**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 generated  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 | https://apps.apple.com/us/app/5-minute-anesthesia-consult/ id1102384412 |
| Icon  Description automatically generated  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 | https://apps.apple.com/us/app/association-of-anaesthetists/id913194458 |
| Graphical user interface  Description automatically generated  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 | https://apps.apple.com/us/app/anesthesia-411/id449473295 |
| Graphical user interface, text, application, chat or text message  Description automatically generated  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 | 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 confidence  ASRA Coags | Healthcare provider decision support  Drug references, medication management  Patient centred app | Pre-operative  Regional anesthesia  Pain 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 confidence  Anesthesia Pre-Op | Healthcare provider decision support  Patient 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 generated  MyATLS | Healthcare provider decision support  Drug references, medication management  Medical calculators  Reference texts/journals, training and education | General anesthesia  Surgical 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 generated  Regional Anesthesia Reference | Drug references, medication management  Medical calculators  Reference 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 generated  TTE 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 generated  ECHO 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 generated  iTIVA Anesthesia | Reference texts/journals, training and education | General anesthesia | Simulation based learning of TIVA | Free  In-app purchase $9.99 | https://apps.apple.com/us/app/itiva-anesthesia/id635652167 |
| A picture containing text, clipart  Description automatically generated  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 | 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 confidence  Anaesthetic Drugs | Drug references, medication management | General anesthesia  Pain 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 generated  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 | https://play.google.com/store/apps/details?id=com.hofficer. anesthesiadrugsfast |
| Icon  Description automatically generated  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 | https://play.google.com/store/apps/details?id=com.epocrates&hl=en\_AU |
| **Medical Calculators** | | | | | |
| Icon  Description automatically generated  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 | 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 confidence  Opioid Calculator | Drug references, medication management | Pain medicine | Calculates oral morphine equivalents | Free | https://apps.apple.com/ca/app/opioid-calculator/id1039219870 |
| Icon  Description automatically generated  Pedi-Anesth | Healthcare provider decision support  Drug references, medication management  Medical 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 confidence  Atlas of Ultrasound Anesthesia | 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 | https://play.google.com/store/apps/details?id=com. mobisystems. msdict.embedded.wireless.elsevier.augra |
| A picture containing person  Description automatically generated  Anaesthesiology -Paediatric & Clinical  Anaesthesiology | Reference texts/journals | General anesthesia  Paediatric setting  Surgical specialty  Regional anesthesia  Pain 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 generated  BLOCKJOCKS  Regional Anesthesia | Reference texts/journals, training and education | Regional anesthesia | Regional anesthesia educational resource | Free  In-app purchase $19.99 - $169.99. | https://apps.apple.com/us/app/blockjocks/id1232060664 |
| Text  Description automatically generated with medium confidence  Block 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 generated  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 | https://apps.apple.com/us/app/case-files-anesthesiology-1e/id461592758 |
| Icon  Description automatically generated with low confidence  Echocardiography 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 generated  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 | https://apps.apple.com/us/app/read-by-qxmd/id574041839 |
| Graphical user interface, website  Description automatically generated  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 | [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 generated  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 | https://play.google.com/store/apps/details?id=com.prepladder.anesthesia |
| A picture containing text  Description automatically generated  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 | 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 generated  Powerchart 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.

Graphical user interface, text, application, email

Description automatically generated

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.