.

Reasons for Use in Manufacturing:
- C2 safe technician creates a list of narcotic “stock” unit-dose (strip-packs, unit dose syringes, etc.) and dilutions needed in the C2 safe. Manufacturing receives this list to make.
Controlled Substances: Patient-Specific Oral Doses

Drugs are pulled from the C2 safe for patient-specific oral doses.

Liquid unit-dose is pulled up in syringe and placed on labeled bag.

Drug is counted, strip-packed, and placed on labeled bag.

Original stock bottle and unit dose on bag wait on table for pharmacist check.

Pharmacist checks manufacturing documentation.

When possible, dosage forms that are Pyxis eligible should be loaded in Pyxis to be vended to patients upon subsequent doses.

Pharmacy technician immediately delivers narcotic order to floor.

HAND DELIVERY: Nurse or physician must sign for delivery of narcotic. Delivering technician must also sign.

Occasionally in MCC: Technician loads narcotic to Custom PCA/CSS drawer in Pyxis. Must talk to nurse and place a note on the eMAR.

Reasons for Use in Patient Oral Doses:
• Manufacturing receives a new or one-time unit-dose order for a patient that is not stored in the floor Pyxis.
• Manufacturing receives a unique unit-dose order for a patient that must be compounded each time.
Controlled Substances: IV Room

Drugs are pulled from the C2 safe for use in IV room.

Drugs are checked in to the IV room Pyxis for use as stock.

Narcotic(s) is(are) pulled from the Pyxis and placed in sterile room for compounding. Pyxis receipt for stock vial is generated at this time.

Pre-prepared IV products are pulled from the Pyxis.

Sterile product(s) is(are) prepared by technician. Technician initials label.

Sterile product(s) is(are) checked by pharmacist. Pharmacist initials label.

Label/receipt for narcotic order is placed in delivery bin for floor while product is retained on IV room counter until retrieved by technician.

Pharmacy technician retrieves narcotic order and delivers it to the floor.

HAND DELIVERY: Nurse or physician must sign for delivery of narcotic. Delivering technician must also sign.

Unused patient-specific orders or those that have not been signed for are returned to the IV room for wastage.

UK-prepared “stock” narcotics (like PCA’s) are received and secured in the IV room Pyxis.

Stock vials are re-secured inside the IV room Pyxis after order has been made and checked.

Reasons for Use in IV Room:
• Pyxis critical low or stock out is issued for IV room Pyxis.
• UK-prepared controlled substance stock order is generated (PCA’s, etc.).
• Unique patient specific order is generated.
Controlled Substances: OR Satellite

Reason for Release to OR:
- The report generated by the Pyxis “brain” in the OR pharmacy indicates which narcotics need refilled. The pharmacist/technician sends a list of needed narcotics to the C2 safe technician each morning.
- The OR Pyxis brain indicates a critical low/stock out of a narcotic during the day.

Drugs are pulled from the C2 safe by OR middle pharmacist or the C2 safe technician for release to OR satellite.

OR pharmacist delivers to OR pharmacy for the regular daily order/restock. The OR technician will deliver the medications that run out during the day.

Narcotics are loaded or refilled into minor, major, or cardio trauma boxes. Each box contains a written inventory list.

Pharmacist checks contents of the box and receives the boxes into the Pyxis “brain.”

Box is stored securely in cabinet. In the evening, the cabinet and pharmacy doors are both locked.

Box is checked out by physician or CRNA. A sheet containing box #, room #, time, printed RN/MD name, signature, and pager # must be filled out. The RPh/technician must also sign the sheet.

Select narcotics are used during a procedure. Quantity used is recorded on box sheet.

Box is returned to pharmacy and signed back in by the person delivering it.

Narcotic quantities are verified and recorded. Patient is billed for use.

Sign out and usage sheets are compared to anesthesia administration records as a narcotic usage audit.

Any wastage is returned to pharmacy to be wasted.

Narcotics are administered to patient.

Narcotics are secured in the controlled substance cabinet.

Physician or CRNA checks out narcotic. Sheet containing printed RN/MD name, signature, and pager # is filled out. The RPh/technician must also sign the sheet.

Narcotics that are not to be used in kits are checked and received into the Pyxis “brain” by the pharmacist.
Controlled Substances: Pediatric Satellite

Pediatric pharmacy technician picks up narcotics from central pharmacy and delivers to pediatric pharmacy, or central pharmacy technician delivers to pediatric pharmacy.

Narcotic order contents are verified and secured inside lockbox in the pharmacy for manufacturing.

Stock vial is signed out from lockbox for patient-specific dose. Drug, date, time patient, location, dose, technician number, narcotic sticker number, and ending narcotic quantity are entered into narcotic log for pharmacy.

Correct dosage and dosage form is prepared.

Hand Delivery: Nurse or physician must sign for receipt of controlled substance on patient’s controlled substance usage record sheet in the units or floor. Technician must also sign. Sticker number must be included.

All partial stock vials (except pentobarbital and methadone) are wasted at the end of the day.

Amount of drug wasted is recorded in the pharmacy narcotic log, with a witness.
Controlled Substances: Pyxis (& PWIN)

Pyxis (& PWIN)

Drugs are pulled from C2 safe to replenish Pyxis stock-outs, critical lows, and refills.

Reasons for Release to Pyxis:
- Pyxis generates daily reports of critical lows and stock-outs.
- The C2 technician uses the safe to generate a daily auto-restock report for Pyxis machines at 3:00 am.

Correct amount of narcotics are counted, bagged, and recorded by technicians.

Tech-check-tech is utilized for verification of stock-outs, critical lows, and refills.

Narcotics are labeled for specific Pyxis bins and are stored in compartment 16 in the C2 safe until delivered.

Pharmacy technicians deliver narcotics to secure location in each Pyxis.

Pharmacist checks refilled kit.

Technician restocks kit into PWIN.

Box is checked out by physician or CRNA. Specific patient for whom box is checked out must be added to PWIN and box checked out under their name.

A sheet containing box #, room #, time, printed RN/MD name, signature, and pager # must be filled out. The RPh/pharmacy technician must also sign the sheet.

Select narcotics from kit are used in procedures for a specific patient.

Used narcotic kit is returned to central pharmacy and signed back in on sheet.

Used kit is brought back to the C2 safe technician.

Amounts of narcotics used are recorded and billed to the specific patient.

Empty spots in kit created by procedural narcotic use are filled by the C2 safe technician.

Prescriber with UK Hospital photo ID will request narcotic prescription blank(s).

Technician will verify photo ID, and add that person as a patient in PWIN, using the 9 digit security number on the badge as the account number.

Technician will remove and dispense the requested amount of blanks (#1 for one blank, #100 for a pad of blanks).

Prescriber will maintain security of the prescription blanks after they leave the central pharmacy PWIN.

Drugs are pulled from C2 safe to replenish Pyxis stock-outs, critical lows, and refills.

Correct amount of narcotics are counted, bagged, and recorded by technicians.

Tech-check-tech is utilized for verification of stock-outs, critical lows, and refills.

Narcotics are labeled for specific Pyxis bins and are stored in compartment 16 in the C2 safe until delivered.

Pharmacy technicians deliver narcotics to secure location in each Pyxis.

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Technician will remove and dispense the requested amount of blanks (#1 for one blank, #100 for a pad of blanks).

Prescriber will maintain security of the prescription blanks after they leave the central pharmacy PWIN.
Controlled Substances: Administration & Wastage

RN administers correct medication and dosage to correct patient.

**PEDIATRIC**
- RN documents drug, dose, and administration time in eMAR.
- RN documents dose administered and any wastage on patient’s controlled substance usage sheet for drips.

**ANESTHESIA AND OR**
- During OR satellite pharmacy hours, any wastage is delivered to pharmacy for wasting.
- Labeled waste is placed in a locked wooden wastage box at Gill, PACU, 3OB, or outpatient.
- The C2 safe technician accesses Pyxis for keys to wastage boxes. (OR pharmacist/technician may also access PACU waste.)
- Medication is wasted in Pyxis by technician.
- Technician brings wastage to central pharmacy (C2 tech) or satellite pharmacy (OR).
- Pharmacist double checks wastage.

**OTHER ADULT (eMAR)**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.

**3**
- RN documents drug, dose, and administration time in paper anesthesia flow record.
- After OR satellite pharmacy hours, wasted medication is bagged and labeled with a patient identifier.

**4**
- Labeled waste is placed in a locked wooden wastage box at Gill, PACU, 3OB, or outpatient.
- The C2 safe technician accesses Pyxis for keys to wastage boxes. (OR pharmacist/technician may also access PACU waste.)
- Technician brings wastage to central pharmacy (C2 tech) or satellite pharmacy (OR).
- Pharmacist double checks wastage.

**5**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.

**6**
- RN documents drug, dose, and administration time in paper anesthesia flow record.
- After OR satellite pharmacy hours, wasted medication is bagged and labeled with a patient identifier.
- Labeled waste is placed in a locked wooden wastage box at Gill, PACU, 3OB, or outpatient.
- The C2 safe technician accesses Pyxis for keys to wastage boxes. (OR pharmacist/technician may also access PACU waste.)
- Technician brings wastage to central pharmacy (C2 tech) or satellite pharmacy (OR).
- Pharmacist double checks wastage.

**2**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.

**1**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.

**3**
- RN documents drug, dose, and administration time in paper anesthesia flow record.
- After OR satellite pharmacy hours, wasted medication is bagged and labeled with a patient identifier.
- Labeled waste is placed in a locked wooden wastage box at Gill, PACU, 3OB, or outpatient.
- The C2 safe technician accesses Pyxis for keys to wastage boxes. (OR pharmacist/technician may also access PACU waste.)
- Technician brings wastage to central pharmacy (C2 tech) or satellite pharmacy (OR).
- Pharmacist double checks wastage.

**2**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.

**1**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.
**Pyxis Replenishments: Stockouts & Critical Lows**

1. **Is item currently in pyxis refill bin?**
   - **Yes**: Remove medication from pyxis refill bins, attach SO bulletin
   - **No**: **Stock out (SO) prints in Central**
     - **1st**: Stock out (SO) prints in Central
     - **2nd**: **Is the medication en route? (contact tech & check console)**
       - **No**: **No**
       - **Yes**: Technician to refill at the station
     - **3rd**: Did it print an Auto SO label in Talyst & was it filled?
       - **No**: **No**
       - **Yes**: **Yes**

2. **Pull Medication, attach SO bulletin**
   - **No**: **No**
   - **Yes**: **Yes**

3. **Place in Pharmacist “Checking Bin”**
1st Shift Stock Out Procedure

Stock out (SO) prints in Central

Is item currently in pyxis refill bin?

- **No**
  - Did it print a Auto SO label in Talyst & was it filled?
    - **No**
      - Pull Medication, attach SO bulletin
    - **Yes**
      - Technician to refill at the station

- **Yes**
  - Remove medication from pyxis refill bins, attach SO bulletin
  - Place in Pharmacist “Checking Bin”
2nd Stock Out Procedure

Stock out (SO) prints in central

Is the medication en route? (contact tech & check console)

Did it print a Auto SO label in Talyst & was it filled?

Yes

Technician to refill at the station

Place in Pharmacist “Checking Bin”

NO

Pull Medication, attach SO bulletin

NO
3rd Shift Stock Out Procedure

Stock out (SO) prints in Central

Did it print a Auto SO label in Talyst & was it filled?

- **No**
  - Pull Medication, attach SO bulletin

- **Yes**
  - Technician to refill at the station
  - Place in Pharmacist “Checking Bin”
Critical Low (CL) prints in Central

1st
2nd
3rd

Does it require immediate attention?

Yes

Is CL in pyxis refill bin?

Yes

Remove medication from pyxis refill bins, attach CL bulletin

No

No

Pull Medication, attach CL bulletin

Yes

Contact delivery tech. Is CL en route with tech?

Yes

Yes

No

Yes

State “Not Filled”, Initial, & File CL bulletin

Place in Pharmacist “Checking Bin”

Technician to refill at the station
A CL prints when the PAR level is below 50% of the min

How do I know if the CL requires immediate action? (Things to consider.)

- Will the quantity that remains last until the next normal refill
- Is it a PRN or scheduled?
- How many per day is that station using?
- Which station?
- If it is a Cardinal Assist item-is it after the pyxis delivery on Friday and before 1p on Sunday?
1st Shift Critical Low Procedure

Critical Low (CL) prints in Central

Does CL require immediate action?

Yes

Is CL in pyxis refill bin?

No

Contact delivery tech is CL en route with tech?

No

State "Not Filled," Initial, & file CL bulletin

Yes

Attach CL bulletin, & Place in Pharmacist "Checking Bin"

Technician to refill at the station

Pull Meds for CL
Critical Low (CL) prints in Central

Does CL require immediate action?

- **Yes**
  - Contact delivery tech. Is CL in route with tech?
    - **Yes**
      - Attach CL bulletin & Place in Pharmacist “Checking Bin”
    - **No**
      - Pull Meds for CL

- **No**
  - State “Not Filled,” Initial, & file CL bulletin

Technician to refill at the station
Critical Low (CL) prints in Central

Does CL require immediate action?

- Yes: Pull Meds for CL
  - Attach CL bulletin & Place in Pharmacist “Checking Bin”

- No: State “Not Filled,” Initial, & file CL bulletin
  - Technician to refill at the station

I am hoping you will be available for one of the two dates next week. If not, we will need to look at the week of April 11th. If you would i

Thursday, March 31
Friday, April 1
Thank you.
C-II meds for order are faxed to another technician, for ordering on DEA 222.

C-II meds are ordered from Cardinal.

C-II meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

C-III through C-V meds for order are given to another technician for regular ordering.

C-III through C-V meds are ordered from Cardinal.

C-III through C-V meds are delivered to central pharmacy. Totes are marked as separate from legend drugs by a specific number on the totes. They are also double-strapped.

Controlled substance totes are moved to the area beside the C2 safe until C2 safe technician can receive them and refill safe.

C2 safe technician verifies contents of order with original order list.

Drugs are received and refilled into C2 safe by the C2 safe technician.

The C2 safe technician generates an inventory report for the C2 safe each day for purposes of identifying which drugs to order for refill.
Leaving the C2 Safe

Drugs are received and refilled into C2 safe by the C2 safe technician.

- Drugs are pulled from the C2 safe for use in manufacturing.
- Drugs are pulled from the C2 safe for use in IV room.
- Drugs pulled from the C2 safe for floor and unit Pyxis stock-out and critical low refill. (Also for PWIN refills.)
- Drugs are pulled from the C2 safe for release to satellite pharmacies (OR and pediatric).
- Drugs are pulled from the C2 safe for patient-specific oral doses.
Manufacturing

Drugs are pulled from the C2 safe for use in manufacturing.

Technician documents receipt of bulk stock bottle narcotics on paper sheet.

Liquid unit-dose is pulled up in syringe.

Dilution is made and set on table.

Drug is counted and strip-packed.

Technician documents any wastage of narcotics.

Original stock bottle and unit dose wait on table for pharmacist check.

Pharmacist checks manufacturing documentation.

Unit dose narcotics manufactured for "stock" are received to the C2 safe in compartment # 16.

Original stock bottle narcotics still containing drug are returned to the C2 safe.

Reasons for Use in Manufacturing:
- C2 safe technician creates a list of narcotic "stock" unit-dose (strip-packs, unit dose syringes, etc.) and dilutions needed in the C2 safe. Manufacturing receives this list to make.
Patient-Specific Oral Doses

Drugs are pulled from the C2 safe for patient-specific oral doses.

Liquid unit-dose is pulled up in syringe and placed on labeled bag.

Technician documents receipt of bulk bottle narcotics on paper form.

Drug is counted, strip-packed, and placed on labeled bag.

Drug is counted, strip-packed, and placed on labeled bag. 

Reasons for Use in Patient Oral Doses:
• Manufacturing receives a new or one-time unit-dose order for a patient that is not stored in the floor Pyxis.
• Manufacturing receives a unique unit-dose order for a patient that must be compounded each time.

Technician documents any wastage of narcotics.

Original stock bottle and unit dose on bag wait on table for pharmacist check.

Pharmacist checks manufacturing documentation.

Pharmacy technician immediately delivers narcotic order to floor.

Original stock bottle narcotics are returned to the C2 safe.

HAND DELIVERY: Nurse or physician must sign for delivery of narcotic. Delivering technician must also sign.

Occasionally in MCC and Peds: Technician loads narcotic to Custom PCA/CSS drawer in Pyxis. Must talk to nurse and place a note on the eMAR.

When possible, dosage forms that are Pyxis eligible should be loaded in Pyxis to be vended to patients upon subsequent doses.
Drugs are pulled from the C2 safe for use in IV room.

Reasons for Use in IV Room:
- Pyxis critical low or stock out is issued for IV room Pyxis.
- UK-prepared controlled substance stock order is generated (PCA’s, etc.).
- Unique patient specific order is generated.

Drugs are checked in to the IV room Pyxis for use as stock.

Narcotic(s) is(are) pulled from the Pyxis and placed in sterile room for compounding. Pyxis receipt for stock vial is generated at this time.

Pre-prepared IV products are pulled from the Pyxis.

Sterile product(s) is(are) prepared by technician. Technician initials label.

Sterile product(s) is(are) checked by pharmacist. Pharmacist initials label.

Label/receipt for narcotic order is placed in delivery bin for floor while product is retained on IV room counter until retrieved by technician.

HAND DELIVERY: Nurse or physician must sign for delivery of narcotic. Delivering technician must also sign.

Pharmacy technician retrieves narcotic order and delivers it to the floor.

UK-prepared “stock” narcotics (like PCA’s) are received and secured in the IV room Pyxis.

Stock vials are re-secured inside the IV room Pyxis after order has been made and checked.

Unused patient-specific orders or those that have not been signed for are returned to the IV room for wastage.
Narcotics that are not to be used in kits are checked and received into the Pyxis “brain” by the pharmacist.

Narcotics are secured in the controlled substance cabinet.

Physician or CRNA checks out narcotic. Sheet containing printed RN/MD name, signature, and pager # is filled out. The RPh/technician must also sign the sheet.

Narcotics are administered to patient.

Any wastage is returned to pharmacy to be wasted.

Or pharmacist delivers to OR pharmacy for the regular daily order/restock. The OR technician will deliver the medications that run out during the day. Medications are received to the Pyxis “brain” at this time.

Narcotics are loaded or refilled into minor, major, or cardio trauma boxes and removed from the Pyxis “brain”. Each box contains a written inventory list.

Pharmacist checks contents of the box.

Box is stored securely in cabinet. In the evening, the cabinet and pharmacy doors are both locked.

Box is checked out by physician or CRNA. A sheet containing box #, room #, time, printed RN/MD name, signature, and pager # must be filled out. The RPh/technician must also sign the sheet.

Select narcotics are used during a procedure. Quantity used is recorded on box sheet.

Box is returned to pharmacy and signed back in by the person delivering it.

Narcotic quantities are verified and recorded. Patient is billed for use.

Reason for Release to OR:
• The report generated by the Pyxis “brain” in the OR pharmacy indicates which narcotics need refilled. The pharmacist/technician sends a list of needed narcotics to the C2 safe technician each morning.
• The OR Pyxis brain indicates a critical low/stock out of a narcotic during the day.

Sign out and usage sheets are compared to anesthesia administration records as a narcotic usage audit.
Pediatric Satellite

Pediatric pharmacy technician picks up narcotics from central pharmacy and delivers to pediatric pharmacy, or central pharmacy technician delivers to pediatric pharmacy.

Narcotic order contents are verified and secured inside lockbox in the pharmacy for manufacturing.

Stock vial is signed out from lockbox for patient-specific dose. Drug, date, time patient, location, dose, technician number, narcotic sticker number, and ending narcotic quantity are entered into narcotic log for pharmacy.

Correct dosage and dosage form is prepared.

Pharmacist checks order.

HAND DELIVERY: Nurse or physician must sign for receipt of controlled substance on patient’s controlled substance usage record sheet in the units or floor. Technician must also sign. Sticker number must be included.

Pharmacist checks syringes.

All partial stock vials (except pentobarbital and methadone) are wasted at the end of the day.

Amount of drug wasted is recorded in the pharmacy narcotic log, with a witness.

Reason for Release to Peds:
• Pediatric pharmacist/technician sends a list of needed narcotics to the C2 safe technician each morning.
• Pyxis machines in the pediatric floor indicate a critical low/stock out of a narcotic during the day.
Pyxis (& PWIN)

**GAMMA KNIFE KITS**
- Box is checked out by physician or CRNA.
  - Specific patient for whom box is checked out must be added to PWIN and box checked out under their name.

**PWIN**
- A sheet containing box #, room #, time, printed RN/MD name, signature, and pager # must be filled out. The RPh/pharmacy technician must also sign the sheet.

**KEYS**
- Select narcotics from kit are used in procedures for a specific patient.

**VOCERAS**
- Used narcotic kit is returned to central pharmacy and signed back in on sheet.

**ONE-TIME USE NARCOTICS**
- Used kit is brought back to the C2 safe technician.

**CS BLANKS**
- Amounts of narcotics used are recorded and billed to the specific patient.

**Prescriber with UK Hospital photo ID will request narcotic prescription blank(s).**

**Technician will verify photo ID, and add that person as a patient in PWIN, using the 9 digit security number on the badge as the account number.**

**Technician will remove and dispense the requested amount of blanks (#1 for one blank, #100 for a pad of blanks).**

**Prescriber will maintain security of the prescription blanks after they leave the central pharmacy PWIN.**

**Tech-check-tech is utilized for verification of stock-outs, critical lows, and refills.**

**Narcotics are labeled for specific Pyxis bins and are stored in compartment 16 in the C2 safe until delivered.**

**Pharmacy technicians deliver narcotics to secure location in each Pyxis.**

**Reasons for Release to Pyxis:**
- Pyxis generates daily reports of critical lows and stock-outs.
- The C2 technician uses the safe to generate a daily auto-restock report for Pyxis machines at 3:00 am.

**PWIN**
- Correct amount of narcotics are counted, bagged, and recorded by technicians.

**Drugs are pulled from C2 safe to replenish Pyxis stock-outs, critical lows, and refills.**

**Pharmacist checks refilled kit.**

**Technician restocks kit into PWIN.**

**Box is checked out by physician or CRNA.**
- Specific patient for whom box is checked out must be added to PWIN and box checked out under their name.

**A sheet containing box #, room #, time, printed RN/MD name, signature, and pager # must be filled out. The RPh/pharmacy technician must also sign the sheet.**

**Select narcotics from kit are used in procedures for a specific patient.**

**Used narcotic kit is returned to central pharmacy and signed back in on sheet.**

**Used kit is brought back to the C2 safe technician.**

**Amounts of narcotics used are recorded and billed to the specific patient.**

**Empty spots in kit created by procedural narcotic use are filled by the C2 safe technician.**

**Pharmacist checks refilled kit.**

**Technician restocks kit into PWIN.**
RN administers correct medication and dosage to correct patient.

**PEDIATRIC**
- RN documents drug, dose, and administration time in eMAR.
- RN documents dose administered and any wastage on patient’s controlled substance usage sheet for drips.

**ANESTHESIA AND OR**
- During OR satellite pharmacy hours, any wastage is delivered to pharmacy for wasting.
- Medication is wasted in Pyxis by technician.
- Pharmacist double checks wastage.

**OTHER ADULT (eMAR)**
- RN documents drug, dose, and administration time in eMAR.
- RN wastes necessary amount of medication in Pyxis with a witness.

**3**
- RN documents drug, dose, and administration time in paper anesthesia flow record.
- Medication is wasted in Pyxis by technician.
- Technician brings wastage to central pharmacy (C2 tech) or satellite pharmacy (OR).

**4**
- After OR satellite pharmacy hours, wasted medication is bagged and labeled with a patient identifier.
- Labeled waste is placed in a locked wooden wastage box at Gill, PACU, 3OB, or outpatient.
- The C2 safe technician accesses Pyxis for keys to wastage boxes. (OR pharmacist/technician may also access PACU waste.)