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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| App name | App type | Clinical Area | Description | Cost | URL |
| **General clinical support** |
| Graphical user interface, text, application  Description automatically generated5 Minute Anesthesia Consult | Healthcare provider decision supportDrug references, medication managementReference texts/journals, training and educationPatient centred app | Pre-operative settingGeneral anesthesiaSurgical specialty | Thorough pathology-based app extending from pre-operative management to intra-operative management | FreeIn-app purchase $119.99 | https://apps.apple.com/us/app/5-minute-anesthesia-consult/ id1102384412 |
| Icon  Description automatically generatedAAGBI (Association of Anaesthetists of Great Britain and Ireland) | Healthcare provider decision supportDrug references, medication managementReference texts/ journals, training and educationMedical calculatorsHealthcare provider communication/ referral coordination | Pre-operative settingGeneral anesthesiaSurgical specialtyRegional anesthesia | Centralised hub for interaction between anaesthetists, guidelines, and education | Free | https://apps.apple.com/us/app/association-of-anaesthetists/id913194458 |
| Graphical user interface  Description automatically generatedAnesthesia 411 | Healthcare provider decision supportDrug references, medication managementReference texts/journals, training and education | General anesthesiaSurgical specialty | Specific procedures and the integral information for anaesthetists to perform them safely | $3.99 | https://apps.apple.com/us/app/anesthesia-411/id449473295 |
| Graphical user interface, text, application, chat or text message  Description automatically generatedAnesthesia Central | Healthcare provider decision supportDrug references, medication managementReference texts/ journals, training and education | General anesthesiaSurgical specialty | Combination resource allowing for multiple uses across several domains | FreeIn-app purchases $99.99 - $169.99 | https://apps.apple.com/us/app/anesthesia-central/id347656772 |
| **App name** | **App type** | **Clinical Area** | **Description** | **Cost** | **URL** |
| A red and white sign  Description automatically generated with low confidenceASRA Coags | Healthcare provider decision supportDrug references, medication managementPatient centred app | Pre-operativeRegional anesthesiaPain medicine | Guidelines provided for regional anesthesia and pain management | $3.99 | https://apps.apple.com/us/app/asra-coags/id858796572 |
| Icon  Description automatically generated with medium confidenceAnesthesia Pre-Op | Healthcare provider decision supportPatient centred app | Pre-operative setting | Provides checklist for pre-operative patient assessment | Free | https://play.google.com/store/apps/details?id=com.mobincube.anesthesia\_ pre\_op.sc\_HNMR4H |
| A picture containing text, toiletry  Description automatically generatedMyATLS | Healthcare provider decision supportDrug references, medication managementMedical calculatorsReference texts/journals, training and education | General anesthesiaSurgical specialty | Easy to access trauma based clinical decision support tool | $1.22 - $9.77 per item | https://play.google.com/store/apps/details?id=com.echo.myatls |
| Icon  Description automatically generatedRegional Anesthesia Reference | Drug references, medication managementMedical calculatorsReference texts/journals, training and education | Regional anesthesia | Provides education about regional anesthesia, recommended analgesia and calculator | Free | https://play.google.com/store/apps/details?id=com.awalters. regionalanestheiaatlas |
| A picture containing text, clipart  Description automatically generatedTTE Standard Views | Reference texts/journals, training and education | Pre-operative | Provides 3-dimensional context for images viewed in transthoracic echocardiography | $4.99 | https://apps.apple.com/us/app/tte-standard-views/id660856485 |
| Icon  Description automatically generatedECHO Views - Transesophageal Echocardiography | Reference texts/journals, training and education | Pre-operative | Transesophageal Echocardiography educational resource | $9.99 | https://apps.apple.com/us/app/echo-views-transesophageal-echocardiography/id447218400 |
| **App name** | **App type** | **Clinical Area** | **Description** | **Cost** | **URL** |
| A picture containing text  Description automatically generatediTIVA Anesthesia | Reference texts/journals, training and education | General anesthesia | Simulation based learning of TIVA | FreeIn-app purchase $9.99 | https://apps.apple.com/us/app/itiva-anesthesia/id635652167 |
| A picture containing text, clipart  Description automatically generatedMedscape | Healthcare provider decision supportReference texts/ journals, training and education | Pre-operativeGeneral anesthesiaPaediatric settingSurgical specialtyRegional anesthesia; Pain  | Search engine database | Free | https://play.google.com/store/apps/details?id=com.medscape.android |
| **Drug References/ Medication Management** |
| A person holding a medical equipment  Description automatically generated with medium confidenceAnaesthetic Drugs | Drug references, medication management | General anesthesiaPain medicine | Provides doses for common medications used in anesthesia | Free | https://play.google.com/store/apps/details?id=com.mobincube.anesthetic\_ drugs.sc\_HC5XV7 |
| A picture containing text, indoor  Description automatically generatedAnesthesia Drugs Fast | Drug references, medication management | General anesthesiaPaediatric settingPain medicine | Provides doses, ranges, calculations for a wide variety of anaesthetic medications | $1.35 | https://play.google.com/store/apps/details?id=com.hofficer. anesthesiadrugsfast |
| Icon  Description automatically generatedEpocrates | Healthcare provider decision supportDrug references, medication managementMedical calculators | General anesthesiaPaediatric settingPain medicine | Provides easy access to drug doses, monographs, drug calculators | FreeIn-app purchases $24.99 - $349.99 | https://play.google.com/store/apps/details?id=com.epocrates&hl=en\_AU |
| **Medical Calculators** |
| Icon  Description automatically generatedCalculate by QxMD | Healthcare provider decision supportDrug references, medication managementMedical Calculator | Pre-operativeGeneral anesthesiaSurgical specialty | Centralised location for clinical point of care tools | Free | https://apps.apple.com/us/app/calculate-by-qxmd/id361811483 |
| **App name** | **App type** | **Clinical Area** | **Description** | **Cost** | **URL** |
| A green and white cube  Description automatically generated with low confidenceOpioid Calculator | Drug references, medication management | Pain medicine | Calculates oral morphine equivalents | Free | https://apps.apple.com/ca/app/opioid-calculator/id1039219870 |
| Icon  Description automatically generatedPedi-Anesth | Healthcare provider decision supportDrug references, medication managementMedical calculators | Paediatric setting | Combination resource providing multiple aids | Free | https://apps.apple.com/us/app/pedi-anesth/id1019040157 |
| **Reference Texts** |
| Graphical user interface  Description automatically generated with low confidenceAtlas of Ultrasound Anesthesia | Reference texts/journals, training and education | Regional anesthesia | In depth teaching of ultrasound guided regional anesthesia techniques | FreeIn-app purchases $64.99 - $129.99 | https://play.google.com/store/apps/details?id=com. mobisystems. msdict.embedded.wireless.elsevier.augra |
| A picture containing person  Description automatically generatedAnaesthesiology -Paediatric & ClinicalAnaesthesiology | Reference texts/journals | General anesthesiaPaediatric settingSurgical specialtyRegional anesthesiaPain medicine | Textbook | Free | https://play.google.com/store/apps/details?id=com. andromo.dev658544.app945759 |
| A cartoon of a person holding a device  Description automatically generatedBLOCKJOCKSRegional Anesthesia | Reference texts/journals, training and education | Regional anesthesia | Regional anesthesia educational resource | FreeIn-app purchase $19.99 - $169.99. | https://apps.apple.com/us/app/blockjocks/id1232060664 |
| Text  Description automatically generated with medium confidenceBlock GuRU Lite | Reference texts/journals, training and education | Regional anesthesia | Regional anesthesia educational resource | $9.99 | https://apps.apple.com/us/app/block-guru-lite/id829739487 |
| **App name** | **App type** | **Clinical Area** | **Description** | **Cost** | **URL** |
| Text  Description automatically generatedCase Files Anaesthesiology | Reference texts/journals, training and education | General anesthesiaSurgical specialtyRegional anesthesiaPain medicine | Case-based learning, with exam-based questions | FreeIn-app purchase $29.99 | https://apps.apple.com/us/app/case-files-anesthesiology-1e/id461592758 |
| Icon  Description automatically generated with low confidenceEchocardiography pocketcards | Reference texts/journals, training and education | Pre-operative | Flashcard based education | $3.99 | https://apps.apple.com/us/app/echocardiography-pocketcards/id359676863 |
| Icon  Description automatically generatedRead 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 | https://apps.apple.com/us/app/read-by-qxmd/id574041839 |
| Graphical user interface, website  Description automatically generatedHandbook of Clinical Anesthesia | Reference texts/journals, training and educationDrug references, medication managementMedical calculators | Pre-operativeGeneral anesthesiaSurgical specialtyRegional anesthesia | Provides comprehensive guidelines, recommendations, information for practicing anaesthetists | FreeIn-app purchases $52.99 - 104.99 | [https://play.google.com/store/apps/details?id=com.medpresso. Lonestar.clinanes](https://play.google.com/store/apps/details?id=com.medpresso.%20Lonestar.clinanes) |
| Icon  Description automatically generatedAnesthesia by Dr. Swati Singh | Reference texts/journals, training and education | Pre-operativeGeneral anesthesiaSurgical specialtyRegional anesthesia | Study tool for anesthetics topics | Free | https://play.google.com/store/apps/details?id=com.prepladder.anesthesia |
| A picture containing text  Description automatically generatedMorgan & Mikhail's Clinical Anaesthesiology Flashcards | Reference texts/journals, training and education | General anesthesiaSurgical specialtyRegional anesthesia | Flashcard based learning focusing on anesthetics core knowledge | FreeIn-app purchase $44.99 | https://apps.apple.com/us/app/morgan-mikhails-clinical-anesthesiology-flashcards/id916009564 |
| **App name** | **App type** | **Clinical Area** | **Description** | **Cost** | **URL** |
| **Communication** |
| AIRS mobile app | Communication | General anesthesia | Online patient safety reporting system | Free | https://qualityportal.aqihq.org/AIRSMain/AIRSCaseEntry |
| **Electronic Medical Record** |
| A blue square with a white letter p  Description automatically generatedPowerchart Touch | Electronic medical record | General anesthesia | Mobile access to patient notes, pathology results, clinical photography for users within Cerner network | Free (with eligible Cerner systems) | https://www.cerner.com/solutions/powerchart-touch |
| *TIVA: Total intravenous anesthesia.* |

**Figure S2.** 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.

1. *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.

1. *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.

1. *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.

1. *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.

1. *Re-evaluate the app*

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