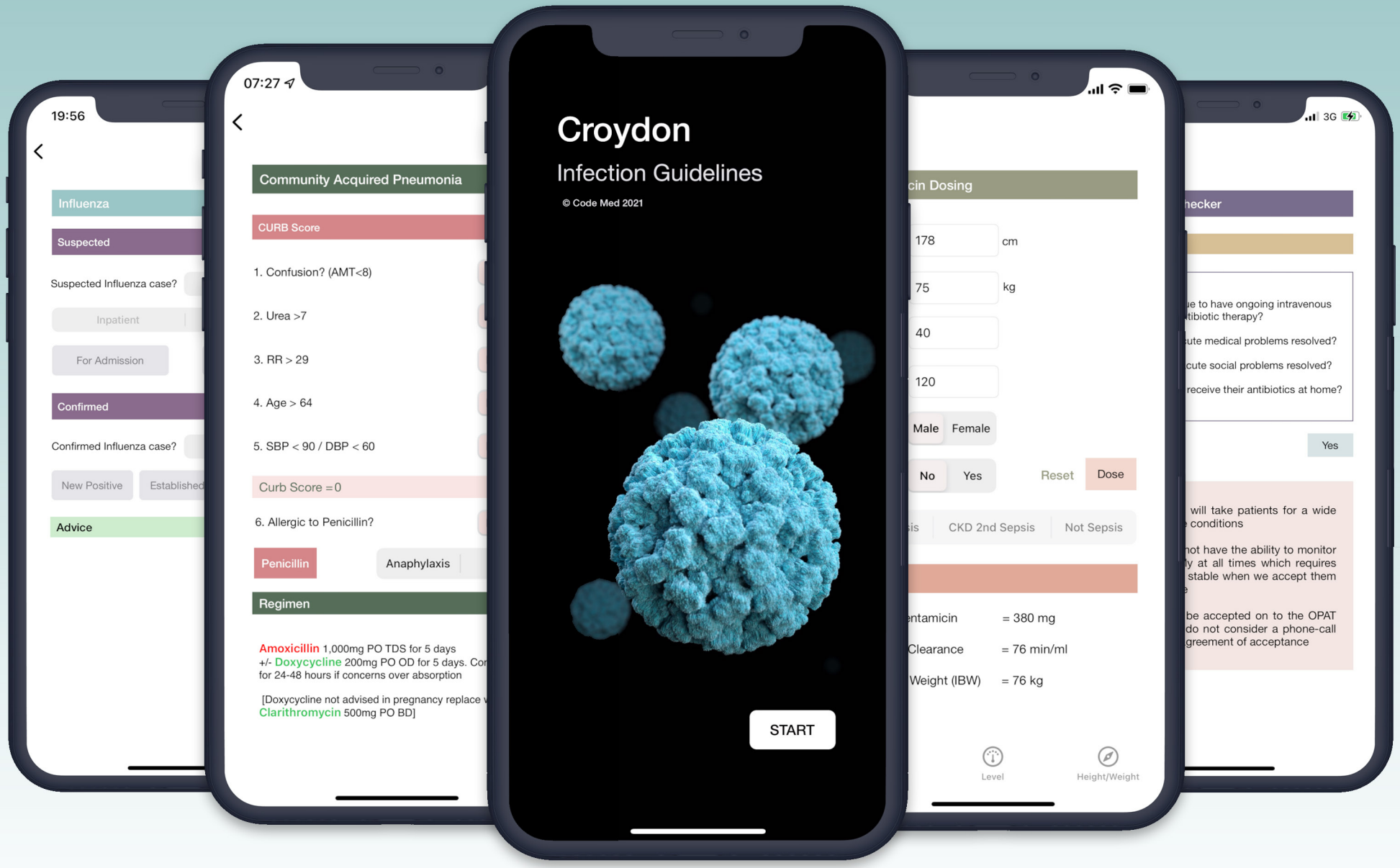
19:56
Influenza
Suspected
Suspected Influenza case?
Inpatient
For Admission
Confirmed
Confirmed Influenza case?
New Positive
Advice
07:27
Community Acquired Pneumonia
CURB Score
1. Confusion? (AMT<8)
2. Urea >7
3. RR > 29
4. Age > 64
5. SBP < 90 / DBP < 60
Curb Score = 0
6. Allergic to Penicillin?
Penicillin
Anaphylaxis
Regimen
Amoxicillin 1,000mg PO TDS for 5 days
+/- Doxycycline 200mg PO OD for 5 days.
for 24-48 hours if concerns over absorption
[Doxycycline not advised in pregnancy replace
Clarithromycin 500mg PO BD]
Croydon
Infection Guidelines
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START
cin Dosing
178
cm
75
kg
40
120
Male
Female
No
Yes
Reset
Dose
CKD 2nd Sepsis
Not Sepsis
= 380 mg
Clearance
= 76 min/ml
Weight (IBW)
= 76 kg
Level
Height/Weight
3G
Yes

Infection Guidelines

Welcome to the Infection Guidelines App by Code Med.

This app was born out of the desire to build a comprehensive resource which would fulfill a multitude of functions. Infections are among the mainstay of patients' complaints and continue to become increasingly complex. Within this complexity needs to come clarity for frontline clinicians, whether that be treating infections in the community or in hospitals.

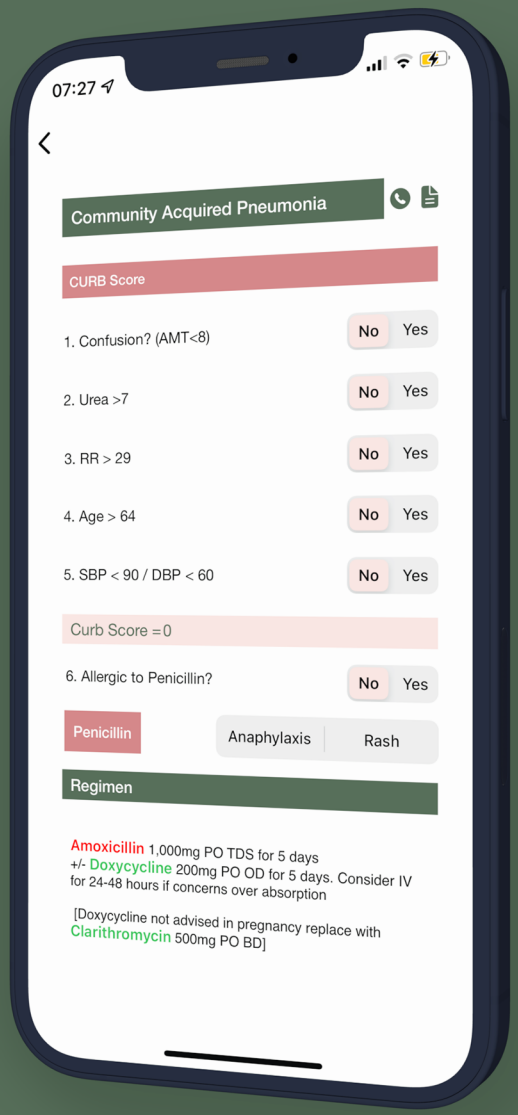
The Infection Guidelines app brings together the infection ecosystem from Primary Care to Secondary Care and beyond. We have designed some beautiful tools with immediate and significant relevance, which will transform the way that clinicians think about and manage infections within the clinical space.

We hope you will find our offering something which is transforms your practice and has a significant impact on outcomes.

Dr Joseph Hogan
Code Med Director

Dr Imran Qureshi
Code Med Director

Dr Arron Thind
Code Med Director



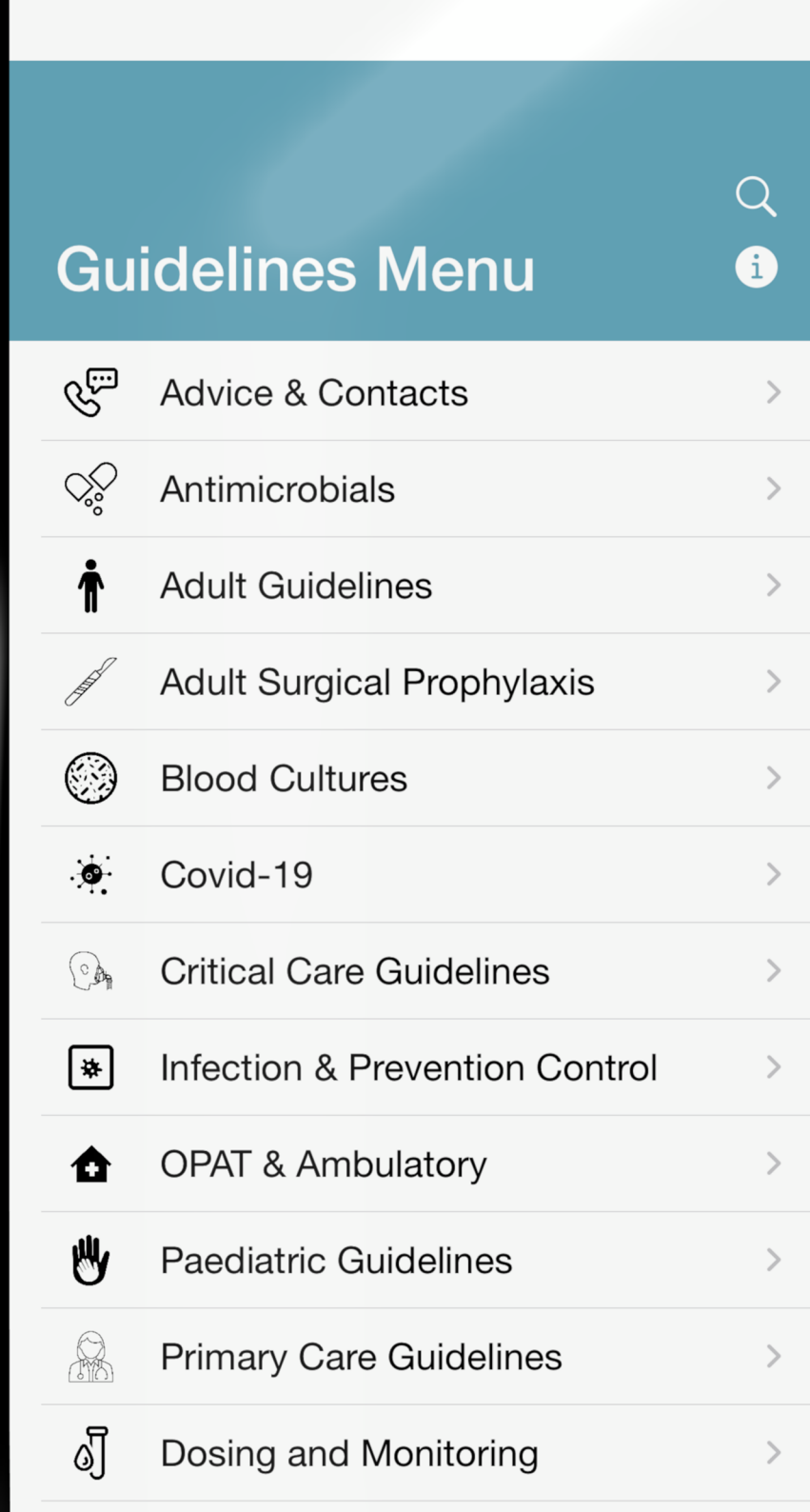
Inside

Owe tell you what we have put into this app you will be as excited as we are. We have tried to really innovate and bring features and functions which will help you in all aspects of managing infections.

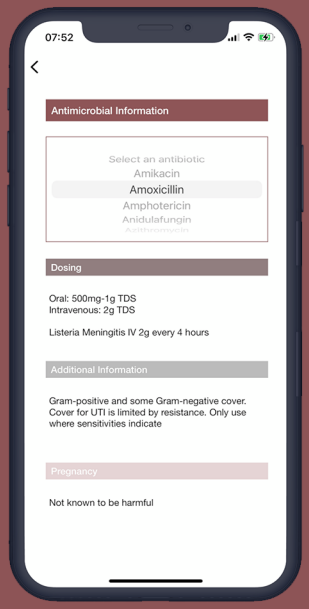
Of course, we have included the expected infection specific guidelines for hospital inpatients (adult and paediatric), including critical care. What we have done is to go a step further and include Primary Care antimicrobial guidelines to complete the ecosystem of infection management and to improve visibility. We then took it up a notch and incorporated decision management tools into each guideline to make selecting the correct regimen easy.

Providing a comprehensive experience of managing infections meant that we not only provided detailed information around antimicrobials, how they are used and their dosing and monitoring, but also their use in surgical prophylaxis and importantly Covid19, to optimise antimicrobial stewardship.

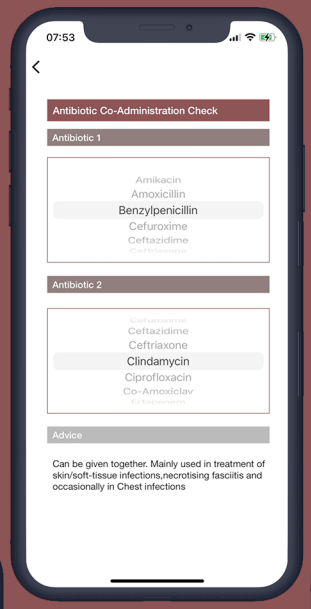
Beyond that, we have developed tools for aiding understanding and managment of blood cultures, Infection Control and Outpatient Parenteral Antimicrobial Therapy. We will go on to focus on each section in more detail.



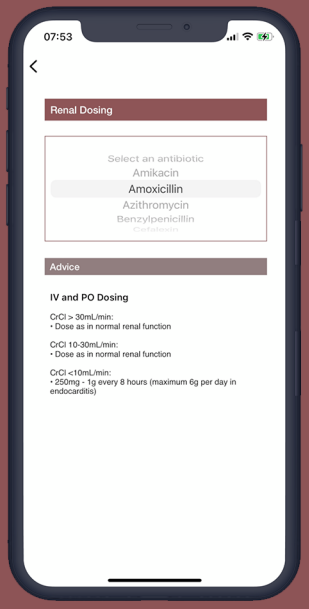
Antimicrobials



The antimicrobial information provides guidance about different antibiotics including dosing, use in pregnancy and additional useful information relating to activity and considerations when prescribing

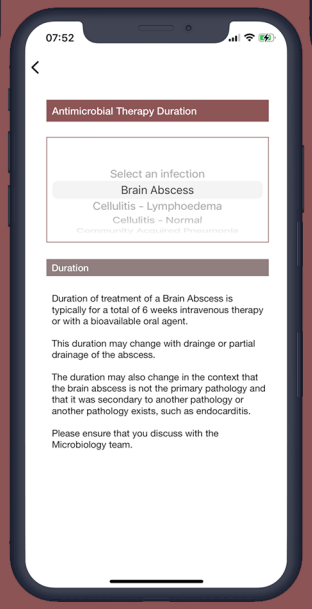


Clinicians who may not be familiar with the spectra of different antibiotics may prescribe them together. The co-administration tool, helps clinicians to check if antibiotics can be given together or not

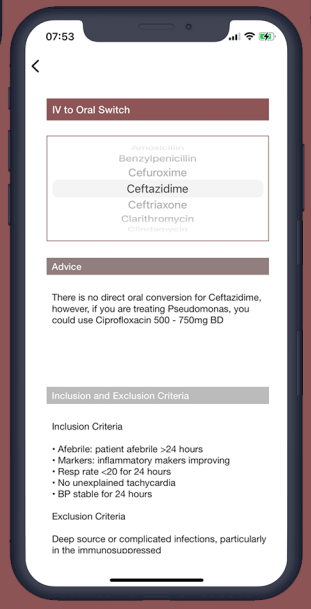


Knowing how to dose antibiotics in renal impairment is critical to preserve kidney function. This tool provides advice about dose conversion in renal impairment for common antibiotics

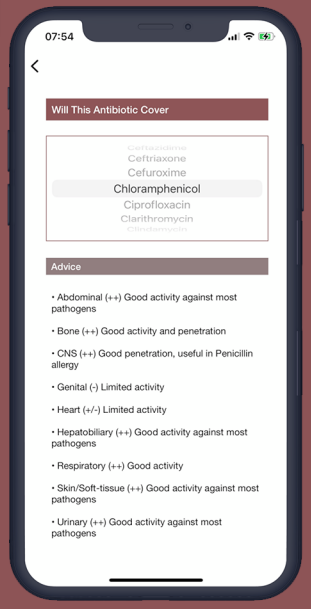
The antimicrobial therapy duration tool provides advice about duration of antimicrobial therapy for common infections. Where relevant, it will also provide information about referral to the OPAT service



The IV to Oral Switch tool provides advice of the oral equivalents to intravenous antibiotics. It also advises which patients are appropriate for oral switch and for those who are not



A common question asked by clinicians is whether an antibiotic will cover other infections. This tool provides an indication of whether or not an antibiotic will cover other infections by system / organ



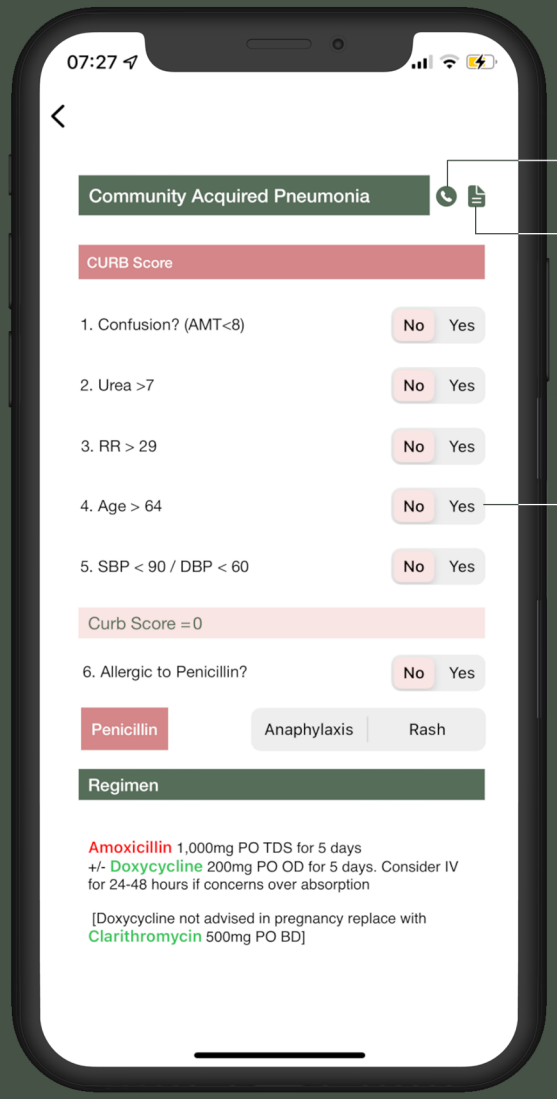
Adult Guidelines

Guidelines

Antimicrobial guidelines are an essential part of managing patients with infections. Infections are amongst the most common reasons that patients present to hospital. They need to be started on antibiotic therapy which comes from the Trust's empirical guidance.

We know that with an accessible set of guidelines, adherence improves as well as a reduction in the use of broad spectrum antimicrobials, which can have significant implications with resistance and increase in infections such as Clostridioides difficile

- Bone and Joint Infections
- Cardiovascular Infections
- CNS Infections
- Gastrointestinal Infections
- Respiratory Infections
- Sepsis
- Skin and Soft Tissue Infections
- Urinary Tract Infections
- Urogenital Infections



Contact

A touch of a button puts hospital colleagues in direct contact with the Microbiology advice line at Croydon Hospital

Information

All Croydon Hospital staff are eligible to use UpToDate for free. All of the guidelines are linked to relevant UpToDate material to provide you with extra information

Decision Tools

Functions have been added into each clinical guideline which will act as decision tools in helping the clinician to arrive at the correct regimen for the patient. All you need to do is to select the relevant options and the output will dynamically change to provide the relevant regimen.

Prophylaxis

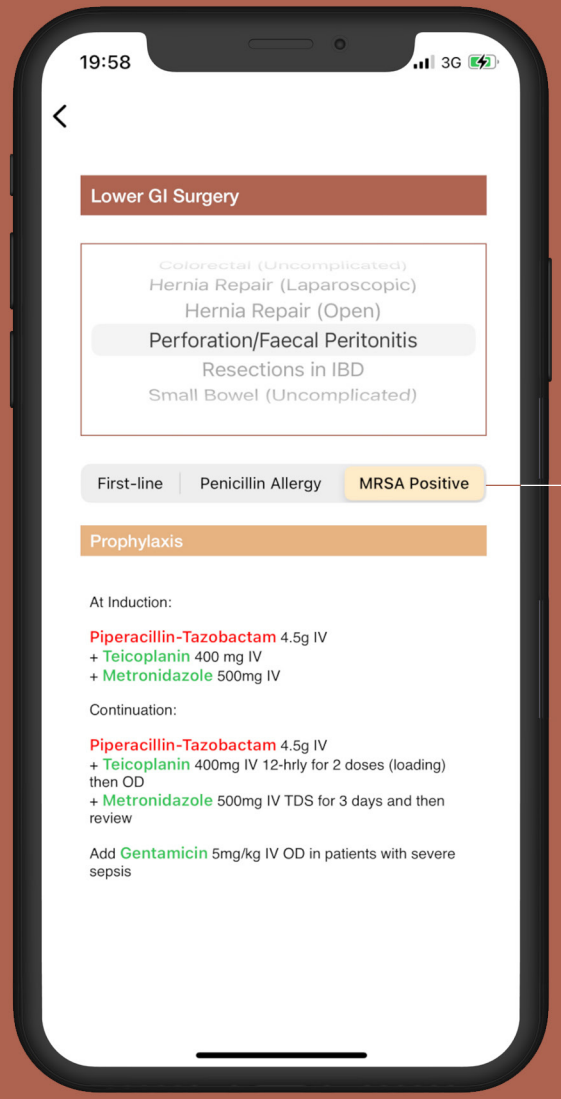
Surgical Prophylaxis

Routine surgical prophylaxis is a critical part of preventing post-operative infections.

Ensuring that the correct choices are made to cover the microbial flora at the anatomical site prevent subsequent superficial and deep infections.

Whilst it is vital to prevent post-operative infections, the desire to over-prescribe prophylaxis needs to be curbed and having robust surgical prophylaxis guidance will help to prevent it.

- Cardiac Procedures
- Endocarditis Prophylaxis
- Gastrointestinal Endoscopy
- Gynaecology & Obstetrics
- Lower GI Surgery
- Orthopaedic Surgery
- Upper GI & Hepatobiliary Surgery
- Urology
- Vascular Surgery



Decision Tools

A decision tool has been introduced to help clinicians make the right choice for antimicrobial prophylaxis in a variety of situations, whether the patient be allergic to Penicillin or colonised with MRSA

Results Interpretation

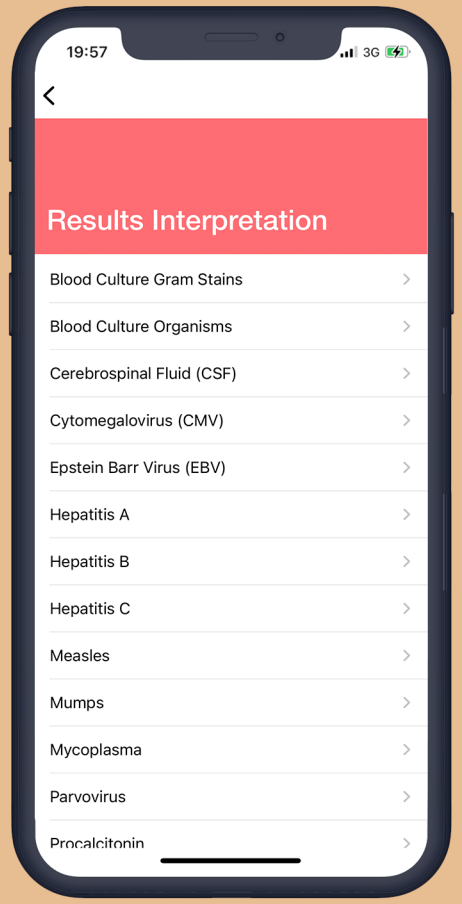
Results Interpretation

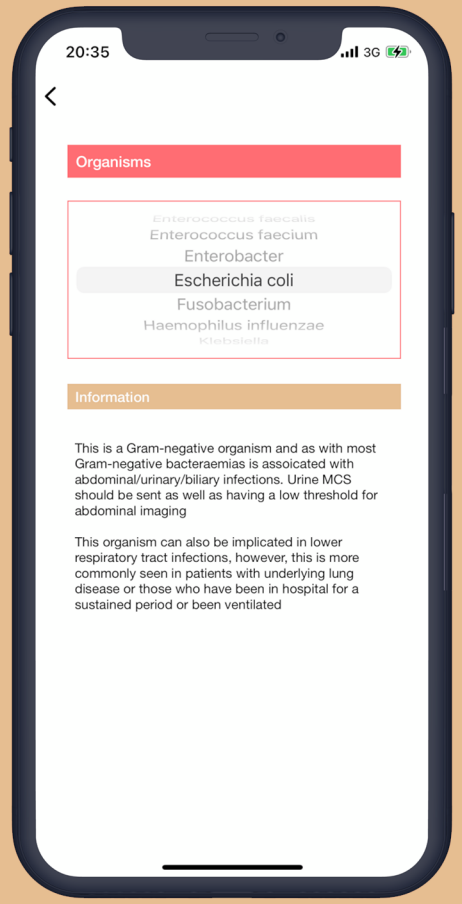
A common problem scenario for clinicians is being able to interpret the results of various diagnostic tests.

Whether that be a blood culture Gram stain result or a serological test, understanding what the different terms mean can be challenging, which in turn can lead to a delay in appropriate management for the patient.

Within this section, a number of tools have been provided to help clinicians interpret results with a greater level of confidence and surety. Given the number of different clinical situations that can arise, it is difficult to encompass them all, however, these tools will help clinicians to interpret the majority of results with a greater level of ease.

Alongside interpretation of the results, we have provided further information, which will help in understanding what the next steps are in terms of management and monitoring.





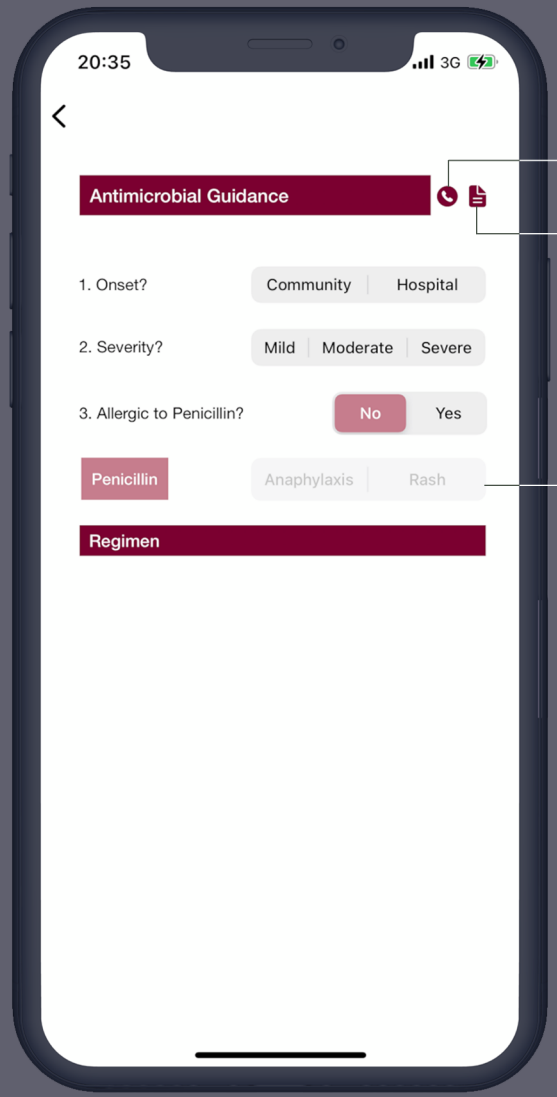
Covid19

Guidelines

The advent of Covid19 has single-handedly managed to change the narrative around antibiotic prescribing in hospitals. Before the deployment of the vaccine, patients were extremely sick with a high mortality rate. It was difficult for clinicians to watch their patients becoming more unwell. What this did was to drive significant escalation of therapy, even though, antibiotics have no effect on viruses.

We wanted to introduce specific local guidance around Covid19 antimicrobial prescribing, to try and reduce the burden of broad-spectrum antibiotic use through escalation, which resulted in this tool to help clinicians to prescribe the correct antibiotics, based on where the onset of the infection was and how severe it is, when considering a superimposed bacterial infection.

Links to Public Health England's videos to Donning and Doffing have also been provided within the app.



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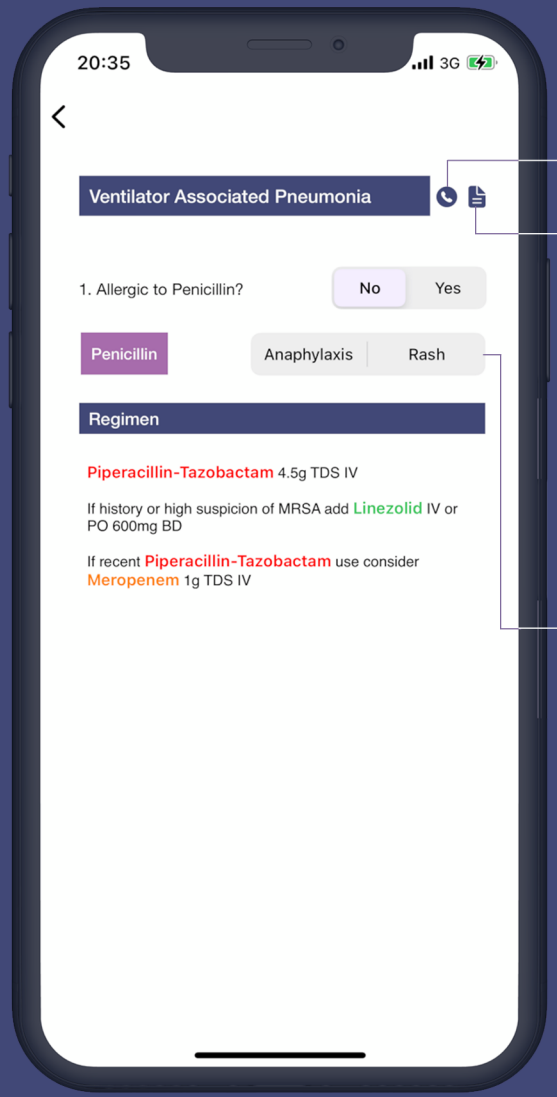
Critical Care

Guidelines

Critical Care units have the sickest patients in a hospital. A significant number of them will have been admitted to one of the Critical Care units with an infective pathology. The immune system of these patients will often be compromised in some way, or they will have single or multi-organ failure, which will complicate their treatment

Our Critical Care antimicrobial guidelines have been co-developed by the Critical Care team to ensure that we provide the optimal treatment for patients, whilst ensuring that we maintain antimicrobial stewardship

- Community Acquired Pneumonia
- Hospital Acquired Pneumonia
- Ventilator Associated Pneumonia
- Abdominal Infection
- Biliary Tract Infection
- Urinary Tract Infection
- Encephalitis
- Meningitis
- Necrotising Fasciitis
- Long-Line Infection



Contact

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Decision Tools

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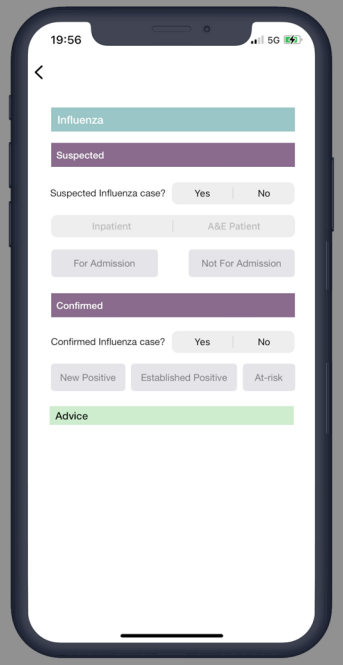
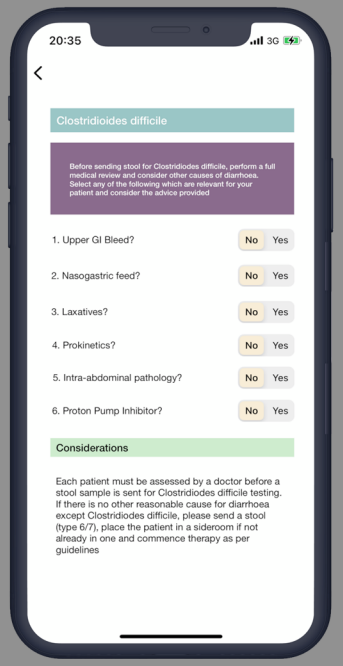
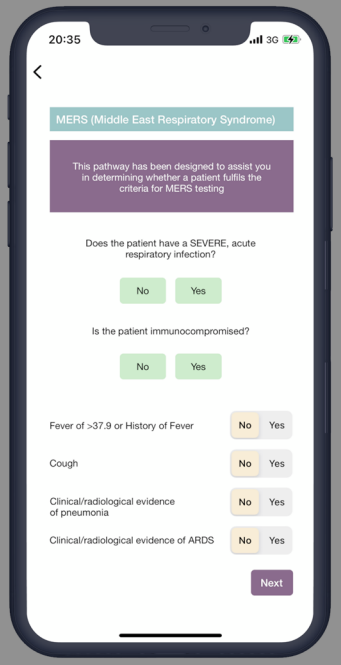
Infection Control



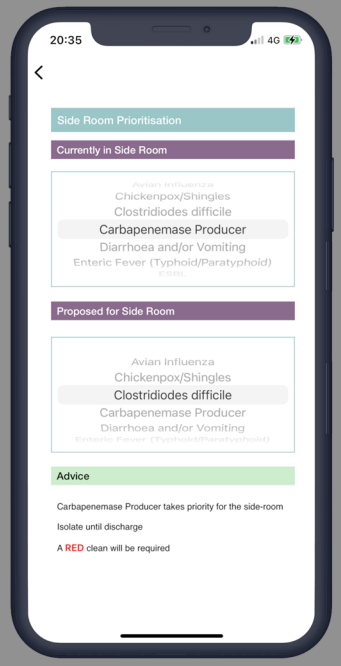
The Influenza tool takes clinicians through a pathway to determine what management plan needs to be implemented, depending on whether they are being admitted and whether they fall into a risk category



Patients often have diarrhoea, but it is not always infective in origin and can be caused for a variety of reasons. This is a tool developed for considerations that clinicians should take when sending a stool for Clostridioides difficile



Middle East Respiratory Syndrome is a differential which is raised by clinicians for patients who have travelled to various countries and return with a respiratory illness. This tool helps clinicians to navigate the PHE guidance about whether the patient is at risk and whether they require testing



In the situation that two patients on a ward both need a sideroom, the question around priority is raised. This tool helps to establish which conditions take priority for a sideroom, and when moving patients in and out of siderooms, which type of clean will be required

OPAT & Ambulatory

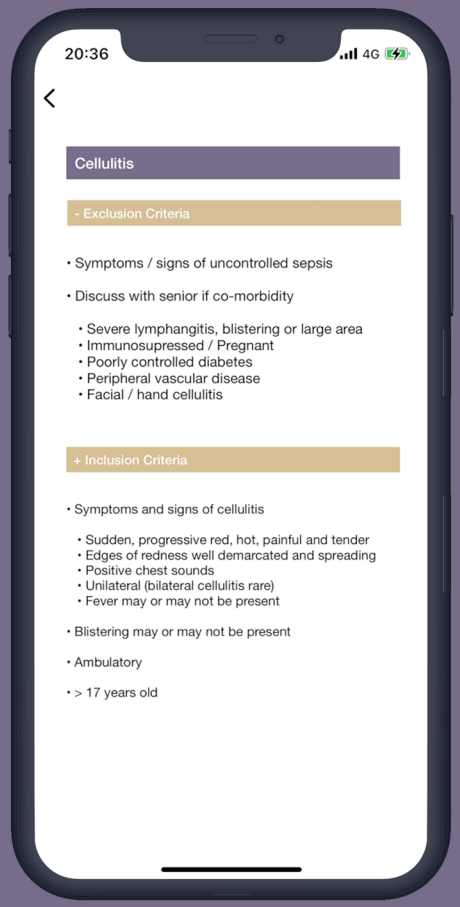
OPAT

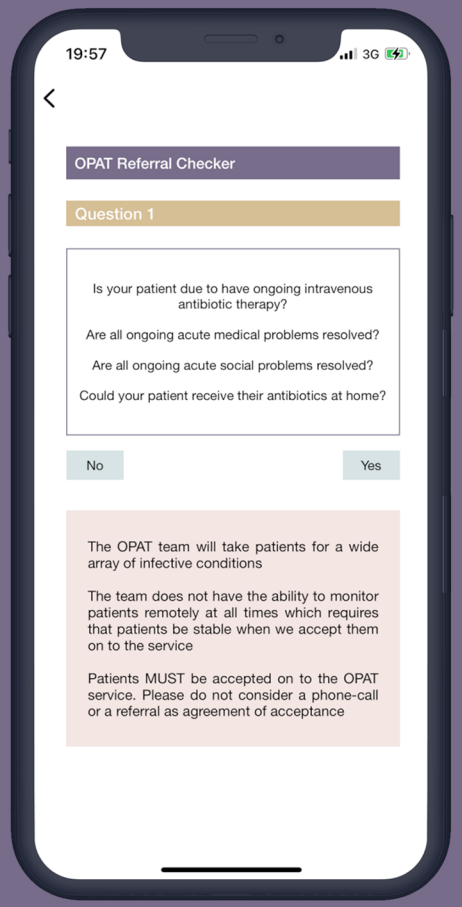
The Outpatient Parenteral Antimicrobial Therapy (OPAT) service has been designed to facilitate earlier discharge of patient care from hospital to their place of residence.

The OPAT Pathway and referral system is often not well understood by clinicians, and so in this part of the app, not only is the pathway described, but a referral checker has also been implemented, which takes clinicians who wish to refer to the service through a series of questions to test the patient's suitablitiy for antibiotic therapy at home

Ambulatory

Not all patients are suitable for the OPAT service, which could be for a number of reasons. They may however be suitable for either the medical or the surgical ambulatory service. In this part of the app, we have provided information around three common medical conditions which may well be suited to the Ambulatory service, along with their inclusion and exclusion criteria



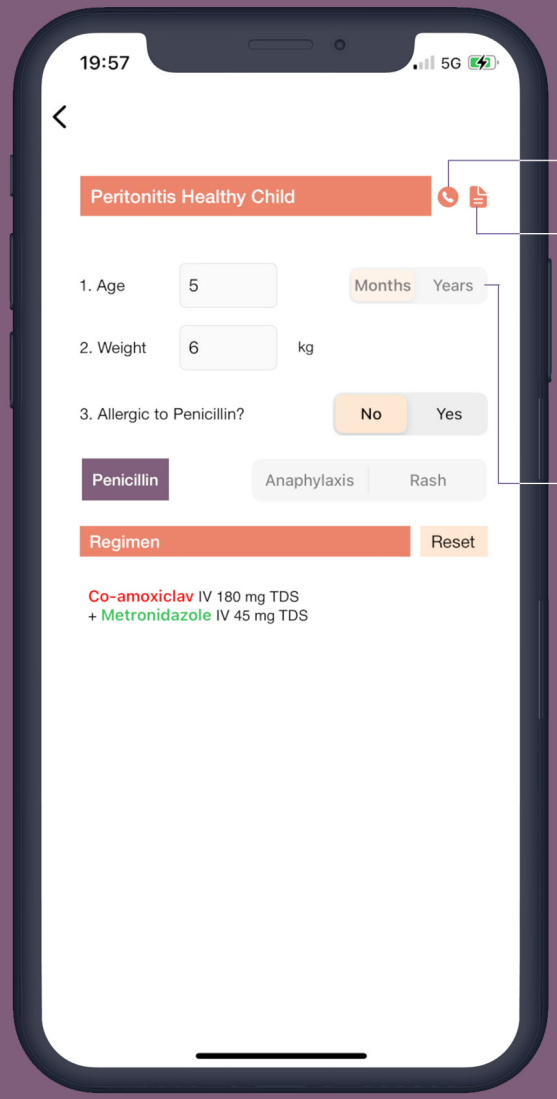


Paediatrics

Guidelines

Paediatric inpatient admissions are important because the majority of paediatric patients that present to secondary care and are admitted are quite unwell. It is vital to have empirical antimicrobial guidance which is available to Paediatric colleagues so that they can optimise the management of children admitted with infections, of which there will be a significant number. This section provides guidance on a range of clinical conditions and systems

- Bone Infections
- Cardiovascular Infections
- CNS Infections
- ENT Infections
- Gastrointestinal Infections
- Eye Infections
- Respiratory Infections
- Skin and Soft Tissue Infections
- Urinary Tract Infections
- Sepsis & Febrile Neutropenia



Contact

A touch of a button will put Paediatric colleagues in direct contact with the Microbiology advice line at Croydon Hospital

Information

All Croydon Hospital staff are eligible to use UpToDate for free. All of the Paediatric guidelines are linked to relevant UpToDate material to provide you with extra information

Calculation Support

Paediatric dosing is often based on personal parameters of the patient, such as age, weight and height. The calculations for dosing have been included in the guidance to make it easier for Paediatric colleagues to dose their patients accurately, minimising human error

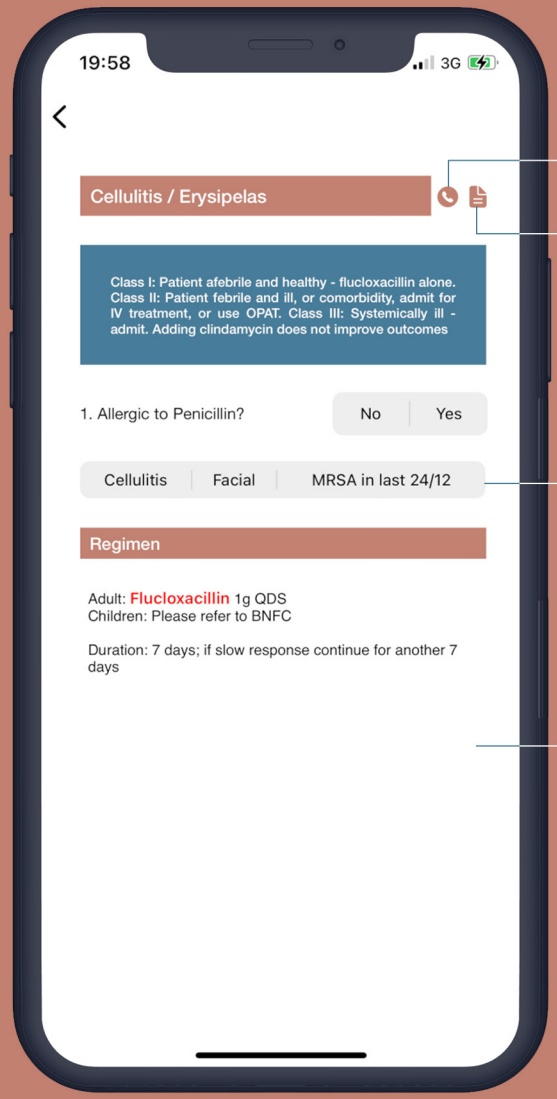
Primary Care

Guidelines

Primary care clinicians are under significant pressure to see a high volume of patients within a short space of time.

Patients with infections make up a significant part of their total consultations. Having easy access to the guidance on an app with in-built decision tools really helps colleagues to make decisions quickly in a time-sensitive environment.

- Dental Infections
- Eye Infections
- Gastrointestinal Infections
- Genital Tract Infections
- Lower Respiratory Tract Infections
- Meningitis
- Skin and Soft Tissue Infections
- Upper Respiratory Tract Infections
- Urinary Tract Infections



Contact

A touch of a button puts Primary care colleagues in direct contact with the Microbiology advice line at Croydon Hospital

Information

All guidelines are referenced back to the original Primary care guidance, which has further information for clinicians should they need to use it.

Decision Tools

Functions have been added into each clinical guideline which will act as decision tools in helping the clinician to arrive at the correct regimen for the patient

Targetted Guidance

Comprehensive guidance is provided to enable Primary care colleagues to make the correct choices. Durations of therapy are provided as well as colour coded antibiotics for Penicillin allergy

Dosing & Monitoring

Calculators

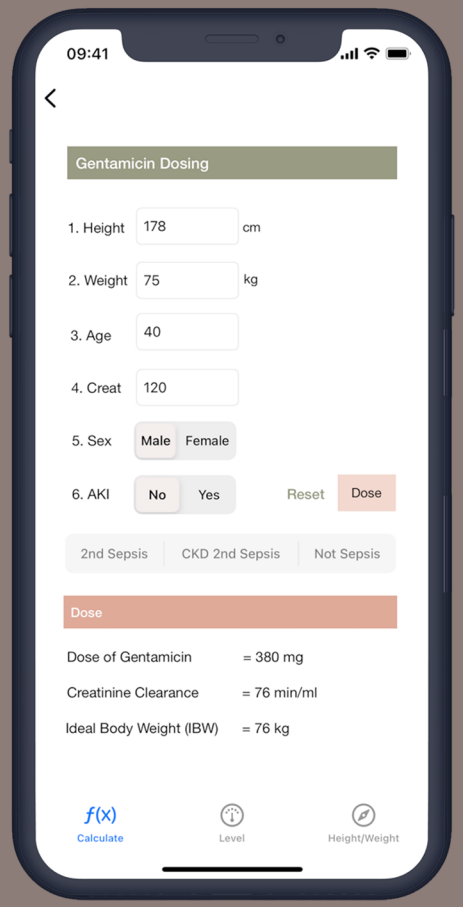
The app has four in-built antibiotic dosing calculators for

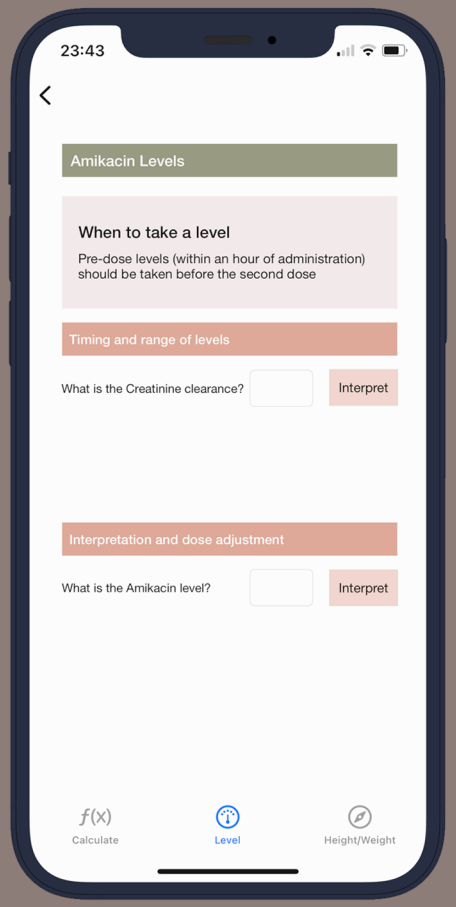
- Amikacin
- Gentamicin
- Teicoplanin
- Vancomycin

A height and weight converter is built into each calculator and is also available separately

Each calculator adheres to the local Trust guidelines, and provides feedback and guidance at relevant points

Where appropriate, guidance is provided around loading and maintenace dosing





Level

Each of the four antibiotic calculators has an in-built level calculator which provides an interpretation of the result

An additional tool is included which provides references for other antibiotics which involve therapeutic dose monitoring

Benefits

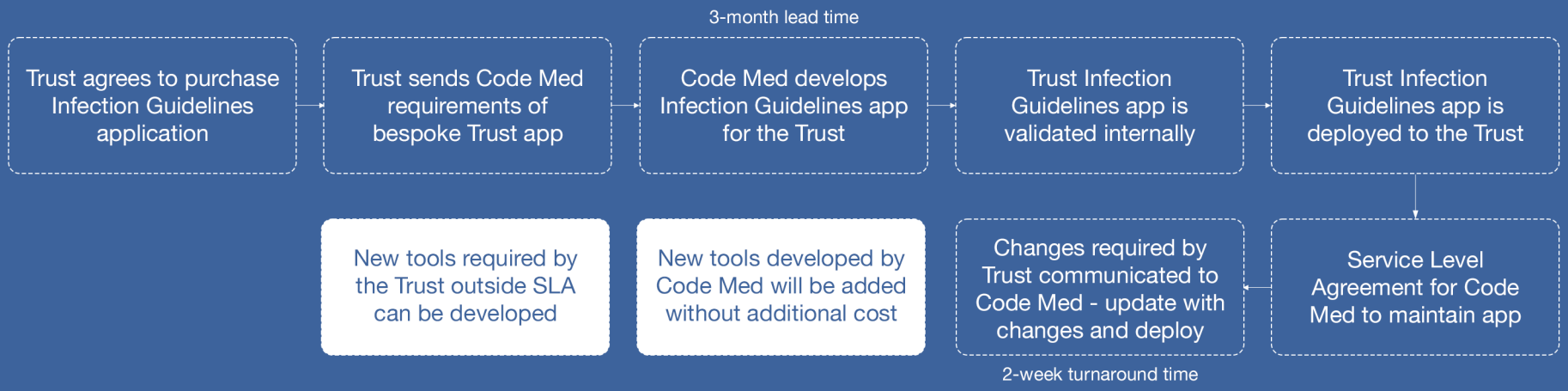
These calculators provide an accurate dose calculation and can also be set to minimise drug wastage by rounding to be consistent with vial volumes

Using these calculators reduces the time taken by clinicians to calculate the dose whilst ensuring a high level of accuracy

Interested?

So now that you have had the grand tour, you might be thinking how you can get this app in the hands of your frontline staff?

We do not have a generic app as others may do, which takes your information and presents it in a standard format. We bespokely craft our apps for each organisation so that we can provide the look and feel that you want and which reflects your corporate identity. You may already be using alternative solutions, which may be working well for you, however, we want you to imagine the possibilities of the technology you could introduce to your organisation, and how that could make even greater improvements in the future.



Take a moment to reach out to us with no commitment whatsoever. Let us take the time to explore the possibilities. We look forward to hearing from you.

Code Med Team
info@codemed.co.uk
07789260113