

Medical calculator apps allow point of care, rapid decision-making

Calculate your patient's appropriate drug dosage on the spot

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The most useful applications (apps) for health care professionals and students? Medical calculator apps (along with drug reference and disease diagnosis apps), according to surveys of clinicians and students.^{1,2} The utility of calculator apps to these groups is not surprising; calculator apps fall in the category of clinical decision-making apps, which also includes decision support systems, clinical treatment guidelines, disease diagnosis aids, differential diagnosis aids, laboratory test ordering, laboratory test interpretation, and medical exams.³ Calculator apps obviously save time as most health care providers have not memorized the many medical formulas and do not have computational speed. I have previously discussed other, more ObGyn-specific calculators, such as due date calculators.^{4,5} In this App Review column, however, I would like to highlight 3 general calculator apps: Calculate by QxMD, CliniCalc Medical Calculator, and Medscape. Researchers found all 3 apps 100% accurate and contained the most functions desired by internists.⁶ The apps are available at no cost and include many unique calculators. My colleagues and I actually used Calculate by QxMD to verify calculations in a previous study.⁷



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A clinical example for how to apply calculators in practice is as follows: A multiparous patient at term has undergone an unscheduled cesarean delivery for arrest of dilation and intra-amniotic infection. You need to decide if the patient requires anti-coagulants for deep venous thrombosis (DVT) prophylaxis and her necessary daily dose for gentamicin for postpartum infection prophylaxis. You can use Medscape's body mass index (BMI) calculator to find out that this patient's BMI is 45 kg/m² and that DVT prophylaxis is in fact indicated. You also can use QxMD's ideal body weight calculator to get the patient's weight and determine the appropriate daily dose for gentamicin.

The **TABLE** (page 58) provides more information on the apps, with its inclusions based on a shortened version of the APPLICATIONS scoring system, APPLI (app comprehensiveness, price, platform, literature used, and important special features).⁷ ●

References

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IN THIS ARTICLE

Details on recommended apps

page 58

CONTINUED ON PAGE 58

TABLE Recommended general medical calculator apps

App	App comprehensiveness	Price	Platform	Literature used	Important special features
 <p>Calculate by QxMD</p> <p>iTunes: https://itunes.apple.com/us/app/calculate-by-qxmd/id361811483?mt=8</p> <p>Google Play: https://play.google.com/store/apps/details?id=com.qxmd.calculate&hl=en_US</p>	Multiple disciplines	Free	iTunes and Google Play store	Yes	<ul style="list-style-type: none"> • Accurate • Easy to navigate
 <p>CliniCalc Medical Calculator</p> <p>iTunes: https://itunes.apple.com/us/app/clinicalc-medical-calculator/id353404314?mt=8</p>	Multiple disciplines	Free	iTunes only	No	<ul style="list-style-type: none"> • Accurate • Easy to navigate
 <p>Medscape</p> <p>iTunes Preview: https://itunes.apple.com/us/app/medscape/id321367289?mt=8</p> <p>Google Play: https://play.google.com/store/apps/details?id=com.medscape.android&hl=en</p>	Multiple disciplines	Free	iTunes and Google Play stores	References provided in diseases, conditions, medical procedures, and medical news sections	<ul style="list-style-type: none"> • Accurate • Info on diseases, conditions, and medical procedures, with tables, images, and videos covering pathophysiology, epidemiology, differential diagnosis, and treatment options • Drug interaction checker • Pill identifier • Medical news