



Calculate With Confidence.



eDose[®]

Drug Dosage Calculation and
Assessment Software



Calculate with Confidence

Inaccurate dosage calculations too frequently jeopardize patient safety. Each year, patients are needlessly harmed by medication errors. For many dealing with the mathematics of dosage calculation, simple practice is not enough. That's why we've created an innovative learning product called eDose, a web-based drug dose calculation learning and assessment solution designed for healthcare students and professionals. eDose provides an innovative, authentic and proven approach to teaching and assessing drug dosage calculation skills that's easy-to-use.

Licensed from UK-based medical software developer, Authentic World Ltd., eDose is already being successfully used by the UK's National Health Service (NHS) and at higher education institutions across the UK. To date, more than 50,000 students and practitioners in the UK are using the product to enhance their medication dosage calculation skills. In late 2008, METI launched eDose in the United States and Canada. Today, eDose is successfully used in healthcare learning environments around the world. Research studies at various institutions have proven the success of eDose in increasing the knowledge of dosage calculation skills by learners and practitioners worldwide.

eDose works!

eDose consists of six modules that provide an integrated learning and assessment platform. eDose is 100% web-based and launched from a secure site allowing you to log on from anywhere with an Internet connection. eDose is fully narrated and uses realistic representations of clinical practice to provide all the educational tools you need to:

- Master medication dosage calculation at the learner's own pace
- Understand the basic principles related to medication orders, administration vehicles and conversions including IV infusion rates
- Establish a permanent understanding of the correct methodology for setting up the dosage problem to be solved
- Improve computation abilities for every means of drug administration
- Hone skills using randomized practice assessments that provide unlimited unique experiences
- Receive and record immediate assessment results
- Evaluate for competency based upon your institution's standards
- Determine areas of learner deficiency and assign additional targeted assessments
- Allow learners to improve on their deficiencies using self-directed remediation

eDose for Hospitals

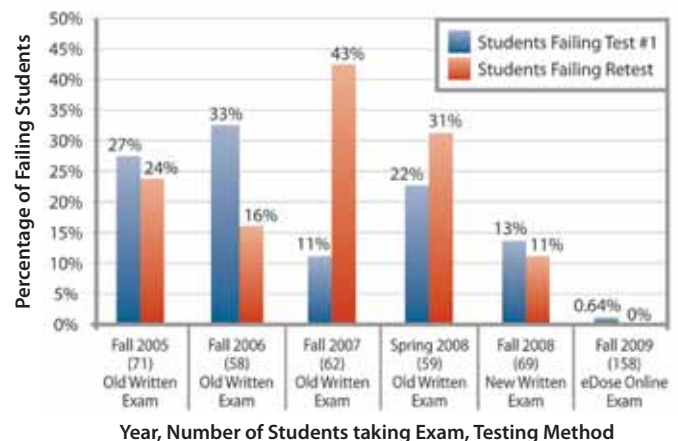
eDose provides a quick and easy-to-use solution for assessment of dosage calculation competency in the hospital workforce. eDose provides early identification during the recruitment and orientation process as well as providing ongoing competency assessment for healthcare practitioners.



eDose for Nursing Students

Although nursing students must demonstrate proficiency of dosage calculations prior to graduation, every year up to 30% of nursing students fail to progress in their studies because they are unable to pass mandatory dosage calculation exams. Students score up to 27% higher on their drug dosage calculation assessments when using eDose as opposed to traditional techniques.*

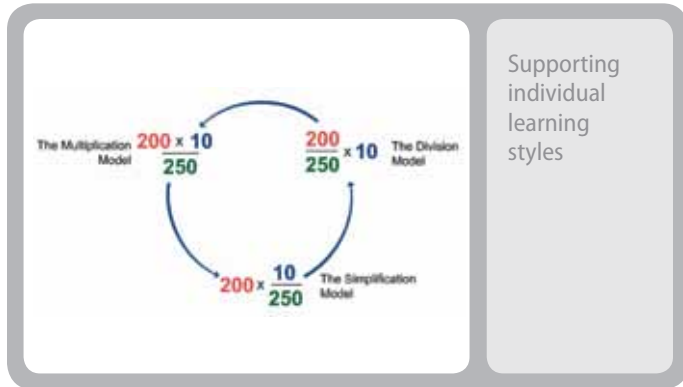
The Percentage of Bachelor of Nursing Accelerated Track (BNAT) Students Failing Math Test (Fall 2005 - Fall 2009)**



University of Calgary's BNAT failure rate fell from 12% to less than 1% after adopting eDose into their curriculum

Developing Competence and Quality Standards

eDose accommodates for individual learning styles by incorporating a three-phase orientation process that provides users with options for selecting an equation model which suits their needs.



Supporting individual learning styles

Users are coached via interactive exercises in:

- Setting the problem up appropriately
- Accurately calculating the correct dosage and rate
- Solving problems step-by-step using worked examples and tutorials

Proactive Risk Assessment

Our online authentic diagnostic assessment tools provide educational institutions and healthcare organizations with solutions for undertaking proactive risk assessments. Using the same high quality imagery, users are provided with the opportunity for repeated practice at solving examples drawn from our extensive medication dosage problem database.

At a time determined by the organization, learners are exposed to a 100-point diagnostic assessment specific to their broad area of clinical practice. At the institutional level, the service provides higher education faculty and clinical managers with reporting tools to gauge, monitor and track over time the performance of individual learners or practitioners.

The screenshot shows a user interface for a diagnostic assessment. At the top, it displays 'User: aw88a192', 'Test Taken: 148798', and 'Score: 88 out of 88'. Below this, 'Question 26' is shown with the status 'This question was answered INCORRECTLY.'. A feedback message says '2/3 of more elements of the calculation are incorrect. See below for details.'. The question asks for the amount of drug to give in mL. The correct answer is shown as $25 \times 1 = 0.5$. The user's answer is shown as $25 \times 1 = 2$, which is marked with a large red 'X'.

Summary of individual user performance

Supporting Clinical Risk Management

Our online organizational support provides tools for assessing, monitoring and tracking the performance of individuals or groups. This enables organizations to regularly and systematically identify individual practitioners diagnosed as likely to commit dosage calculation errors. In addition, it allows organizations to target and support potentially high-risk groups such as:

- Students in pre-licensure education programs
- Newly licensed practitioners entering their first clinical positions
- Experienced practitioners at time of hire
- Experienced practitioners returning to practice following a prolonged period of absence

Managing Data to Support Clinical Audit

The eDose data management tools provide:

- Comprehensive reports of practitioner performance in tabular and graphical formats
- Powerful filtering tools that enable organizations to focus on specific groups or areas of practice
- Diagnostic performance reports
- Downloadable data for entry into local reporting systems

New and Improved: More Advanced Calculation Modules

Complex drug administration requires sophisticated training, so eDose has added the Injectable Medicines Therapy and Injectable Medicines Therapy Assessment (IMT & IMTA) modules.



Injectable Medicine Therapy

By isolating and targeting 26 areas of dosage calculation and administration errors, we have created a learning module covering the scope of each and every one of these issues. From washing your hands, to selecting the proper delivery methods to more complex mathematical calculations, the IMTA provides a great testing tool to identify areas of concern and assess proficiency.

* Case Western Reserve University. Improving Medication Dosage Calculation Skills Among Undergraduate Nursing Student
 ** Source: The University of Calgary, Alberta, Canada



Innovative Solutions for reducing medication errors

eDose is the affordable web-based solution for drug dosage calculations and assessments. Designed for healthcare students and professionals, eDose, provides the understanding and skills required to safely and accurately perform medication dosage in clinical practice. The user-friendly interface makes accessing eDose simple for learners to master their skills. eDose comprises an integrated learning and assessment platform that provides a solution for:

- Accommodating large numbers of healthcare practitioners and learners
- Training students to a higher verifiable standard within a shorter time frame
- Assessing students without the need to set or mark examination papers
- Generating instant diagnostic feedback to students
- Monitoring student engagement and performance
- Identifying those students likely to commit errors in the practice setting

eDose is offered through a subscription service. Subscriptions can be purchased for an entire cohort or sold through the campus bookstore. Faculty receive free licenses.

For more information about eDose or other METI products contact eDose@meti.com or visit meti.com.



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