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Board of Registration in Pharmacy

Advisory: Non-Sterile Compounding

In addition to the requirements of MGL, 247 CMR, USP <795>, and <800>, the Board of Registration in Pharmacy ("Board") would like to provide a review of select requirements and guidance for the practice of non-sterile compounding by Board licensed pharmacies.

In accordance with MGL c.112 section 39D, **complex non-sterile compounding** is specifically defined with certain requirements, including additional specialty licensure (see Section VII below).

I. Definitions

- a. **Non-sterile compounding** is defined as the process of combining, admixing, diluting, pooling, reconstituting other than as provided in the manufacturer's labeling, or otherwise altering a drug or bulk drug substance to create a non-sterile preparation (adapted from the latest draft of USP <795>).
- b. **Complex non-sterile compounding** is defined as the compounding of drug preparations which require special training, a special environment or special facilities or equipment or the use of compounding techniques and procedures that may present an elevated risk to the compounder or the patient ([MGL c.112 section 39D](#)).

Note: The Board considers the compounding of NIOSH drug containing preparations or other hazardous agents to be complex non-sterile compounding.

II. General

- a. Pharmacies must have policies and procedures covering all aspects of non-sterile compounding, including training, based on the type of the compounding performed.
- b. Patient specific prescriptions are required to dispense any compounded preparation into or from Massachusetts.
- c. Copies of commercially available, FDA approved drugs or drug preparations may not be compounded except to meet the unique medical

need of an individual patient by producing a significant difference between the compounded drug preparation and a comparable commercially available drug whether it is for human or animal use. See policy:

<https://www.mass.gov/doc/policy-2020-02-compounding-of-commercially-available-drugs/download>

- d. Pharmacies may provide emergency kits (“e-kit”) containing limited quantities of Schedule VI compounded medications to a licensed veterinarian for the purpose of direct administration or dispensing in emergency situations in accordance with Board policy:

<https://www.mass.gov/doc/joint-policy-2019-06-compounded-emergency-medications-for-veterinarian-use/download>

- e. Pharmacies may participate in research drug studies with compounded medications in accordance with Board policy:

<https://www.mass.gov/doc/2018-06-retail-pharmacy-participation-in-investigational-drug-studies/download>

III. Non-Sterile Compounding Process

- a. A pharmacy must follow a master formulation record (i.e. formulation sheet) each time it prepares a compounded non-sterile preparation. The master formulations must be based on USP standards as well as any relevant scientific data and / or direct validation testing, as applicable.
- b. Simple reconstitution of commercially available FDA approved drug preparations in accordance with manufacturer package insert instructions is not considered compounding.
- c. Breaking or splitting drugs is not considered compounding, but for hazardous drugs, USP <800> must be followed to perform these activities. See advisory:
<https://www.mass.gov/doc/implementation-of-usp-in-community-pharmacies-0/download>
- d. Pre-measured compounding kits are still considered compounding and all relevant USP standards must be followed.
- e. Active Pharmaceutical Ingredients (“API”) and other bulk powders must be obtained from a facility that is registered by the FDA.

Note: The Board would like to remind non-sterile compounders to exercise extreme caution in assuring proper dosages when compounding with API powders by verifying if the API is a pure powder or a trituration (dilution).

IV. Facility and Equipment

- a. Pharmacies must have a designated compounding area that should be at least 10 square feet of counter space. This area should be separated or otherwise protected from water sources (i.e. sink).

- b. Surfaces in compounding areas should be smooth, seamless, impervious, free from cracks and crevices, and non-shedding to facilitate cleaning. Note: Carpeting is not allowed in the compounding space per the latest draft of USP <795>.
- c. Compounding facilities must be maintained in a clean and sanitary manner including sinks, utensils, and equipment. Review the [FDA's Insanitary Conditions at Compounding Facilities guidance document](#).
- d. Equipment used for compounding must be in a good state of repair and properly maintained.
- e. Scales / balances must be properly maintained and sealed at least once per calendar year. See newsletter for details: <https://nabp.pharmacy/wp-content/uploads/2016/06/Massachusetts-Newsletter-November-2019.pdf>
- f. Space, equipment, and materials should be designed, arranged, and used in a way that minimizes errors and cross-contamination.
- g. Before beginning any renovations, retail pharmacies must apply for approval using this form: <https://www.mass.gov/how-to/request-approval-for-a-pharmacy-renovation-or-expansion>

V. Labeling / BUDs

- a. Beyond use dates ("BUD") must be assigned in accordance with USP <795> or a validated formula. Assure that BUDs are appropriately assigned in the pharmacy's computer system and are not defaulted to one year.
- b. In addition to standard prescription labeling, a statement that the drug is a non-sterile compounded drug preparation must also be included (MGL c. 94C section 21).

VI. Documentation

- a. A reconstitution log (or similar documentation) for the preparation of commercially available products (e.g., antibiotic suspensions, erythromycin-benzoyl peroxide gel, etc.) is recommended.
- b. Flavoring agents added to commercially available products must be documented as part of the prescription record, reconstitution log, or other similar documentation.
- c. Each compounded non-sterile preparation must be documented on a compounding record (i.e. compounding log).
Note: The compounding record serves as the accountability documentation as required by MGL c.112 section 39D.
- d. All pharmacies are required to maintain a defective drug log for any compounded drug preparation that is or may be defective. See advisory for details:
<https://www.mass.gov/advisory/advisory-on-pharmacy-requirement-to-maintain-defective-drug-preparation-log>

VII. Complex Non-Sterile Compounding

- a. An additional pharmacy specialty license will be required to prepare complex non-sterile preparations:
<https://www.mass.gov/pharmacy-licensing>
- b. The Board considers the following to be examples of complex non-sterile compounding (not all inclusive):
 - i. compounding of NIOSH drug containing preparations or other hazardous agents;
 - ii. use of complex calculations such as accounting for loss on drying, salt conversions, multiple aliquots, etc.; and
 - iii. preparation of the following dosage forms:
 - 1. transdermal dosage forms
 - 2. capsules
 - 3. suppositories
 - 4. troches
 - 5. lollipops
 - 6. sublingual dosage forms
 - 7. tablets
 - 8. tablet triturates
 - 9. modified-release preparations
 - 10. other dosage forms intended to deliver systemic effects (inserts, nasal sprays, nasal irrigations, certain gels, etc.)
- c. Additional requirements for pharmacies engaged in complex non-sterile compounding:
 - i. a dedicated compounding room with a containment hood(s) is recommended for complex non-sterile compounding but is required for hazardous drug (HD) compounding (i.e. containment secondary engineering control with containment primary engineering control);
 - ii. HD and non-HD non-sterile compounding cannot occur in the same room or primary engineering control. A separate room with a separate containment hood(s) is required for HD compounding (per USP <800>);
 - iii. compounding of non-sterile preparations using bulk drug substances must comply with FDA's guidance "[Bulk Drug Substances Used in Compounding Under Section 503A of the FD&C Act](#)"; bulk drug substances must be accompanied by a valid certificate of analysis;
 - iv. pharmacists engaged in complex non-sterile compounding must obtain 3 continuing education hours in complex non-sterile compounding each calendar year;
 - v. repairs and / or service of complex non-sterile compounding facilities must be conducted in accordance with the Board's advisory:
<https://www.mass.gov/doc/advisory-on-conducting-repairs-or-service-to-sterile-compounding-facilities-or-facilities/download>;

- vi. retail complex non-sterile compounding pharmacies licensed by the Board are required to [report](#) volume and distribution data each calendar year.

Please direct any questions to: Pharmacy.Admin@massmail.state.ma.us