



Guidelines for Teachers Administering MDCA

UBC Okanagan nursing students are required to complete medication dosage calculation assessment (MDCA) in semesters 3, 4, 5, 6 & 7 of the program. Students must obtain 95% or higher on the MDCA in order to administer medications in the clinical setting.

The intent of this guideline is to ensure consistency across the UBCO Nursing Program to support students with this high-stakes exam process.

MDCA policy: <https://www.calendar.ubc.ca/okanagan/index.cfm?tree=18,288,1076,1335>

MDCA requirements standard: <https://nursing-new.cms.ok.ubc.ca/wp-content/uploads/sites/120/2021/05/MDCA-Requirements-Standard.pdf>

Notification of MDCA

- Associate Director communicates the policy in the yearly information packages
- Course instructor to include in the course syllabus
- Course instructors to remind students via Canvas

Opportunity for Practice

- at the start of the term (have available online resources – questions & links)
- post one practice exam on Canvas

Question Format

- Number of marks: 20
- Time to complete: 1 hour
- Initial MDCA exam will be computer-based exam on Canvas; rewrite exams may be computer- or paper-based
- Type of questions: range of calculations but they need to accurately reflect the reality of practice, questions based on knowledge the student learned in the previous term/year, MDCA review & actual tests are similar in level of difficulty for that term, include conversion questions (ex: mcg-> mg, mg-> g), include questions involving decimal points (ex: Dig 0.125 mg)
- Reviewing of questions prior to administration of MDCA – produced by & reviewed by teams

Test Environment

- Classroom - ideally all students at one time, except for DRC accommodations as needed
- Basic calculators only allowed (no graphic or statistical calculators, no smart phones)

Marking

- Teacher will verify students grades on MDCA (whether hand-marked, or computer-graded).
- When units are an important part of the answer, the MDCA question should indicate this; and if the student does not include the correct units in their answer, then the answer will be marked as incorrect.
- Rounding of answers – will be dependent on what is the expectation in practice. The expectations for rounding of answers will be in the stem of the question.
 - e.g.: 10.4 drops/min would not be realistic but would not want to round up if answer is 1.25 ml of a drug.

Process Following Unsuccessful MDCA Write

- Teacher notifies the student, team leader and clinical teacher of unsuccessful first write
- Teacher meets with student to review their exam:
 - Explore reasons for errors & strategies for success.
 - Student to demonstrate solution for all incorrect answers on paper to show process and demonstrate understanding
 - Ask student if they have any disabilities and DRC accommodations. If DRC accommodations are required, put in exam request same day (7-day booking time required) or consult with team leader.
 - Book open lab MDCA remediation appointment for student
 - Book re-write for student, a minimum of one week later
 - Offer student the option of either online or paper version of exam for re-write
- In SSIII or SSIV, initiate an MDCA learning contract if student fails both the initial MDCA and an MDCA re-write
- In SSV and later, initiate an MDCA learning contract immediately after student fails the initial MDCA

Open Lab MDCA Remediation

- Students will complete at least 5 remedial examples in lab.
- Remedial examples will include medication order and provide medication materials to determine and demonstrate correct dose.
- Remedial examples will be linked to the types of medication questions for the level of MDCA and errors made by the student during the initial MDCA.
- Students will be provided with additional resources for practice if needed.

MDCA Re-Write

- Minimum of one week after previous MDCA
- Student to select computer-based or paper-based exam format
- Ensure DRC accommodations (if applicable) are in place for re-write exam
- Number and type of questions will be the same as the initial MDCA

Other Methods to Increase Math Competency

- Instructors will add medication math questions into other course exams, as appropriate.

Approved by School of Nursing March 20, 2023