Multidose Medication Dispensing for Discharge
How-to Webinar

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Washington State Board of Pharmacy
Olympia, WA

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Norman, OK

Planned by ASHP.
Sponsored by Sanofi.
Disclosures for Faculty and Planners

- Susan Boyer
  - No pertinent relationships to report
- Darin Smith
  - No pertinent relationships to report
• **Purpose:** To provide an overview for nurses and healthcare professionals on enhancing medication delivery practices that will result in improved continuity of care and reduction in medication errors.

• **Objectives:**
  – Define multidose medication dispensing for discharge (MMDD)
  – Identify standards for implementing a MMDD practice
  – Discuss benefits of participating in MMDD.
Multidose Medication Dispensing for Discharge (MMDD)

- **INTRODUCTION**
  - **GETTING STARTED**
  - **MAKING THE CASE**
  - **PLAN & IMPLEMENT**
  - **EDUCATE**
  - **EVALUATE**

**Tool Kit**
- Get Started
- Make the Case
- Plan and Implement
- Educate
- Evaluate
What is Multidose Medication Dispensing for Discharge?
**Multidose Medication Dispensing for Discharge (MMDD)** is the practice of labeling/relabeling partially-used multidose medications and providing them for outpatient use after hospital discharge.

Partially-used multi-dose containers dispensed to inpatients are often discarded when the patient is discharged despite the need for continued therapy; the patient is provided with a prescription at the time of discharge and incurs a copayment to obtain a new container of the same product.

Potentially suitable multidose medications include inhalers, insulin vials or pens, ophthalmic/otic products (e.g., drops, ointments), topical preparations (e.g. creams, lotions).
**Audience Polling Question #1**

Are you currently providing a multidose medication dispensing for discharge (MMDD) service at your hospital?

1. Yes
2. No
3. Sometimes
1. Does your department currently provide the service of relabeling multi-dose containers (inhalers, insulin pens, eye drops) or initially labeling for “take home” medications that have been dispensed to an inpatient that they will continue taking upon discharge?

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<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
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<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>208</td>
<td>50%</td>
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<tr>
<td>2</td>
<td>No</td>
<td>211</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td>419</td>
<td>100%</td>
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</table>

2. Is this service provided hospital wide or only for selected patient care areas or services?

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<th>Answer</th>
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<tr>
<td>1</td>
<td>Hospital wide</td>
<td>176</td>
<td>85%</td>
</tr>
<tr>
<td>2</td>
<td>Selected patient care areas</td>
<td>21</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>Selected services</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>207</td>
<td>100%</td>
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</tbody>
</table>
1. Does your department currently provide the service of relabeling multi-dose containers (inhalers, insulin pens, eye drops) or initially labeling for “take home” medications that have been dispensed to an inpatient that they will continue taking upon discharge?

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<thead>
<tr>
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<td>2</td>
<td>No</td>
<td>211</td>
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</tr>
<tr>
<td>Total</td>
<td></td>
<td>419</td>
<td>100%</td>
</tr>
</tbody>
</table>

1. We are not providing this service because (check all that apply)

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<th>Answer</th>
<th>Response</th>
<th>%</th>
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<tbody>
<tr>
<td>1</td>
<td>Have not thought about providing this service.</td>
<td>13</td>
<td>6%</td>
</tr>
<tr>
<td>2</td>
<td>Do not have appropriate license.</td>
<td>50</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>Uncertain about the regulatory requirements associated with doing this.</td>
<td>51</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>Would require investigation and resources to implement.</td>
<td>60</td>
<td>30%</td>
</tr>
<tr>
<td>5</td>
<td>Have no convenient way to label or relabel prescriptions for discharge.</td>
<td>124</td>
<td>61%</td>
</tr>
<tr>
<td>6</td>
<td>Have not been able to convince others that this is an important service to offer our patients.</td>
<td>11</td>
<td>5%</td>
</tr>
<tr>
<td>7</td>
<td>Other:</td>
<td>48</td>
<td>24%</td>
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</table>
19. 4. Would you be more likely to consider this type of outpatient dispensing service if a toolkit was made available to assist you in implementing this service?

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<th>Response</th>
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<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>55</td>
<td>28%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>42</td>
<td>21%</td>
</tr>
<tr>
<td>3</td>
<td>Maybe</td>
<td>103</td>
<td>52%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>200</td>
<td>100%</td>
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Welcome!
Multidose medication dispensing for discharge (MMDD) is a service that reduces pharmaceutical waste, optimizes limited health care resources, and increases patient satisfaction. Multidose medications such as inhalers, insulin pens, eye drops and topical preparations when ordered for continued use upon discharge can be labeled appropriately upon initial dispensing or relabeled at discharge to send with the patient.

This ASHP Resource Center provides tools that can be used to implement this service at your institution. Start today by downloading the How-to Guide to facilitate implementation of MMDD.

State Rules and Regulations
Regulations differ among States, but your State will be in one of these three categories.
- Separate License Required
- Hospital License Allows
- Special Circumstances

For law and regulation details, select your State from the menu below.
Select Your State -->  Go!
MULTIDOSE MEDICATION DISPENSING FOR DISCHARGE
A resource for facilitating care transition, reducing waste, and controlling costs

Background and Rationale

Hospital inpatients using inhalers, insulin injection pens, ophthalmic products (e.g., drops, ointments), and topical preparations (e.g., creams, lotions) provided in multiple-dose containers often need to continue these therapies on an outpatient basis after hospital discharge. In many hospitals, partially-used multidose containers dispensed to inpatients are discarded when the patient is discharged despite the need for continued therapy. The patient is provided with a prescription at the time of discharge and incurs a copayment to obtain a new container of the same product. This practice raises concerns about the waste of products paid for by the patient or insurer and causes patient dissatisfaction.

Ensuring the prudent use of limited health care resources has gained increasing importance in recent years because of the current economic climate and nationwide drug shortages. Reducing the amount of pharmaceutical waste has implications for the environment because of concerns about the improper disposal of pharmaceutical products in landfills and sewers and the detection of pharmaceuticals and their byproducts in surface water and groundwater. The handling procedures and costs for pharmaceutical waste disposal vary because state laws and regulations vary. The cost to hospitals of disposing of partially-used multidose containers of pharmaceuticals at the time of patient discharge is not inconsequential.

A service whereby multidose medications used on an inpatient basis are dispensed at the time of discharge for use on an outpatient basis has been suggested as a strategy for reducing pharmaceutical waste, optimizing the use of limited health care resources, and increasing patient satisfaction.

For the complete discussion, Download Background and Rationale for Multidose Medication Dispensing for Discharge document (PDF).
www.multidose.org

MULTIDOSE Medication Dispensing for Discharge
A resource for facilitating care transition, reducing waste, and controlling costs

Background and Rationale

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A service whereby multidose medications used on an inpatient basis are dispensed at the time of discharge for use on an outpatient basis has been suggested as a strategy for reducing pharmaceutical waste, optimizing the use of limited health care resources, and increasing patient satisfaction.

For the complete discussion, Download Background and Rationale for Multidose Medication Dispensing for Discharge document (PDF).
Background and Rationale for MMDD

- Eight Page Document
  - Emphasizes
    - Waste Reduction
    - Environmental Concerns
    - Cost Containment
    - Patient Satisfaction
  - Includes
    - Pharmacy Director Survey Information
    - Published data related to MMDD
    - References
Multidose Medication Dispensing for Discharge (MMDD)

- GETTING STARTED
- MAKING THE CASE
- PLAN & IMPLEMENT
- EDUCATE
- EVALUATE

**Tool Kit**
- Get Started
- Make the Case
- Plan and Implement
- Educate
- Evaluate
MULTIDOSE MEDICATION DISPENSING FOR DISCHARGE
A resource for facilitating care transition, reducing waste, and controlling costs

Toolkit

1. Get Started
   » How-to Guide
   » Background and Rationale for Multidose Medication Dispensing for Discharge

2. Make the Case
   » State Rules and Regulations – See Map on Home Page
   » Additional Legal, Regulatory, and Accreditation Standards Considerations
   » Multidose Medication Wastage Calculator
   » Slide Kit to Obtain Administrative Approval

3. Plan and Implement
   » Considerations for implementing Multidose Medication Dispensing for Discharge
   » Sample Policies and Procedures
   » Sample best practices of other hospitals that have implemented this service (coming in June)

4. Educate
   » Education of Key Personnel and Implementation Guide
How-to Guide for a MMDD Service

- Designed to help you make the most of the tools included on the MMDD Resource Center
  - Tools available in PowerPoint, Word, or Adobe PDF format
  - Materials were designed to copy and repurpose as needed

How-to Guide

Let us show you how to get the most out of this site.
How-to Guide for a MMDD Service

• Includes summary information on the following MMDD Resource Center tools:
  – Background and Rationale
  – State Rules and Regulations
  – Additional Legal, Regulatory and Accreditation Standards Considerations
  – Multidose Medication Wastage Calculator
  – Template Slide Kit to Obtain Administrative Approval
  – Considerations for Implementing
  – Sample Policies and Procedures
  – Education of Key Personnel and Implementation Guide
  – Compliance Monitoring
**Audience Polling Question #2**

Are you aware of your state requirements on multidose medication dispensing for discharge (MMDD)?

1. Yes
2. No
What Are My State Requirements When Considering MMDD?
Determining State Requirements

www.multidose.org

State Rules and Regulations

Regulations differ among States, but your State will be in one of these three categories.

- Separate License Required
- Hospital License Allows
- Special Circumstances

For law and regulation details, select your State from the menu below.

Select Your State ---> Go!

Separate License Required: Delaware, Florida, Nevada
Determining State Requirements

www.multidose.org

State Rules and Regulations
Regulations differ among States, but your State will be in one of these three categories.

Separate License Required
Hospital License Allows
Special Circumstances

For law and regulation details, select your State from the menu below.

Select Your State ---> Go!

Hospital License Allows: 42 States
Determining State Requirements

www.multidose.org

**State Rules and Regulations**
Regulations differ among States, but your State will be in one of these three categories.

- **Separate License Required**
- **Hospital License Allows**
- **Special Circumstances**

For law and regulation details, select your State from the menu below.

Select Your State --->

**Special Circumstances:** Alabama, Alaska, Maine, Utah, Wyoming
Determining State Requirements

State Rules and Regulations
Regulations differ among States, but your State will be in one of these three categories:
- Separate License Required
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For law and regulation details, select your State from the menu below.

Washington Example

What are the requirements in your state?

Washington
A hospital pharmacist could dispense a medication to a patient that is being discharged. Our laws require that they would fill the medication pursuant to a prescription and labeled as a prescription would be in the retail environment.

Board of Pharmacy

Web Site
Establish Legality

• Very Important to confirm:
  – Requirements with State Board of Pharmacy
  – Acceptability of MMDD with institutional legal/regulatory/compliance department
Multidose Medication Dispensing for Discharge
A resource for facilitating care transition, reducing waste, and controlling costs

**Toolkit**

1. **Get Started**
   - How-to Guide
   - Background and Rationale for Multidose Medication Dispensing for Discharge

2. **Make the Case**
   - State Rules and Regulations – [See Map on Home Page](#)
   - Additional Legal, Regulatory, and Accreditation Standards Considerations
   - Multidose Medication Wastage Calculator
   - Slide Kit to Obtain Administrative Approval

3. **Plan and Implement**
   - Considerations for implementing Multidose Medication Dispensing for Discharge
   - Sample Policies and Procedures
   - Sample best practices of other hospitals that have implemented this service *(coming in June)*

4. **Educate**
   - Education of Key Personnel and Implementation Guide
Legal, Regulatory, and Accreditation Standards Considerations for MMDD

- Four Page Document
- Includes Summary Information as it relates to MMDD for the following:
  - CMS reimbursement based on patient satisfaction (value-based purchasing)
  - Risk Evaluation and Mitigation Strategies (REMS)
  - Patient Counseling
  - Medication Reconciliation
Audience Polling Question #3

Do you think that multidose items may be leaving your institution without meeting appropriate labeling or dispensing requirements?

1. Yes
2. No
3. Have never thought about it
MEDICATIONS THAT MAY BE LEAVING YOUR ORGANIZATION WITHOUT APPROPRIATE LABELING

- Inhalers
- Ocular products (including erythromycin ophthalmic ointment (neonates))
- Insulin vials/pens
- Topical ointments/creams
- Otic products
- Bulk antibiotic suspensions
- Methylprednisolone dose packs
- Women’s services products (Epifoam, Tucks, etc...
Multidose Medication Dispensing for Discharge (MMDD)

GETTING STARTED

MAKE THE CASE

PLAN & IMPLEMENT

EDUCATE

EVALUATE

BACKGROUND

TOOL KIT

- Get Started
- Make the Case
- Plan and Implement
- Educate
- Evaluate
Why is it important to implement Multidose Medication Dispensing for Discharge?
ASHP Survey of Pharmacy Directors (N=4908)

2. Have you had requests for providing this type of service?

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<th>Answer</th>
<th>Response</th>
<th>%</th>
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<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>129</td>
<td>63%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>75</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>204</td>
<td>100%</td>
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3. Do you think such a service would improve patient satisfaction in your hospital?

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<th>Answer</th>
<th>Response</th>
<th>%</th>
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<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>140</td>
<td>71%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>58</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>198</td>
<td>100%</td>
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Facilitating Care Transition

- Dispensing partially used multidose medications for discharge insures patient has a continued initial supply
  - Also allows more time for patients taking new multidose medications to fill prescriptions post-discharge

- Provides opportunity for focused medication teaching
  - Potential for improving HCAHPS satisfaction scores
    - “Patients who reported that staff “Always” explained about medicines before giving it to them”
    - “Patients at each hospital who reported that YES, they were given information about what to do during their recovery at home.”
Controlling Cost

• Most hospital discarded multidose medications continued after discharge are already paid for by the patient or their insurance provider/Medicare

• MMDD reduces the amount of costly pharmaceutical waste (some potentially hazardous) requiring proper disposal

• Veterans Health Affairs (VHA) has piloted a MMDD program and is launching a national initiative at VHA hospitals to reduce healthcare costs
  • Pilot was first recipient of President’s Securing American’s Value and Efficiency (SAVE) Award in 2009\(^{(1,2)}\)

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Reducing Waste

• MMDD is a nationally recommended practice to reduce pharmaceutical waste\(^1\)

• A 50% waste reduction of returned multidose medications was observed when studied at two hospitals affiliated with the same health-system\(^2\)

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Reducing Waste

- Consider collecting and documenting waste for defined period of time
  - Visual Impact?
Slide Kit to Obtain Administrative Approval

**Toolkit**

- **Get Started**
  - How-to Guide
  - Background and Rationale for Multidose Medication Dispensing for Discharge

- **Make the Case**
  - State Rules and Regulations – See Map on Home Page
  - Additional Legal, Regulatory, and Accreditation Standards Considerations
  - Multidose Medication Wastage Calculator
  - Slide Kit to Obtain Administrative Approval

- **Plan and Implement**
  - Considerations for Implementing Multidose Medication Dispensing for Discharge
  - Sample Policies and Procedures
  - Sample best practices of other hospitals that have implemented this service (coming in June)

- **Educate**
  - Education of Key Personnel and Implementation Guide
(Insert your hospital/health-system name here)

- (Consider including any institution specific data on collected multidose waste)
- (Consider including any institution specific data on cost implications of pharmaceutical waste reduction)
What is the process for implementing Multidose Medication Dispensing for Discharge?
Process Development/Implementation

- Obtain organizational commitment
- Establish a MMDD team
- Determine baseline waste (if appropriate)
- Develop organization specific list of items appropriate for MMDD
SUITABILITY OF MEDICATION FOR MULTI-DOSE MEDICATION DISPENSING FOR DISCHARGE (MMDD)

Medications considered for MMDD should meet established organization specific criteria agreed upon by both the pharmacy and the medical staff. Example criteria could include:

1) The medication is on a pre-approved list signed off on by organizational leadership
2) The medication is intended to be continued once the patient is dismissed
   □ Special considerations for sending home PRN medications (Example: newborn erythromycin ointment)
3) The medication is not a controlled/dangerous substance
4) The patient (or family/care provider) is deemed competent to handle and administer the medication
5) A specific order is written by the physician to authorize that the medication is appropriate to send home
   □ Consideration should be given as to whether this could be accomplished via protocol
### 6. What multi-dose products do you label for patients to take home upon discharge? (check all that apply)

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eye drops</td>
<td>160</td>
<td>82%</td>
</tr>
<tr>
<td>2</td>
<td>Topicals</td>
<td>153</td>
<td>78%</td>
</tr>
<tr>
<td>3</td>
<td>Insulin pens</td>
<td>100</td>
<td>51%</td>
</tr>
<tr>
<td>4</td>
<td>Inhalers</td>
<td>185</td>
<td>94%</td>
</tr>
<tr>
<td>5</td>
<td>Other:</td>
<td>34</td>
<td>17%</td>
</tr>
</tbody>
</table>
Process Development/Implementation (continued)

- Develop appropriate policy/procedure
  - Determine state/national labeling requirements
  - Identify labeling/relabeling procedure
  - Establish process to determine physician intent for multidose medication continuation at discharge
    - Electronic or written order vs. protocol driven
Example Policy
Prior to implementing multi-dose medication dispensing for discharge (MMDD), an initial assessment of the inpatient pharmacy’s ability to appropriately meet outpatient prescription labeling requirements is required.

- Is the medication labeling process used for inpatient dispensing already appropriate for outpatient use? (most efficient)
- Does the pharmacy information system have the capability of generating a label which will meet outpatient dispensing requirements? Or is label reformatting necessary and/or possible?
- Does the hospital have a separate outpatient pharmacy or appropriate satellite area that could be utilized to relabel inpatient medications for outpatient dispensing
Any medication sent home with the patient should meet all outpatient prescription labeling requirements as established by state requirements. Labeling requirements should include (but are not limited to):

- Dispensing pharmacy name and contact information
- Date dispensed to patient (relabeling date?)
- Patient Name
- Prescriber
- Drug Name, Strength, Size
- Patient instructions (in layman’s terms)
- Any applicable auxiliary instruction labels
- Any applicable expiration dating
- Any state specific requirement

**Note:** Labeling or relabeling should always be completed under the supervision of a registered/licensed pharmacist. The final product should be inspected and signed off on by a registered/licensed pharmacist. Labels should NOT be sent to the floor for a non-pharmacist practitioner to attach to the product. Determine your state requirements (laws/rules) for take home dispensing.
Example from Spectrum Health

SpectrumHealth

Butterworth Hospital Pharmacy
100 Michigan NE Grand Rapids, MI 49503
Phone 516-391-1650

Take as directed on Medication Discharge Instructions.

No refill.
Keep out of the Reach of Children. May be a Non Safety container. Discard after one year or at expiration date if less.
Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

SpectrumHealth

Blodgett Hospital Pharmacy
1840 Wealthy St Grand Rapids, MI 49506
Phone 616-774-7410

Take as directed on Medication Discharge Instructions.

No refill.
Keep out of the reach of children—may be a non safety container. Discard after one year or at expiration date if less. Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.
## ASHP Survey of Pharmacy Directors (N=4908)

8. Medications are relabeled and dispensed from (check all that apply)

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<th>Answer</th>
<th>Response</th>
<th>%</th>
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<tbody>
<tr>
<td>1</td>
<td>Outpatient pharmacy</td>
<td>33</td>
<td>17%</td>
</tr>
<tr>
<td>2</td>
<td>Satellite pharmacy</td>
<td>15</td>
<td>8%</td>
</tr>
<tr>
<td>3</td>
<td>They are labeled appropriately for discharge upon initial dispensing</td>
<td>79</td>
<td>41%</td>
</tr>
<tr>
<td>4</td>
<td>Other:</td>
<td>83</td>
<td>43%</td>
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### 4. This service is provided:

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<tr>
<td>1</td>
<td>Upon physician request</td>
<td>14</td>
<td>45%</td>
</tr>
<tr>
<td>2</td>
<td>Upon patient request</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>3</td>
<td>Both</td>
<td>7</td>
<td>23%</td>
</tr>
<tr>
<td>4</td>
<td>Other</td>
<td>9</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>31</td>
<td>100%</td>
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• Determine appropriate patient counseling and documentation mechanisms
• Educate process participants
  • Medical Staff, Nursing Staff, Pharmacy Staff, Respiratory Therapy Staff, Case Managers, Social Workers
• Determine follow-up monitoring plan
• Implement...
Appropriate discharge planning should include evaluation of medications that may be eligible for multi-dose medication dispensing for discharge (MMDD).

Early identification of opportunities is important to:

- Maximize program benefits to patients
- Allow for physician clarification of intent for medication continuation at discharge
- Facilitate an organized process for timely labeling/relabeling by the pharmacy (if initial label does not already meet requirements)
- Complete and reinforce patient education as appropriate
Special consideration for medications deemed appropriate for multi-dose medication dispensing (MMDD) for discharge should be given during the discharge medication reconciliation process.

Considerations for discharge medication reconciliation:

- Verification the medication is to continue at home
- Review for potential mix-ups based on any inpatient therapeutic interchanges that may have occurred
  - Examples: Insulins (e.g. Novolog™ to Humalog™), Inhalers (e.g. Advair™ to Symbicort™)
- Verification that medication meets institutional criteria for MMDD
- Verification that labeling is complete and accurate
- Patient is appropriately educated regarding use and administration of medication
10. How do you meet OBRA ’90 and state board patient counseling requirements when dispensing these medications for outpatient use? (check all that apply)

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<tbody>
<tr>
<td>1</td>
<td>Pharmacists counsel patients upon request.</td>
<td>103</td>
<td>53%</td>
</tr>
<tr>
<td>2</td>
<td>Pharmacists counsel all patients.</td>
<td>19</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>Nurses counsel patients upon request.</td>
<td>23</td>
<td>12%</td>
</tr>
<tr>
<td>4</td>
<td>Nurses counsel all patients.</td>
<td>130</td>
<td>67%</td>
</tr>
<tr>
<td>5</td>
<td>Other:</td>
<td>20</td>
<td>10%</td>
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</table>
PATIENT EDUCATION

All patients eligible to receive bulk medications intended for take home use must meet educational/counseling requirements as established by regulatory agencies (state and federal). Additional consideration should be given to any Risk Evaluation and Mitigation Strategy (REMS) program requirements applicable to the product.

Considerations for education should include:

- Assessment of patient/caregivers ability to administer the medication
- Any applicable regulatory requirements for counseling
ADDITIONAL CONSIDERATIONS FOR PLANNING AND IMPLEMENTING MMDD
THERAPEUTIC INTERCHANGE

For organizations that are interchanging inhalers, eye drops, insulin pens/vials or other medications suitable for multi-dose medication dispensing for discharge (MMDD), special consideration must be given to insure that substituted items are not sent home with the patient unless they are to be continued as home medications.

Example: A patient is admitted to a hospital with a robust therapeutic interchange program. The patient’s home medication list includes Advair™ (salmeterol/fluticasone) which is interchanged by the pharmacy to Symbicort™ (budesonide/formoterol). Upon discharge, the patient is given their Symbicort™ inhaler to take home. The patient presents to their physician office the following week taking both Advair™ and Symbicort™.

Thorough patient education and discharge medication reconciliation are necessary to avoid medication misadventures related to therapeutic duplication for interchanged medications.
Multidose medication containers suitable for multidose medication dispensing for discharge (MMDD) should not be routinely stored in automated dispensing cabinets.

Storage of these items outside of the pharmacy (particularly in the emergency department or outpatient areas) allows opportunity for practitioners to circumvent appropriate labeling and counseling requirements.

All multidose items should be dispensed by a pharmacist and appropriately labeled when intended for outpatient use.
Prior to implementing multidose medication dispensing for discharge (MMDD) established procedures should be developed for transport and handling of multidose containers (ie. inhalers, insulin pens, eye drops, etc...) that have been in contact with a patient.

- Consideration should be given to bagging the medication prior to delivery to the pharmacy for handling and relabeling.
- Appropriate hand hygiene should be emphasized for all staff handling multidose containers that have been in contact with a patient.
Special caution should be taken with regards to appropriate billing practices. Multidose medication containers should not be charged to an inpatient bill and sent home when the medication has not been ordered and administered as part of the inpatient stay.

**Example:** At the time of patient discharge, a physician writes an order for the pharmacy to label and send home a vial of 70/30 insulin. Upon pharmacy profile review, the pharmacist notes that the patient has not received 70/30 insulin during her brief stay. The pharmacist contacts the physician and determines that he indeed wants this type of insulin sent home with the patient. The pharmacist reminds the physician it is fraudulent to charge on an inpatient bill and send a medication home with a patient when doses were not received as part of a that visit.

Additionally, policies/procedures should address the potential for practitioners to order multidose medication containers to be dispensed at the time of discharge with the first dose being administered immediately prior to departure.
Considerations for Implementing MMDD

• Eight page document
• Includes summary info on:
  – Suitability of medications
  – Medications that may be leaving your organization without appropriate labeling
  – Appropriate multidose medication storage
  – Therapeutic interchange
  – Assessment of labeling capabilities
  – Infection control
  – Compliant billing practices
  – Discharge planning
  – Discharge medication reconciliation
  – Patient education
Multidose Medication Dispensing for Discharge (MMDD)

- Getting Started
- Make the Case
- Plan & Implement
- Educate
- Evaluate

Tool Kit
- Get Started
- Make the Case
- Plan and Implement
- Educate
- Evaluate
Education and Implementation

• Three page document
• Includes Frequently Asked Questions (FAQs)
• Incorporates PDCA process improvement methodology
Multidose Medication Dispensing for Discharge (MMDD)

- GETTING STARTED
- MAKE THE CASE
- PLAN & IMPLEMENT
- EDUCATE
- EVALUATE

Tool Kit
- Get Started
- Make the Case
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- Educate
- Evaluate
COMPLIANCE MONITORING FOR MULTIDOSE MEDICATION DISPENSING FOR DISCHARGE (MMDD)
• Policy adherence monitoring
  – Compliance with defined policies

• Waste disposal adherence
  – Compliance with defined policies
  – Incentive to implement process
ADHERENCE TO MMDD POLICY

• Determine policy criteria to monitor
  – Independent licensed practitioner order provided
    • CPOE vs written
  – Labeled appropriately for discharge
  – Patient education performed
    • Electronic vs hard-copy
    • REMS
  – Ongoing monitoring by pharmacy staff to identify attempts to dispense not covered by policy.
ADHERENCE TO MMDD POLICY

• Determine frequency of monitoring
  – Perform monthly or quarterly
  – Perform random sampling

• Determine individual to perform audits
  – Pharmacy Staff
  – Case Management Staff
  – Quality Personnel
  – Unit Nursing Staff
DISPOSAL OF MULTI-DOSE MEDICATIONS

• Identify products for appropriate waste
  – Inhalant/propellant medications
    • MDI- “return to pharmacy if not sent home”
    • Incentive to send home- reduce waste
  – Hazardous Waste
    • Additional labeling (HW)
  – Non-hazardous

• Monitor waste disposal periodically
  – Assess volume pre and post implementation
  – Incorporate into monthly unit inspections
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<tr>
<th>Date</th>
<th>FIN</th>
<th>Product</th>
<th>Appropriate labelling Y/N?</th>
<th>Education Documented Y/N?</th>
<th>Provider order Y/N?</th>
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## SAMPLE RETURN PRODUCT TRACKING AUDIT SPREADSHEET

**Return Product Tracking Audit**

Dates: _______________________

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Multidose Medication Dispensing for Discharge (MMDD)

- **GETTING STARTED**
- **MAKE THE CASE**
- **PLAN & IMPLEMENT**
- **EDUCATE**
- **EVALUATE**

**TOOL KIT**
- Get Started
- Make the Case
- Plan and Implement
- Educate
- Evaluate
For tools and resources on this topic visit www.multidose.org

Resource Center Features:

• How-to Guide.
• State rules and regulations for multidose medication dispensing for discharge.
• Downloadable tool to calculate your medication waste.
• Practical toolkit with customizable slide sets and many more useful tools.
• Helpful links to resources.

Planned by ASHP.
Sponsored by Sanofi.