







## Supplementary Materials

**Table S1:** Examples of Apps used in Anesthesia

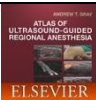



App name	App type	Clinical Area	Description	Cost	URL
<b>General clinical support</b>					
 5 Minute Anesthesia Consult	Healthcare provider decision support Drug references, medication management Reference texts/journals, training and education Patient centred app	Pre-operative setting General anesthesia Surgical specialty	Thorough pathology-based app extending from pre-operative management to intra-operative management	Free  In-app purchase \$119.99	<a href="https://apps.apple.com/us/app/5-minute-anesthesia-consult/id1102384412">https://apps.apple.com/us/app/5-minute-anesthesia-consult/id1102384412</a>
 AAGBI (Association of Anaesthetists of Great Britain and Ireland)	Healthcare provider decision support Drug references, medication management Reference texts/ journals, training and education Medical calculators Healthcare provider communication/ referral coordination	Pre-operative setting General anesthesia Surgical specialty Regional anesthesia	Centralised hub for interaction between anaesthetists, guidelines, and education	Free	<a href="https://apps.apple.com/us/app/association-of-anaesthetists/id913194458">https://apps.apple.com/us/app/association-of-anaesthetists/id913194458</a>
 Anesthesia 411	Healthcare provider decision support Drug references, medication management Reference texts/journals, training and education	General anesthesia Surgical specialty	Specific procedures and the integral information for anaesthetists to perform them safely	\$3.99	<a href="https://apps.apple.com/us/app/anesthesia-411/id449473295">https://apps.apple.com/us/app/anesthesia-411/id449473295</a>
 Anesthesia Central	Healthcare provider decision support Drug references, medication management Reference texts/ journals, training and education	General anesthesia Surgical specialty	Combination resource allowing for multiple uses across several domains	Free  In-app purchases \$99.99 - \$169.99	<a href="https://apps.apple.com/us/app/anesthesia-central/id347656772">https://apps.apple.com/us/app/anesthesia-central/id347656772</a>
App name	App type	Clinical Area	Description	Cost	URL

 <p>ASRA Coags</p>	<p>Healthcare provider decision support</p> <p>Drug references, medication management</p>	<p>Pre-operative</p> <p>Regional anesthesia</p> <p>Pain medicine</p>	<p>Guidelines provided for regional anesthesia and pain management</p>	<p>\$3.99</p>	<p><a href="https://apps.apple.com/us/app/asra-coags/id858796572">https://apps.apple.com/us/app/asra-coags/id858796572</a></p>
 <p>Anesthesia Pre-Op</p>	<p>Patient centred app</p> <p>Healthcare provider decision support</p> <p>Patient centred app</p>	<p>Pre-operative setting</p>	<p>Provides checklist for pre-operative patient assessment</p>	<p>Free</p>	<p><a href="https://play.google.com/store/apps/details?id=com.mobincube.anesthesia_pre_op.sc">https://play.google.com/store/apps/details?id=com.mobincube.anesthesia_pre_op.sc</a> HNMR4H</p>
 <p>MyATLS</p>	<p>Healthcare provider decision support</p> <p>Drug references, medication management</p>	<p>General anesthesia</p> <p>Surgical specialty</p>	<p>Easy to access trauma based clinical decision support tool</p>	<p>\$1.22 - \$9.77 per item</p>	<p><a href="https://play.google.com/store/apps/details?id=com.echo.myatls">https://play.google.com/store/apps/details?id=com.echo.myatls</a></p>
 <p>Regional Anesthesia Reference</p>	<p>Medical calculators</p> <p>Reference texts/journals, training and education</p> <p>Drug references, medication management</p> <p>Medical calculators</p> <p>Reference texts/journals, training and education</p>	<p>Regional anesthesia</p>	<p>Provides education about regional anesthesia, recommended analgesia and calculator</p>	<p>Free</p>	<p><a href="https://play.google.com/store/apps/details?id=com.awalters.regionalanesthesiaatlas">https://play.google.com/store/apps/details?id=com.awalters.regionalanesthesiaatlas</a></p>
 <p>TTE Standard Views</p>	<p>Reference texts/journals, training and education</p>	<p>Pre-operative</p>	<p>Provides 3-dimensional context for images viewed in transthoracic echocardiography</p>	<p>\$4.99</p>	<p><a href="https://apps.apple.com/us/app/tte-standard-views/id660856485">https://apps.apple.com/us/app/tte-standard-views/id660856485</a></p>
 <p>ECHO Views - Transesophageal Echocardiography</p>	<p>Reference texts/journals, training and education</p>	<p>Pre-operative</p>	<p>Transesophageal Echocardiography educational resource</p>	<p>\$9.99</p>	<p><a href="https://apps.apple.com/us/app/echo-views-transesophageal-echocardiography/id447218400">https://apps.apple.com/us/app/echo-views-transesophageal-echocardiography/id447218400</a></p>







App name	App type	Clinical Area	Description	Cost	URL
 iTIVA Anesthesia	Reference texts/journals, training and education	General anesthesia	Simulation based learning of TIVA	Free In-app purchase \$9.99	<a href="https://apps.apple.com/us/app/itiva-anesthesia/id635652167">https://apps.apple.com/us/app/itiva-anesthesia/id635652167</a>
 Medscape	Healthcare provider decision support Reference texts/ journals, training and education	Pre-operative General anesthesia Paediatric setting Surgical specialty Regional anesthesia; Pain	Search engine database	Free	<a href="https://play.google.com/store/apps/details?id=com.medscape.android">https://play.google.com/store/apps/details?id=com.medscape.android</a>
<b>Drug References/ Medication Management</b>					
 Anaesthetic Drugs	Drug references, medication management	General anesthesia Pain medicine	Provides doses for common medications used in anesthesia	Free	<a href="https://play.google.com/store/apps/details?id=com.mobincube.anesthetic_drugs.sc_HC5XV7">https://play.google.com/store/apps/details?id=com.mobincube.anesthetic_drugs.sc_HC5XV7</a>
 Anesthesia Drugs Fast	Drug references, medication management	General anesthesia Paediatric setting Pain medicine	Provides doses, ranges, calculations for a wide variety of anaesthetic medications	\$1.35	<a href="https://play.google.com/store/apps/details?id=com.hofficer.anesthesiadrugsfast">https://play.google.com/store/apps/details?id=com.hofficer.anesthesiadrugsfast</a>
 Epocrates	Healthcare provider decision support Drug references, medication management Medical calculators	General anesthesia Paediatric setting Pain medicine	Provides easy access to drug doses, monographs, drug calculators	Free In-app purchases \$24.99 - \$349.99	<a href="https://play.google.com/store/apps/details?id=com.epocrates&amp;hl=en_AU">https://play.google.com/store/apps/details?id=com.epocrates&amp;hl=en_AU</a>
<b>Medical Calculators</b>					
 Calculate by QxMD	Healthcare provider decision support Drug references, medication management Medical Calculator	Pre-operative General anesthesia Surgical specialty	Centralised location for clinical point of care tools	Free	<a href="https://apps.apple.com/us/app/calculate-by-qxmd/id361811483">https://apps.apple.com/us/app/calculate-by-qxmd/id361811483</a>
App name	App type	Clinical Area	Description	Cost	URL

	Drug references, medication management	Pain medicine	Calculates oral morphine equivalents	Free	<a href="https://apps.apple.com/ca/app/opioioid-calculator/id1039219870">https://apps.apple.com/ca/app/opioioid-calculator/id1039219870</a>
Opioid Calculator					
	Healthcare provider decision support Drug references, medication management Medical calculators	Paediatric setting	Combination resource providing multiple aids	Free	<a href="https://apps.apple.com/us/app/pedi-anesth/id1019040157">https://apps.apple.com/us/app/pedi-anesth/id1019040157</a>
Pedi-Anesth					

## Reference Texts

	Reference texts/journals, training and education	Regional anesthesia	In depth teaching of ultrasound guided regional anesthesia techniques	Free In-app purchases \$64.99 - \$129.99	<a href="https://play.google.com/store/apps/details?id=com.mobisystems.msdictionary.embedded.wireless.elsevier.angua">https://play.google.com/store/apps/details?id=com.mobisystems.msdictionary.embedded.wireless.elsevier.angua</a>
Atlas of Ultrasound Anesthesia					
	Reference texts/journals	General anesthesia Paediatric setting Surgical specialty Regional anesthesia Pain medicine	Textbook	Free	<a href="https://play.google.com/store/apps/details?id=com.andromo.dev658544.app945759">https://play.google.com/store/apps/details?id=com.andromo.dev658544.app945759</a>
Anaesthesiology - Paediatric & Clinical Anaesthesiology					
	Reference texts/journals, training and education	Regional anesthesia	Regional anesthesia educational resource	Free In-app purchase \$19.99 - \$169.99.	<a href="https://apps.apple.com/us/app/blockjocks/id1232060664">https://apps.apple.com/us/app/blockjocks/id1232060664</a>
BLOCKJOCKS Regional Anesthesia					
	Reference texts/journals, training and education	Regional anesthesia	Regional anesthesia educational resource	\$9.99	<a href="https://apps.apple.com/us/app/block-guru-lite/id829739487">https://apps.apple.com/us/app/block-guru-lite/id829739487</a>
Block GuRU Lite					

App name	App type	Clinical Area	Description	Cost	URL
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 Case Files Anaesthesiology	Reference texts/journals, training and education	General anesthesia Surgical specialty Regional anesthesia Pain medicine	Case-based learning, with exam-based questions	Free  In-app purchase \$29.99	<a href="https://apps.apple.com/us/app/case-files-anesthesiology-1e/id461592758">https://apps.apple.com/us/app/case-files-anesthesiology-1e/id461592758</a>
 Echocardiography pocketcards	Reference texts/journals, training and education	Pre-operative	Flashcard based education	\$3.99	<a href="https://apps.apple.com/us/app/ec-hocardiography-pocketcards/id359676863">https://apps.apple.com/us/app/ec-hocardiography-pocketcards/id359676863</a>
 Read by QxMD	Reference texts/ journals, training and education	Multiple	Access to up-to-date and new journal articles, can be filtered to fit specific interests	Free	<a href="https://apps.apple.com/us/app/read-by-qxmd/id574041839">https://apps.apple.com/us/app/read-by-qxmd/id574041839</a>
 Handbook of Clinical Anesthesia	Reference texts/journals, training and education Drug references, medication management Medical calculators	Pre-operative General anesthesia Surgical specialty Regional anesthesia	Provides comprehensive guidelines, recommendations, information for practicing anaesthetists	Free  In-app purchases \$52.99 - 104.99	<a href="https://play.google.com/store/apps/details?id=com.medpresso.Lonestar.clinanes">https://play.google.com/store/apps/details?id=com.medpresso.Lonestar.clinanes</a>
 Anesthesia by Dr. Swati Singh	Reference texts/journals, training and education	Pre-operative General anesthesia Surgical specialty Regional anesthesia	Study tool for anesthetics topics	Free	<a href="https://play.google.com/store/apps/details?id=com.prepladder.anesthesia">https://play.google.com/store/apps/details?id=com.prepladder.anesthesia</a>
 Morgan & Mikhail's Clinical Anaesthesiology Flashcards	Reference texts/journals, training and education	General anesthesia Surgical specialty Regional anesthesia	Flashcard based learning focusing on anesthetics core knowledge	Free  In-app purchase \$44.99	<a href="https://apps.apple.com/us/app/morgan-mikhails-clinical-anesthesiology-flashcards/id916009564">https://apps.apple.com/us/app/morgan-mikhails-clinical-anesthesiology-flashcards/id916009564</a>
App name	App type	Clinical Area	Description	Cost	URL
<b>Communication</b>					
AIRS mobile app	Communication	General anesthesia	Online patient safety reporting system	Free	<a href="https://qualityportal.aqihq.org/AIRSMMain/AIRSCaseEntry">https://qualityportal.aqihq.org/AIRSMMain/AIRSCaseEntry</a>

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## Electronic Medical Record

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Powerchart Touch

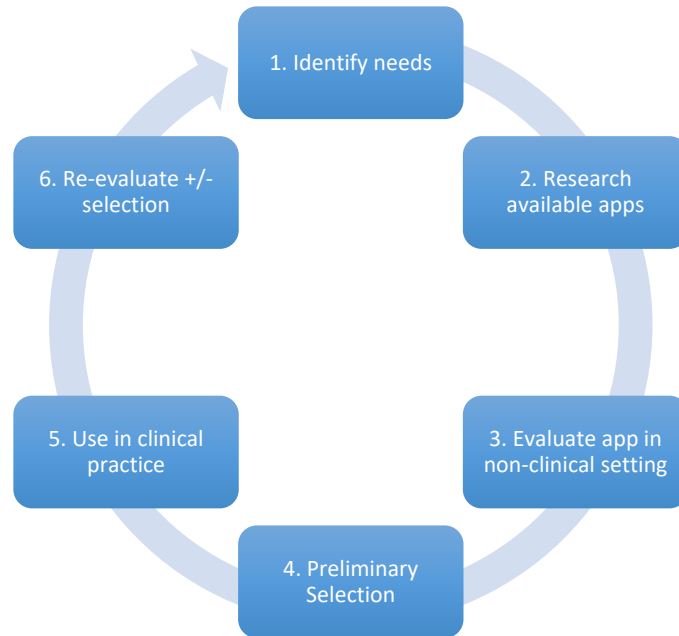
*TIVA: Total intravenous anesthesia.*

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Electronic medical record	General anesthesia	Mobile access to patient notes, pathology results, clinical photography for users within Cerner network	Free (with eligible Cerner systems)	<a href="https://www.cerner.com/solutions/powerchart-touch">https://www.cerner.com/solutions/powerchart-touch</a>
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### Supplementary Figure S1 Worked Example

*"I am a predominantly adult anaesthetist but work in a rural/ regional centre and must occasionally anaesthetise children. I am not the most technologically literate but use an iPhone."*

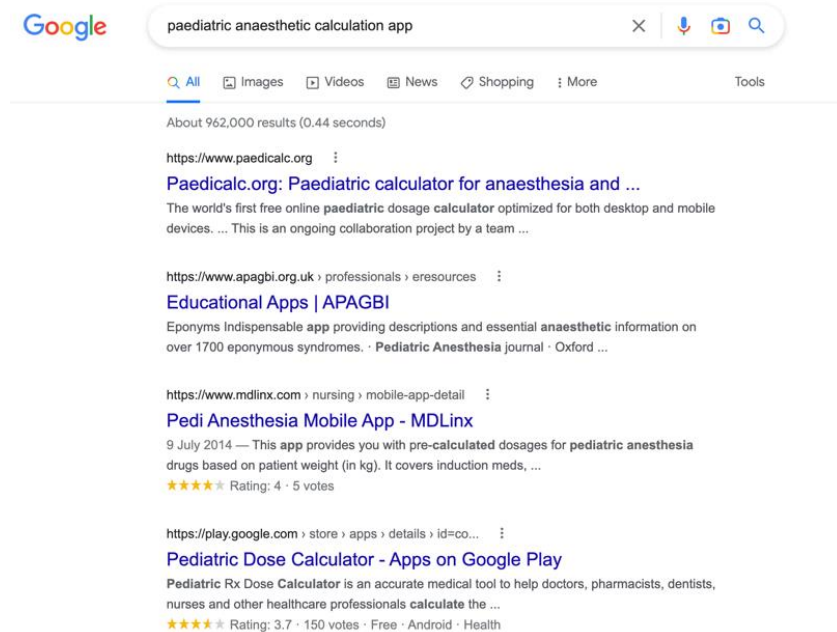


#### 1. *Identify needs*

I have considered aspects of my practice that would be augmented by technology, and have decided Paediatric dose calculations are something I frequently double check, and would be improved with an app.

#### 2. *Research available apps*

I have discussed with paediatric anaesthetic colleagues, registrars and collated a list of potential apps, as well as used the Google Search engine and Apple App store to identify further options.



Additionally, I have looked up the most promising apps in journals and websites such as iMedical Apps, and looked at reviews.

### 3. *Trial app in a non-clinical setting*

From the searches and reviews above, I have narrowed the choice down to around 3 potential apps, and downloaded these onto my phone. Using the provided Table 1, it looks as though app functionality and cost will be my two main criteria. Evaluating the provided apps using Table 1, there is one app I think will be most suited to my needs.

### 4. *Preliminary selection*

After conferring with colleagues and reading reviews more carefully for the selected app, I agree that this app is one I will trial.

### 5. *Use in clinical practice*

I will use the app in theatre, noting the aspects of my work it improves, and areas where the app perhaps falls short.

### 6. *Re-evaluate the app*

After a period (I will select a month), I will take out some conscious time and evaluate the app, and evaluate using the rubric in Table 1 whether I will continue to use the app.