

**Future
Nurse
Suite
Student
User Guide
2019**

Be competent, be safe

supporting education and healthcare providers in the UK in meeting the new NMC Future Nurse standards in the areas of healthcare numeracy and drug dosage and prescribing calculations

STATEMENT ON COGNITIVE COMPETENCE DEVELOPMENT

Where the terms 'competence' or 'competency' are used within safeMedicate and its associated documentation including user guides, sales and marketing materials and website content, we refer explicitly to Cognitive Competence as defined by the European Parliament (2008)¹ in its recommendations on the establishment of a European Qualifications Framework for Lifelong Learning. In this sense, Cognitive Competence relates only to the development and assessment of knowledge of the medication dosage calculation problem solving process and excludes any other forms of competence such as functional, personal or ethical competence that will be required for safe medication practice in a clinical setting.

¹ European Parliament (2008) Glossary: RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 April 2008 on the establishment of the European Qualifications Framework for lifelong learning. [online] EUCEN. Available from: www.eucen.org/EQFpro/GeneralDocs/FilesFeb09/GLOSSARY.pdf [Accessed 28 September 2009]

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THE SAFEMEDICATE COGNITIVE COMPETENCE MODEL

safeMedicate facilitates the learning and authentic diagnostic assessment of the cognitive competencies that establish the critical foundations of patient care knowledge within the domain of medication dosage problem solving.

Cognitive competence in medication dosage problem solving consists of three inter-related elements as illustrated in the figure below:

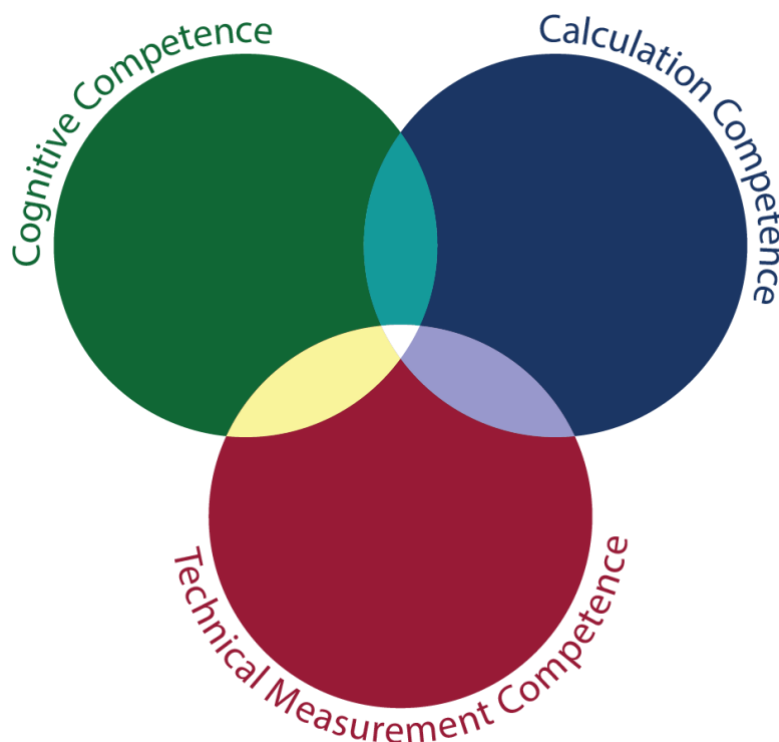


FIGURE 1 - THE SAFEMEDICATE COGNITIVE COMPETENCE MODEL

- **Conceptual Competence:** which involves correctly interpreting a medication dosage calculation problem and accurately setting up a dosage equation.
- **Calculation Competence:** which involves correctly calculating an accurate numerical value for the dose or rate to be administered.
- **Technical Measurement Competence:** which involves selecting an appropriate measurement vehicle and accurately measuring the dose or rate to be administered.

The figure below demonstrates an example of the three competence elements of a liquid medicines dosage problem, which shows:

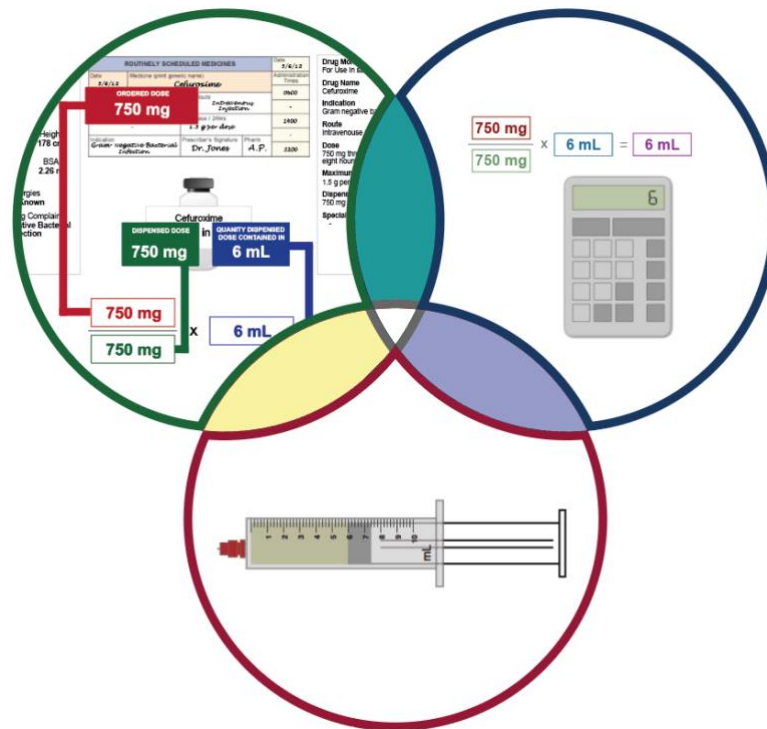


FIGURE 2 - THE THREE COMPETENCE ELEMENTS OF A LIQUID MEDICINES DOSAGE PROBLEM

- **Conceptual Competence:** the extraction of essential numerical information and measurement units from medication orders and labels and the principles of dimensional analysis.
- **Calculation Competence:** the calculation of an appropriate numerical value for the dose to be administered.
- **Technical Measurement Competence:** the technical measurement of the dose to be administered in an appropriate measurement vehicle.

The figure below shows how the *safeMedicate* cognitive competence model locates within the base layer of the Authentic World Hierarchy for Learning.

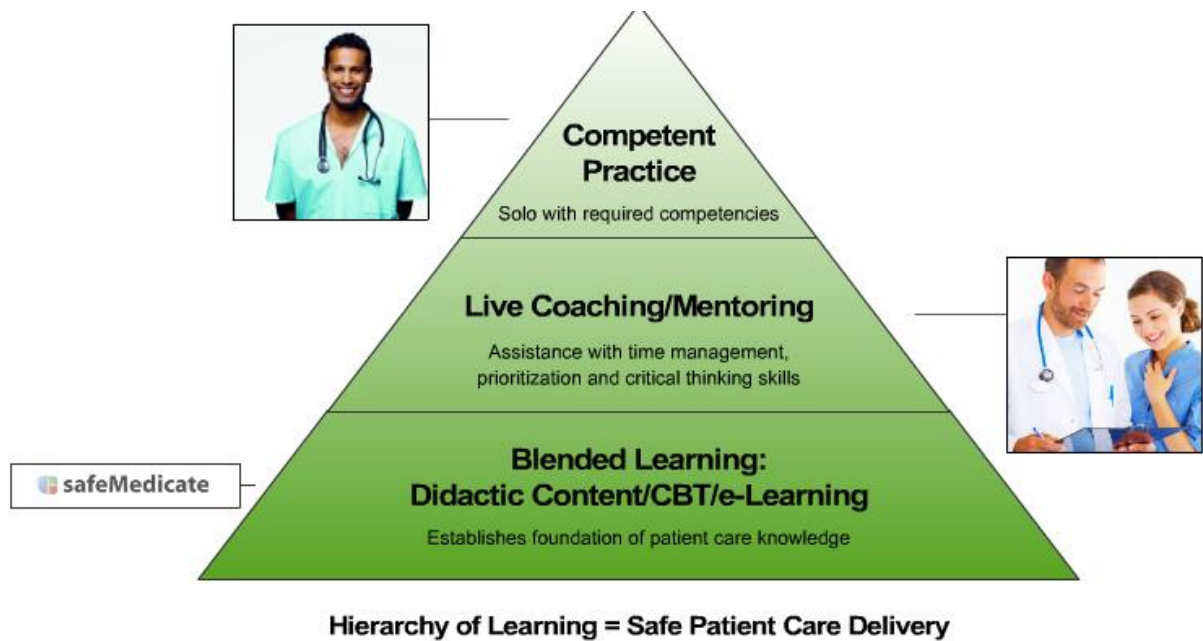


FIGURE 3 - THE AUTHENTIC WORLD HIERARCHY FOR LEARNING

safeMedicate is designed to support the learning, synthesis and diagnostic measurement of cognitive competence in the critical elements of medication dosage problem solving that underpin the application of further competence development and evaluation within each of the remaining levels of the Authentic World Hierarchy for Learning.

- Competence evaluation during simulated clinical experiences and engagement with human patient simulators.
- Competence evaluation in clinical practice settings under the supervision of an experienced mentor.
- Competence achievement consistent with independent practice.

GETTING STARTED

This latest release of *safeMedicate* is accessible from any Internet connected computer including tablet devices such as iPad and smartphones. Open a web browser and go to the following URL to access the *safeMedicate* home page:

www.safemedicate.com



FIGURE 4 – SAFEMEDICATE HOME PAGE

Click on the Login button to get started.

safeMedicate

Login

Username / Email Address

Password

[Forgotten your password?](#)

Region

UK, Australia & Rest of the World

USA, Canada & Switzerland

Login

[Register a new account](#)

FIGURE 5 - SAFEMEDICATE LOGIN PAGE

At the Login page enter your email address or username and password and click the *Login* button – you will be taken to the safeMedicate Home Page.

THE HOME PAGE

safeMedicate HOME MY RECORD MODULES ACCOUNT SETTINGS SUPPORT LOGOUT

Welcome Kirsty!

- From these pages, you can directly access the safeMedicate modules. To begin, simply choose which program you wish to use from the MODULES list above.

To see an overview of your usage of the safeMedicate modules, choose MY RECORD

Updates & Notices

- Your privacy is important to us.

Review your preferences for notifications from us [here](#).

Upcoming Assessments

- 00:00 12/02/2019 - FNS Essential Skills - ADA

Assessments are accessible from the MODULES menu when available.

Need Help?

- If you are experiencing any difficulties using safeMedicate or any of the safeMedicate modules, please contact your local administrator or click SUPPORT above to get in contact with us.

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FIGURE 6 – THE SAFEMEDICATE HOME PAGE

All of the features and functions of *safeMedicate* are accessible from the main menu located at the top of this page. We will look at each menu option in detail in the following pages of this user guide.

Notification Area

The left-hand column of the home page is the **Notification Area**. We'll use the *Updates & Notices* section to post news on any new features or changes we plan to safeMedicate or to draw your attention to important information. The *Upcoming Assessments* section is where you'll be alerted to any assessments that have been scheduled for you as in the example above – check this area frequently so that you don't miss an important test!

Social Buttons

At the bottom right of the page you'll find access to our various social channels including Facebook, Twitter, our Blog, LinkedIn and YouTube. We use Facebook and Twitter in particular to share information with you and also to invite you to participate in the various competitions we run throughout the year. Please take the time to like us on Facebook and follow us on Twitter!

MAIN MENU OPTIONS



FIGURE 7 – THE MAIN MENU OPTIONS

The first thing to note is that the Main Menu stays visible wherever you are within *safeMedicate*. This makes it easy to move around from one module to the next. Starting from the left, the menu options are:

- **Home** - this is just a quick way to always bring you back to the home page shown in Figure 6.
- **My Record** – this is where you access information relating to your usage of *safeMedicate* including your assessment results.
- **Modules** - hovering your mouse over this item opens a list of all the *safeMedicate* learning modules you have access to. You'll also find the **Assessments** module which is where you will access any assessments that have been scheduled for you.
- **Account Settings** - this is where you can update any of your details such as email address or change your password. You can also find a list of the *safeMedicate* modules you have access to and the dates on which these accounts will expire.
- **Support** - this menu item provides information on who to contact in your local institution for first level support. You can also get access to our *Customer Support Service* where you can get extra help directly from us should you need it.
- **Logout** - the very last item on the menu is the logout button. When you're finished working with *safeMedicate* just click here to log out safely.

YOUR USER RECORD

Click on the **My Record** menu item to open the page shown below.

The screenshot displays the 'safeMedicate User Record' interface. It is divided into two main columns: 'Your Details' and 'Usage History'. Below these are several expandable panels, each with a '+' icon on the right side. The 'FNS Essential Skills' panel's '+' icon is circled in red.

Your Details		Usage History	
Name	Kirsty Weeks	Registration Date	11/29/2019
Student Number	N/A	Last Login	12/02/2019
Email Address	kirsty@██████████	Login Count	17
Username	beta03a102	Print Record	
Group	Review Group		
Registration Key	bzyd9w24		
Organisation	Authentic World Ltd.		

Expandable Panels:

- Word Problem Skills (+)
- FNS Essential Skills (+)
- FNS Bodyweight based calculations (+)
- FNS Injectable Medicines Therapy (+)
- Practice Your Skills (+)
- Assessments (+)

FIGURE 8 - YOUR SAFEMEDICATE USER RECORD

Your **User Record** contains up to 7 sections that are displayed as separate 'panels' of information. The number of sections will depend on which modules you have access to.

1. User Record
2. Word Problem Skills
3. FNS Essential Skills
4. FNS Bodyweight-Based and Body Surface Area Calculations
5. FNS Injectable Medicines Therapy
6. Practice Your Skills
7. Assessments

User Record

By default, when the record displays only the top section/panel (User Record) is open as in the example. The left side of the panel contains your basic details while the right side of the panel shows your usage history.

To open any of the other panels of information click the + symbol located to the far right of the chosen panel as highlighted in the figure above.

FNS Essential Skills

The left side of this panel (see figure below) shows your usage history and progress data for the module. Note that progress is shown as a % completion for each section of the module. You will show 100% complete only when you have accessed each page within that module.

The right side of the panel lists your assessment history. These are all the self-administered (practice) assessments you have taken in this module. Note the list shows the assessment date, medication domain and score. To view any of the detailed assessment results click directly over the chosen record. The assessment results are displayed as described in the next section of this guide.

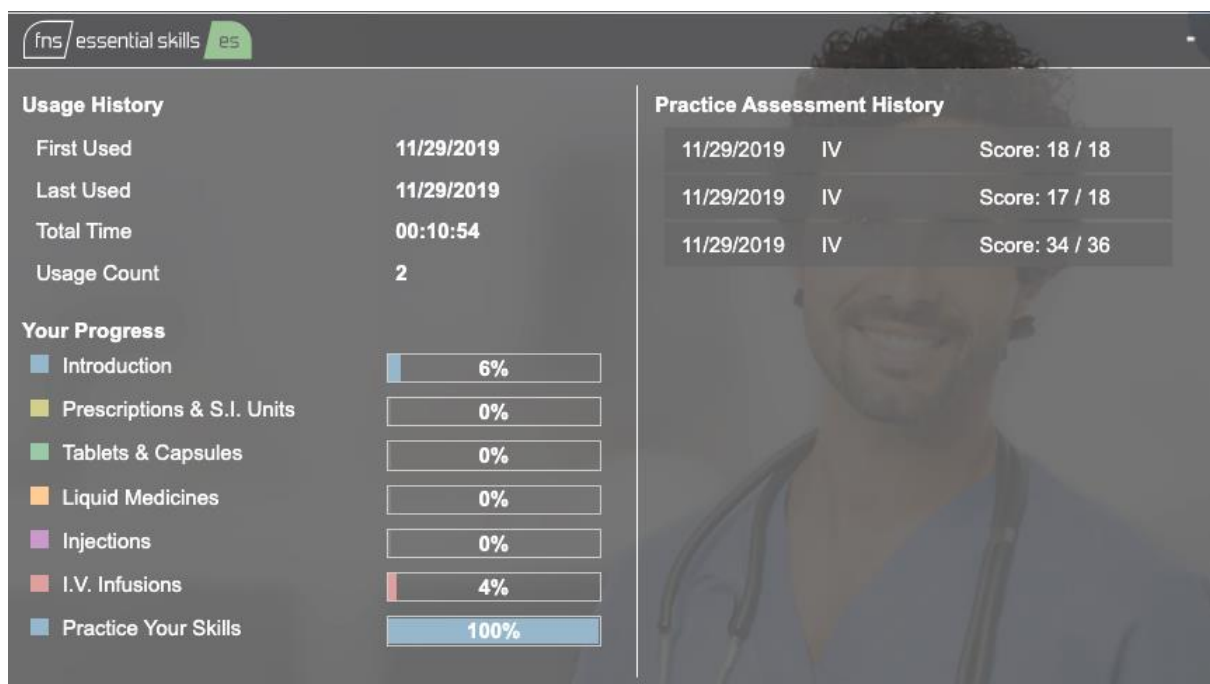


FIGURE 9 - THE ESSENTIAL SKILL INFORMATION PANEL

FNS Bodyweight-Based and Body Surface Area Calculations

Information on this panel is presented in a similar format as for Essential Skills.

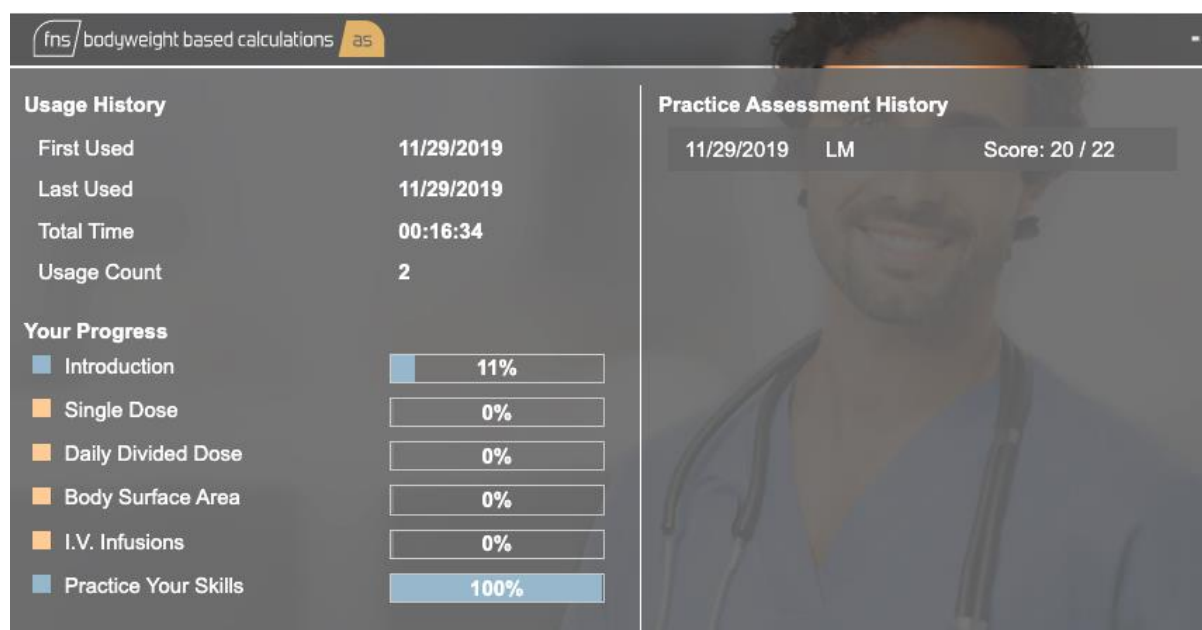


FIGURE 10 – THE ADVANCED SKILLS PEDIATRICS BODYWEIGHT-BASED CALCULATIONS INFORMATION PANEL

FNS Injectable Medicines Therapy

Information on this panel is presented in a similar format as for Essential Skills.

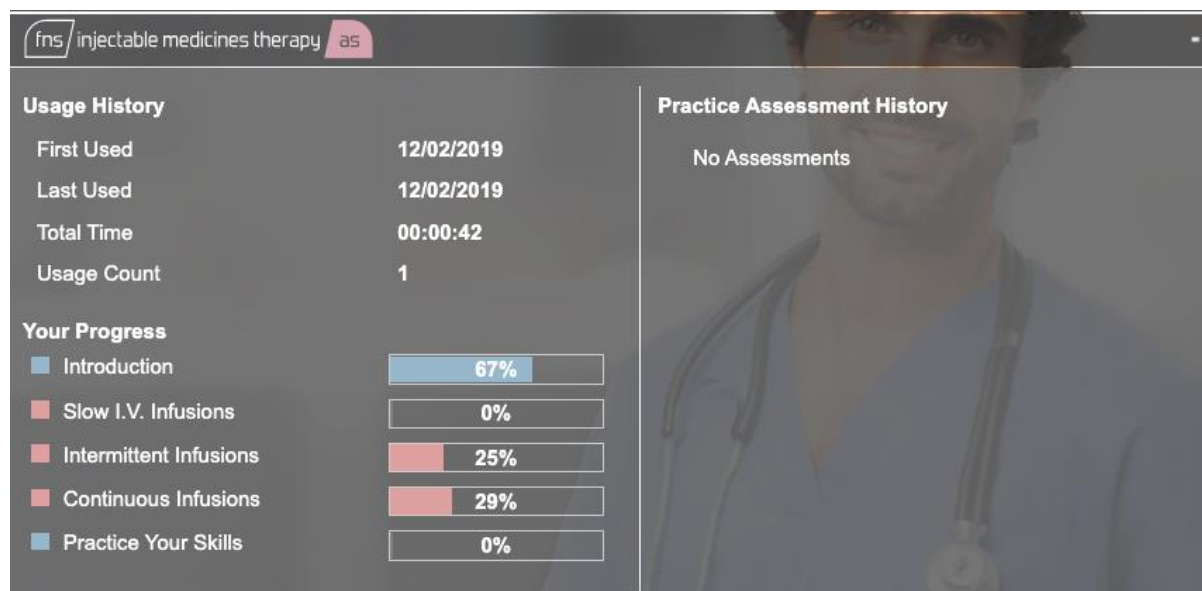


FIGURE 11 ADVANCED SKILLS – INJECTABLE MEDICINES THERAPY INFORMATION PANEL

Assessments

The *Assessment* panel lists assessments that have been scheduled for you by your institution as shown in the example below. Note that the list shows the date of the assessment and the module it is related to.



FIGURE 12 - ASSESSMENT HISTORY LIST

To view any of the detailed assessment results click directly over the chosen record. The assessment results are displayed as described in the next section of this guide.

Printing Your User Record

On the *User Record* screen (see Figure 8) click **Print Record** to print a copy of your record. The report will provide a summary of your engagement with each of the modules.


Viewing Your Assessment Results and Feedback

FNS Essential Skills | Assessment Summary

To access your assessment results and feedback click directly over the chosen assessment in the *Assessment History* list (see Fig 12).

An **Assessment Summary** screen is shown that provides a total score and an overview of every question showing how each element (*conceptual, calculation and technical measurement*) has been marked. Each question number are color-coded blocks that relate to the module (e.g. FNS Essential Skills) section (e.g. tablets and capsules) and problem complexity level (e.g. unit dose). A key for these can be found at the foot of the **Assessment Summary** page.

FNS Essential Skills [Back to My Record](#)

Name:	KIRSTY WEEKS	
ID:		
Submission Date:	12/02/2019	
Submission Time:	13:46	
Time Taken:	60 / 60 minutes	
Score:	135 / 144	

Question	Section	Level	Conceptual	Calculation	Conceptual	Calculation	Conceptual	Calculation	Conceptual	Calculation	Safety Check	Safety Check	Technical Measurement	Technical Measurement
1	TC	Unit Dose	✓	✓									✓	⊙
2	TC	Unit Dose	✓	✓									✓	⊙
3	TC	Sub Unit Dose	✓	✓									✓	⊙
4	TC	Sub Unit Dose	✓	✓									✓	⊙
5	TC	Multiple Unit Dose	✓	✓									✓	⊙
6	TC	Multiple Unit Dose	✓	✓									✓	⊙
7	TC	Conversion of S.I. Units	✓	✓									✓	⊙
8	TC	Conversion of S.I. Units	✓	✓									✓	⊙
9	TC	Complex Dose	✓	✓									✓	⊙
10	TC	Complex Dose	✓	✓									✓	⊙
11	LM	Unit Dose	✓	✓									✓	⊙
12	LM	Unit Dose	✓	✓									✓	⊙
13	LM	Sub Unit Dose	✓	✓									✓	⊙
14	LM	Sub Unit Dose	✓	✓									✓	⊙
15	LM	Multiple Unit Dose	✓	✓									✓	⊙
16	LM	Multiple Unit Dose	✓	✓									✓	⊙
17	LM	Conversion of S.I. Units	✓	✓									✓	⊙
18	LM	Conversion of S.I. Units	✗	✗									✗	⊙
19	LM	Complex Dose	✓	✓									✓	⊙
20	LM	Complex Dose	✓	✓									✓	⊙
21	INJ	Unit Dose	✓	✓									✓	⊙
22	INJ	Unit Dose	✓	✓									✓	⊙
23	INJ	Sub Unit Dose	✓	✓									✓	⊙
24	INJ	Multiple Unit Dose	✓	✓									✓	⊙
25	INJ	Multiple Unit Dose	✓	✓									✓	⊙
26	INJ	Complex Dose	✓	✓									✓	⊙
27	INJ	Complex Dose	✓	✓									✓	⊙
28	INJ	Insulin											✓	⊙
29	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
30	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
31	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
32	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
33	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
34	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
35	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
36	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
37	IV	mL/hr & drops/min	✓	✓	✓	✓							✓	⊙
⌚ Assessment duration expired. The user did not complete any questions beyond this point.														
38	IV	mL/hr & drops/min												

KEY

Module

FNS Essential Skills
FNS Advanced Skills - Bodyweight Calculations
FNS Advanced Skills - Injectable Medicines Therapy

Section

- TC: Tablets & Capsules
- LM: Liquid Medicines
- INJ: Injections
- IV: I.V. Infusions
- SLOW: Slow I.V. Injections
- INT: Intermittent Infusions
- CON: Continuous Infusions

FIGURE 13 – ASSESSMENT SUMMARY SCREEN

Click the preview icon that’s being illustrated below, to view the detailed feedback of your answer.

Question	Section	Level	Conceptual	Calculation	Conceptual	Calculation	Conceptual	Calculation	Conceptual	Calculation	Safety Check	Safety Check	Technical Measurement	Technical Measurement
1	TC	Unit Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
2	TC	Unit Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
3	TC	Sub Unit Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
4	TC	Sub Unit Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
5	TC	Multiple Unit Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	👁
6	TC	Multiple Unit Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
7	TC	Conversion of S.I. Units	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
8	TC	Conversion of S.I. Units	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
9	TC	Complex Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐
10	TC	Complex Dose	✓	✓	☐	☐	☐	☐	☐	☐	☐	☐	✓	☐

FIGURE 14 – PREVIEW ICON | ASSESSMENT SUMMARY SCREEN

The figure below illustrates the typical feedback format for an FNS Essential Skills ADA Injections question. Feedback for other medication domains (tablets & capsules, liquid medicines and IVIs) will follow a similar format.

Question 24 You answered this question CORRECTLY ✓

The prescriber has ordered the following drug.

Complexity Level: **Multiple Unit Dose** fns essential skills ES

Patient's Name
Milagros Belz

Sex **Female** Age **97 years**

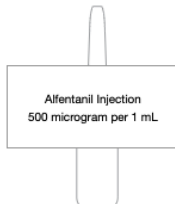
Height **162 cm** Bodyweight **50 kg (110 lbs)**

Body Surface Area **1.5m²**

Presenting Complaint
Induction Of Analgesia During General Anaesthesia

Allergies
Nil Known

ONCE ONLY MEDICINES			
Date	Medicine (print generic name)		
3/12/2019	Alfentanil Injection		
Dose	2000 microgram	Route	Intravenous Injection
Dose Calculation	-	Max Dose	40 microgram/kg/dose
Indication	Induction Of Analgesia During General Anaesthesia	Prescriber's Signature	Pharm
	Dr Jones	Date & Time of Dose	3/12/2019 09:0



Alfentanil Injection
500 microgram per 1 mL

Drug Monograph
For Use in safeMedicate Only

Medication Name
Alfentanil Injection

Indication
Induction Of Analgesia During General Anaesthesia

Administration Route
Intravenous Injection

Dose
2000 microgram Once a day

Maximum Dose
40 microgram/kg/dose

Dispensed Dose
500 microgram per 1 mL

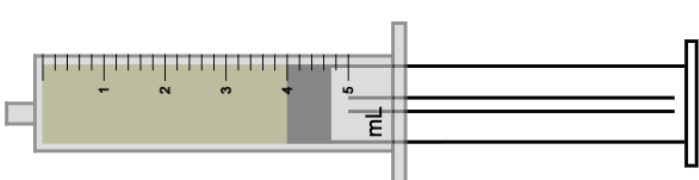
The problem

CORRECT ANSWER

DOSE / VOLUME CALCULATION

$$\frac{2000 \text{ mcg}}{500 \text{ mcg}} \times 1 \text{ mL} = 4 \text{ mL}$$

ADMINISTER THE CORRECT DOSE/VOLUME OF DRUG



Correct answer

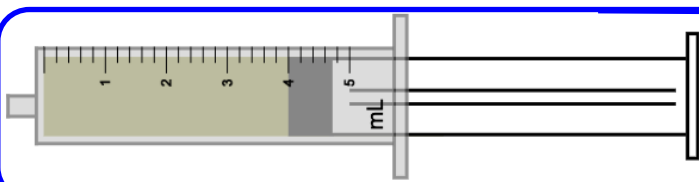
YOUR ANSWER

DOSE / VOLUME CALCULATION CONCEPTUAL ✓ CALCULATION ✓

$$\frac{2000 \text{ mcg}}{500 \text{ mcg}} \times 1 \text{ mL} = 4 \text{ mL}$$

$$4 \text{ mL}$$

ADMINISTER THE CORRECT DOSE/VOLUME OF DRUG TECHNICAL MEASUREMENT ✓



Your answer

YOUR CALCULATOR USAGE

2000 ÷ 500 = 4 🧮

Calculator feedback

FIGURE 15 – DETAILED FEEDBACK FOR AN INDIVIDUAL QUESTION

Note that there are 3 main components to the feedback for the question.

1. The top portion of the screen re-presents the key elements of the problem – i.e. the prescribed dose and the medication container label showing the dispensed dose and quantity/volume this is contained in.
2. The centre portion of the screen shows the correct answer to the problem and includes problem setup (conceptual), calculation and technical measurement components.
3. The lower portion of the screen shows your answer to the problem and affords a discrete comparison with that of the correct solution above. For illustrative purposes the components of the answer have been highlighted to show how they relate to the components of the competence model.

If you've used a calculator to solve the problem, the keystrokes will be recorded in the calculator feedback section of the screen.

Note that in this example, the student has got the conceptual, calculation and technical measurement components correct.

FNS Advanced Skills – Bodyweight Calculations | Assessment Summary

Information on this panel is presented in a similar format as for Essential Skills shown in figure 14).

FNS Advanced Skills – Injectable Medicines Therapy | Assessment Summary

Information on this panel is presented in a similar format as for Essential Skills shown in figure 14).

Your safeMedicate Modules

The *Modules* menu item opens a list of all the *safeMedicate* modules you have access to as shown in the figure below.

My safeMedicate Modules

Word Problem Skills
Develop the skills required for answering word-based dosage calculation problems typical of pre-licensure and pre-employment testing.
▶ [Start Module](#) [User Guide](#)

fns essential skills es
Work through 6 sections that combine to provide the understanding and skills required to safely and accurately perform medication dosage calculations in clinical practice.
▶ [Start Module](#) [User Guide](#)

fns bodyweight based calculations as
Develop and assess your skills required for safe medication practice with the more complex problem solving and calculations associated with bodyweight based and body surface area based dosage calculations.
▶ [Start Module](#) [User Guide](#)

fns injectable medicines therapy as
Develop and assess your skills required for safe medication practice with the more complex problem solving and calculations associated with injectable medicines therapy.
▶ [Start Module](#) [User Guide](#)

Practice Your Skills
Practice your skills in all of your safeMedicate modules.
▶ [Start Module](#) [User Guide](#)

Assessments
Undertake your assessments in one place.
▶ [Start Module](#) [User Guide](#)

FIGURE 16- THE MY SAFEMEDICATE MODULES MENU ITEM

In the above example, access is provided to the *Word Problem Skills*, *FNS Essential Skills*, *FNS Advanced Skills*, *Practice Your Skills* and the *Assessments* module.

- To open any module, click on the **Start Module** link associated with the module you wish to use.

Working with the Learning Modules

To open any module, click on the **Start Module** link associated with the module you wish to use. The module will open, and content will begin playing.

Page Navigation Tools

There are a number of tools available to help you navigate through and work with the module content as shown in the figure below.

The screenshot shows the 'Essential Skills' interface for a module titled 'TRYING THE CALCULATION FOR YOURSELF 1'. The interface includes a 'Try the Calculation Yourself' section with instructions: 'See if you can identify which of the answers is correct and drag the correct measurement of medicine into the answer box.' Below this is a 'ROUTINELY SCHEDULED MEDICINES' table for Methadone Hydrochloride Injection, a central graphic of a syringe labeled 'Methadone Hydrochloride Injection 10mg in 1mL', and a list of syringe volumes (0.1mL, 0.5mL, 1mL, 10mL). A calculation area shows '10 mg' in a red box, '10 mg' in a green box, and '1 mL' in a blue box, with an equals sign and a 'DRAG ANSWER HERE' box. The bottom of the screen features a purple navigation bar with 'Page 6 of 17', 'PAGE RESOURCES' (No Additional Resources), and social media icons. Callouts point to various navigation elements: 'Click here to view and select content by chapter' (pointing to the 'INJECTIONS' dropdown), 'Access User Guide' (pointing to a question mark icon), 'Click here to view and select content by section within each chapter' (pointing to the 'TRYING THE CALCULATION FOR YOURSELF 1' title), 'Current page indicator' (pointing to 'Page 6 of 17'), 'Move to previous page' (pointing to a left arrow), 'Move to next page' (pointing to a right arrow), and 'Additional page resources' (pointing to the 'PAGE RESOURCES' section).

FIGURE 17 – THE LEARNING ENVIRONMENT INTERFACE AND PAGE NAVIGATION TOOLS

If there is additional content associated with the page, it will appear in the **Page Resources** section of the screen. Click on any resource to select and view additional content.

Media Playback Tools

Hover your mouse over the central part of the screen where the content plays to open a set of media playback tools as shown below.

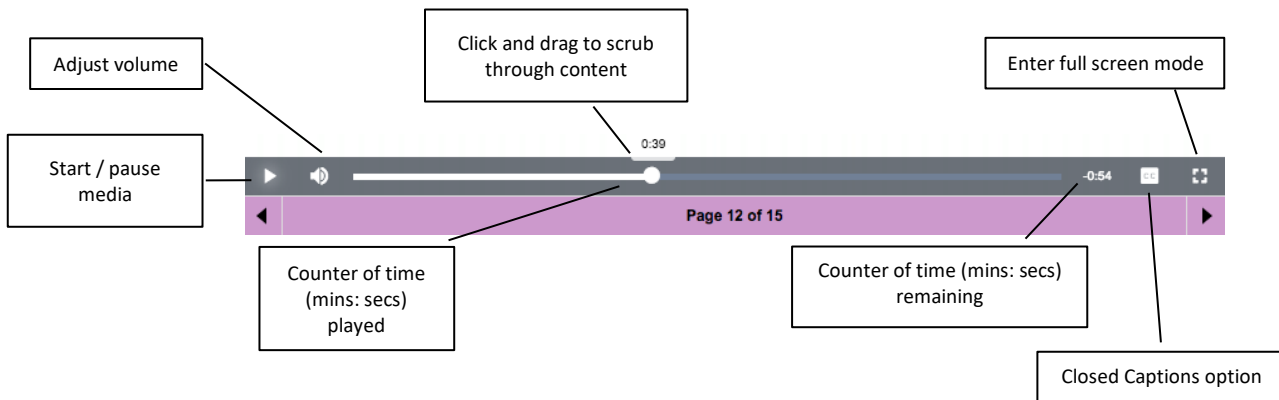


FIGURE 18 - MEDIA PLAYBACK TOOLS

Assessments

Working with the Assessments Module

All assessments scheduled by your university/institution are accessible and are taken via the **Assessments** module.

1. Click on **Modules** on the main menu.
2. On the drop-down menu that opens, click on the **Start Module** link associated with the Assessments module (see Figure 16) to show the screen shown below.

The screenshot displays the 'Assessments' section of the application. At the top, it states 'The following assessments have been scheduled for you today.' and includes a 'Refresh Assessment List' button. Below this, a card for an assessment titled 'All same test' is shown. The card is divided into two columns. The left column lists assessment details: Time (00:00), Date (12/02/2019), Duration (60 minutes), Allowed Attempts (1), Type (Formative Assessment), Area of Practice (Custom), and Calculator (On). The right column contains an 'Assessment Password' input field and a 'Start' button. A callout box on the left points to the title bar 'fns essential skills es' with the text 'Associated learning module and assessment type'. Another callout box points to the details list with the text 'Assessment Details'.

FIGURE 19 - VIEWING UPCOMING ASSESSMENTS

Any assessments that have been scheduled for you will be visible as in the example above.

The title bar of the assessment entry shows the associated learning module and type of assessment – in this example *FNS Essential Skills*.

The left side of the screen shows the details of the assessment including the date, time, duration, allowed attempts, extra time, type (formative or summative), area of practice and whether an on-screen calculator will be available. **Note that you can only sit an assessment on the day and time it has been scheduled for.**

The right side of the screen is where you enter the **Assessment Password** – your instructor or local *safeMedicate* administrator will give this to you in advance of the assessment.

Please note that the safeMedicate Team do not set these passwords and you have to contact your university/institution if you do not have the password for any assessment that has been scheduled.

To start an assessment, enter the Assessment Password and click **Start**.

Authentic Diagnostic Assessment (ADA) Problems

fns essential skills es

This assessment will comprise of 40 questions.

- 10 questions from Tablets & Capsules.
- 10 questions from Liquid Medicines.
- 10 questions from Injections.
- 10 questions from I.V. Infusions.

For each question you will be required to correctly setup and calculate the equation and prepare the correct dosage to be administered.

If you do not complete the assessment within the time limit you will be allowed to complete the question you are currently working on. The assessment will then be saved.

FNS Essential Skills		Rounding Requirements	
Time	10:00:00	Tablets & Capsules:	No Rounding Required.
Date	05/12/2019	Liquid Medicines & Injections:	Answers greater than 1mL, round to 1 decimal place. Answers less than 1mL, round 2 decimal places.
Duration	60.0 minutes	I.V. Infusions:	Adult - mL/hr rounded to the nearest whole number. Child - mL/hr rounded to 1 decimal place. Drops/min rounded to the nearest whole number.
Remaining Attempts	3 of 3	Answers with trailing zeroes will not be accepted.	
Type	Formative Assessment		
Area of Practice	Foundation		
Calculator	On		

Start Assessment Back to Assessment List

FIGURE 20 - BEGINNING A SCHEDULED ASSESSMENT

After submitting the correct assessment password, you will see the screen shown above. This screen provides more detailed information about the assessment you are about to take and reminds you of any rounding requirements should calculated answers not be a whole number.

Click **Start Assessment** when you are ready to begin.

If the assessment includes I.V. infusion problems, then you will be invited to choose the form of equation you prefer to work with as in the example below.

Click to select the one you wish to use.

Assessment Options

This assessment contains Drops per Minute problems.
Which equation type would you like to use to solve these problems?

? Drops per minute calculation type. Please choose an option ▼

START ASSESSMENT

? Drops per minute calculation type. Please choose an option ▼

Please choose an option

Drop Rate Denominator (D.R.D)

Traditional

FIGURE 21 - EQUATION OPTIONS FOR IV INFUSION QUESTIONS

Tablet and Capsules Questions

Time Remaining: 59 minutes
Question 1 of 38
📅

1

2

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37

38

The prescriber has ordered the following drug.

Complexity Level: **Unit Dose**

Patient's Name
Scott Wuest

Sex: **Male** Age: **40 years**

Height: **165 cm** Bodyweight: **66 kg (145.2 lbs)**

Body Surface Area: **1.74m²**

Presenting Complaint: **Hypercholesterolaemia**

Allergies: **Nil Known**

ROUTINELY SCHEDULED MEDICINES			Date
Date	Medicine (print generic name)		2/12/2019
2/12/2019	Simvastatin Tablets		Administration Times
Dose	40 mg	Route	ORAL
Dose Calculation	Max Dose		-
-	40 mg per day		-
Indication	Prescriber's Signature	Pharm	-
Hypercholesterolaemia	Dr Jones		22:00

Drug Monograph
For Use in safeMedicate Only

Medication Name
Simvastatin Tablets

Indication
Hypercholesterolaemia

Administration Route
ORAL

Dose
40 mg Once a day

Maximum Dose
40 mg per day

Dispensed Dose
40 mg per 1 tab(s)

DOSE / VOLUME CALCULATION STEP 1

Carefully study the information above. Use the equation frame below to set up and calculate the required dose/volume for administration.

When you have completed this step, click **NEXT** to continue.

40

mg

/

40

mg

X

1

tab(s)

=

1

?

NEXT

FIGURE 22 - ANSWERING AN AUTHENTIC DIAGNOSTIC ASSESSMENT QUESTION (TABS & CAPS)

In the above example you will see that the numbered boxes at the top of the screen identify your position within the question sequence – in this example Question 1 of 38. Your time remaining to complete the assessment is shown in the title bar of the screen.

In this first step you are prompted to extract the relevant information from the prescription chart and medication product label – insert this information in the equation model by clicking on each text box in turn and typing in the numeric values as shown above.

Click the '?' symbol alongside each numeric value to reveal and select the correct measurement unit for each value as in the figure below.

Choose a measurement unit	g	mg	mcg	mL	L	tab(s)
						cap(s)

Note: For the purposes of setting up the equation, micrograms is abbreviated to mcg.

FIGURE 23 - MEASUREMENT UNIT SELECTOR

Calculate your answer and enter the numeric value and the associated measurement unit in the boxes following the equals (=) sign.

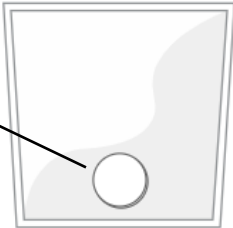
Click **Next** to proceed.

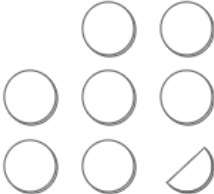
The second step of a typical tablets and capsules question requires you to represent your answer by clicking on and dragging the correct number of tablets/capsules required into the medicine cup as in the example below.

ADMINISTER THE CORRECT AMOUNT OF TABLETS STEP 2

Carefully study the information above. Move the appropriate amount of tablets in to the medicine cup.
When you have completed this step, click **NEXT** to continue.

Click and drag the correct number of tablets or capsules into the medicine cup





NEXT

FIGURE 24 - REPRESENTING YOUR ANSWER BY DRAGGING TABLETS TO THE MEDICINE CUP

When you are happy with your answer click on the **Next** button to proceed to the next question – note that as this is an assessment, you will not be told whether you are correct or otherwise until all questions have been answered.

Liquid Medicine Questions

🕒 Time Remaining: 49 minutes
📊 Question 11 of 38
📊

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		

The prescriber has ordered the following drug.

Complexity Level: **Unit Dose**

Patient's Name
Rickie Damian

Sex: **Male** Age: **82 years**

Height: **164 cm** Bodyweight: **95 kg (209 lbs)**

Body Surface Area: **2.08m²**

Presenting Complaint: **Gram-Positive Infection**

Allergies: **Nil Known**

ROUTINELY SCHEDULED MEDICINES			Date
Date	Medicine (print generic name)	Administration Times	Date
2/12/2019	Cefalexin Oral Suspension	06:00 12:00	2/12/2019
Dose	250 mg	Route	ORAL
Dose Calculation	-	Max Dose	4 g per day
Indication	Gram-Positive Infection	Prescriber's Signature	Pharm
		Dr Jones	
			18:00 24:00

Cefalexin Oral Suspension
250 mg per 5 mL

Drug Monograph

For Use in safeMedicate Only

Medication Name
Cefalexin Oral Suspension

Indication
Gram-Positive Infection

Administration Route
ORAL

Dose
250 mg Four times a day, every six hours

Maximum Dose
4 g per day

Dispensed Dose
250 mg per 5 mL

ROUNDING For volumes greater than 1mL, round to tenths. For volumes less than 1mL, round to hundredths. 💡

STEP 1

DOSE / VOLUME CALCULATION

Carefully study the information above. Use the equation frame below to set up and calculate the required dose/volume for administration.

When you have completed this step, click **NEXT** to continue.

250	mg	x	5	mL	=	5	mL
250	mg						

NEXT


FIGURE 25 - ANSWERING AN AUTHENTIC DIAGNOSTIC ASSESSMENT QUESTION (LIQUID MEDICINES)

In this first step you are prompted to extract the relevant information from the prescription chart and medication product label – insert this information in the equation model by clicking on each text box in turn and typing in the values as in the example.

Click the '?' symbol alongside each numeric value to reveal and select the correct measurement unit for each value (see Figure 23).

When ready, click on **Next** to continue.

DOSE / VOLUME CALCULATION		STEP 1	
<input type="text" value="250"/>	<input type="text" value="mg"/>	x	<input type="text" value="5"/> <input type="text" value="mL"/>
<hr/>		=	<input type="text" value="5"/> <input type="text" value="mL"/>
<input type="text" value="250"/>	<input type="text" value="mg"/>		



ADMINISTER THE CORRECT DOSE/VOLUME OF LIQUID MEDICINE		STEP 2	
Carefully study the information above. Select the most appropriate syringe and measure the correct dose/volume of drug.			
When you have completed this step, click NEXT to continue.			







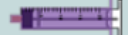
0.5mL 	1mL 	2mL 	3mL 	5mL 
10mL 	20mL 			

FIGURE 26 - SELECTING AN APPROPRIATE MEASUREMENT VEHICLE

The second step of a typical liquid medicine question requires you to select an appropriate method/vehicle with which to administer the dose. You have the choice of selecting a medicine cup or up to two oral syringes from the seven available.

Select the vehicle of choice and click on **Next** to continue.

The third and final step of a typical liquid medicine question requires you to represent your answer as a volume of liquid in your chosen administration vehicle.

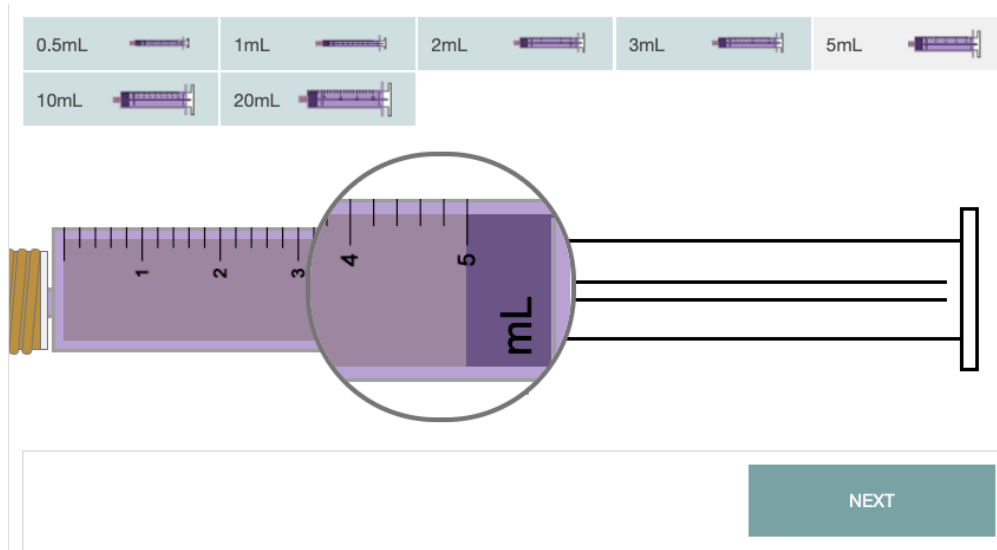


FIGURE 27 - MEASURING THE CORRECT DOSE USING A SYRINGE

Click on and drag the syringe plunger to the right until the desired volume of liquid medicine is drawn into the syringe – note how the syringe barrel is magnified to aid accurate measurement.

In the example above the 5 ml syringe was chosen and the answer represented by drawing the syringe to the **5 mL** graduation. (Please see the next section for how to represent your answer when using the medicine cup.)

When you are happy with your answer click on **Next** to continue to the next question.

Note that as this is an assessment, you will not be told whether you are correct or otherwise until all questions have been answered.

Injection Questions

🕒 Time Remaining: 36 minutes
Question 21 of 38
📊

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The prescriber has ordered the following drug.

Complexity Level: **Unit Dose**

Patient's Name
Simonne Midgette

Sex
Female

Age
27 years

Height
160 cm

Bodyweight
101 kg
(222.2 lbs)

Body Surface Area
2.12m²

Presenting Complaint
Prevention Of Rh0(D)
Sensitisation

Allergies
Nil Known

ONCE ONLY MEDICINES			
Date	Medicine (print generic name)		
2/12/2019	Anti-D (Rh0) Immunoglobulin Injection		
Dose	1500 units	Route	Deep Intramuscular Injection
Dose Calculation	-	Max Dose	1500 units per dose
Indication	Prevention Of Rh0(D) Sensitisation	Prescriber's Signature	Dr Jones
		Pharm	
		Date & Time of Dose	2/12/2019 -

Anti-D (Rh0) Immunoglobulin Injection
1500 units (300 microgram) per 1.3 mL

Drug Monograph
For Use in safeMedicate Only

Medication Name
Anti-D (Rh0) Immunoglobulin Injection

Indication
Prevention Of Rh0(D)
Sensitisation

Administration Route
Deep Intramuscular Injection

Dose
1500 units Once a day

Maximum Dose
1500 units per dose

Dispensed Dose
1500 units (300 microgram) per 1.3 mL

ROUNDING
For volumes greater than 1mL, round to tenths. For volumes less than 1mL, round to hundredths.

STEP 1

DOSE / VOLUME CALCULATION

Carefully study the information above. Use the equation frame below to set up and calculate the required dose/volume for administration.

When you have completed this step, click **NEXT** to continue.

1500

unit(s)

x

1.3

mL

=

1.3

mL

NEXT

FIGURE 28 - ANSWERING AN AUTHENTIC DIAGNOSTIC ASSESSMENT QUESTION (INJECTIONS)

In this first step you are prompted to extract the relevant information from the prescription chart and medication product label – insert this information in the equation model by clicking on each box in turn and typing in the numerical values.


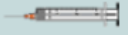




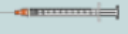
Click the '?' symbol alongside each numeric value to reveal and select the correct measurement unit for each value (see Figure 23).

Calculate your answer and type that in and select the appropriate measurement units.

When ready, click on **Next** to continue.

ADMINISTER THE CORRECT DOSE/VOLUME OF DRUG **STEP 2**

Carefully study the information above. Select the most appropriate syringe and measure the correct dose/volume of drug.
When you have completed this step, click **NEXT** to continue.








1mL 	3mL 	5mL 	10mL 	20mL 
50 Units 	100 Units 			

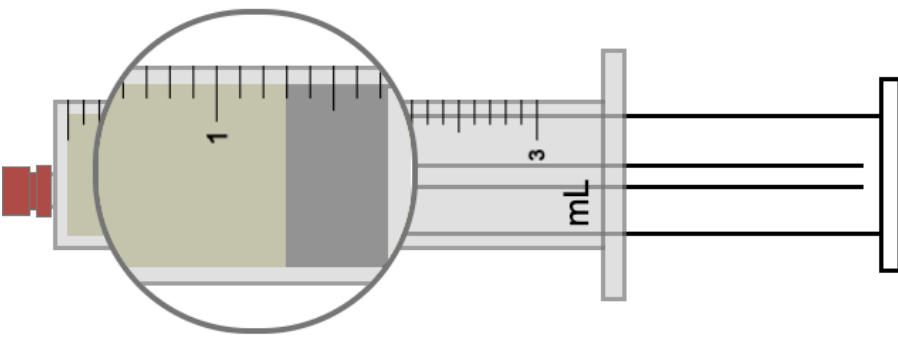
29 - SELECTING AN APPROPRIATE MEASUREMENT VEHICLE

The second step of a typical injections question requires you to select an appropriately sized syringe with which to administer the dose. Note that you have the choice of selecting one of seven syringes.

Click on the syringe of choice to continue.

The third and final step of a typical injections question requires you to represent your answer as a volume of liquid in your chosen syringe.

1mL 	3mL 	5mL 	10mL 	20mL 
50 Units 	100 Units 			



NEXT

FIGURE 30 - MEASURING THE CORRECT DOSE USING A SYRINGE

Click on and drag the syringe plunger to the right until the desired volume of liquid is drawn into the syringe – note how the syringe barrel is magnified to aid accurate measurement.


When you are happy with your answer click on **Next** to proceed to the next question.

You will not be told whether you are correct or otherwise until all questions have been answered.

Intravenous Infusion Questions (Drop Rate Denominator Method)

The prescriber has ordered the following **Intravenous Infusion**.

Complexity Level: **mL/hr & drops/min** fns essential skills es



Patient's Name
Loreta Heng

Sex **Age**
Female **45 years**

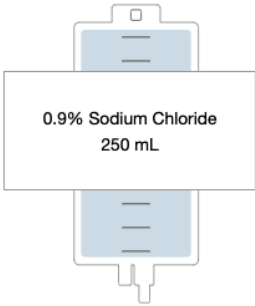
Height **Bodyweight**
178 cm **84 kg**
 (184.8 lbs)

Body Surface Area
2.04m²

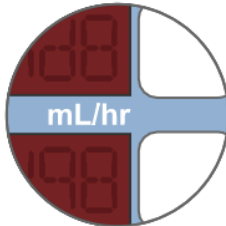
Presenting Complaint
Nil by mouth post-surgery

Allergies
Nil Known


INTRAVENOUS and SUBCUTANEOUS INFUSIONS					
Date	Infusion Fluid		Route	Medicine Added	
	Type / Strength	Volume		Approved Name	Dose
2/12/2019	0.9% Sodium Chloride	250 mL	Intravenous Infusion	-	--
Indication	Fluid maintenance & replacement		Infusion Duration or Rate	5 hour(s)	
Max Dose / 24hrs	3 Litres/24 hours			Prescriber's Signature	Given By
Instructions	Check plasma electrolytes every 24 hours whilst intravenous fluids are administered			Dr Jones	



0.9% Sodium Chloride
250 mL



mL/hr



15 drops per mL

ROUNDING !

When required for adults, mL/hr must be rounded to a whole number.
When required for children, mL/hr must be rounded to 1 decimal place (tenths).
Drops per Minute must be rounded to a whole number.

RATE CALCULATION - ML/HR STEP 1

250

mL

=

50

mL/hr

5

hour(s)

FIGURE 31 - ANSWERING AN AUTHENTIC DIAGNOSTIC ASSESSMENT QUESTION (IVIS)

Solving an IVI assessment question using the drop rate denominator (DRD) method typically involves a two-stage process.

In this first stage you are required to calculate the volume of fluid to be infused per hour i.e. the hourly rate. The first step requires you to extract the relevant information from the prescription chart and intravenous fluid container – insert this information in the equation model by clicking on each box in turn and typing in the values as in the example.

Click the '?' symbol alongside each numeric value to reveal and select the correct measurement unit for each value (see Figure 23).

When ready, click on **Next** to continue.

SETTING THE VOLUMETRIC PUMP	STEP 2
Carefully study the information above. Set the correct rate and volume on the volumetric pump.	
When you have completed this step, click NEXT to continue.	

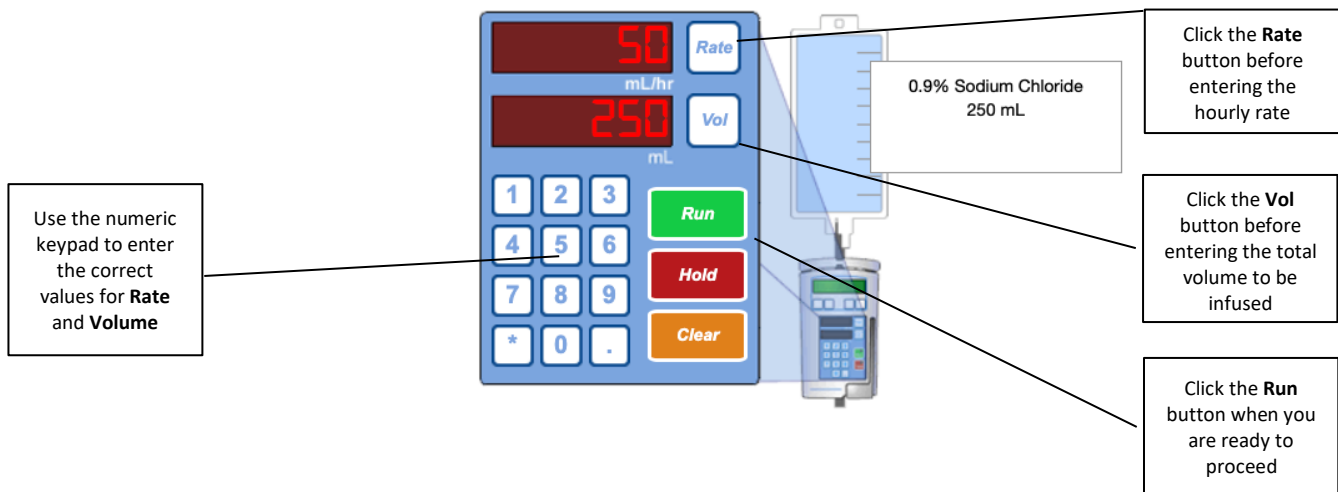


FIGURE 32 – REPRESENTING YOUR ANSWER AS ML/HOUR

In this next step you are required to represent the hourly rate and total infusion volume on a volumetric infusion pump. The above example shows how 50mL of fluid over 5-hour duration is represented.

To enter the hourly rate value on the pump, click on the **Rate** button then click on the appropriate number keys to represent your answer (50 in the above example).

To enter the total volume to be infused on the pump click on the **Vol** button then click on the appropriate number keys to represent your answer.

When you are happy with your answer click on the **Run** button to proceed to the next stage of the problem.

RATE CALCULATION - DROPS/MIN		STEP 3
50	mL/hr	= 13 drops/min
4	D.R.D.	

FIGURE 33 – CALCULATING THE DROPS PER MINUTE USING THE DRD METHOD

In this third stage you are required to calculate the number of drops per minute required if you were to deliver this fluid via an IV administration set.

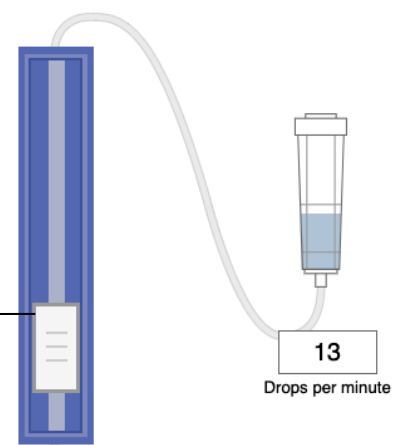
You now have to set up the calculation based upon this hourly rate and the drop rate denominator appropriate to the number of drops per mL that the administration set delivers (13 in this example).

Enter the correct numeric values and select the appropriate measurement units for each. Note that you should round the answer up or down depending on the decimal value (round up for .5 and above).

When you are happy with your answer click on **Next** to proceed to the next step.

SETTING THE I.V. GIVING SET	STEP 4
Carefully study the information above. Set the correct rate of the I.V. Giving Set. When you have completed this step, click NEXT to continue.	

Click and drag the wheel on the flow control to set the correct drops per minute rate



NEXT

FIGURE 34 - REPRESENTING YOUR ANSWER AS DROPS PER MINUTE VIA AN IV ADMINISTRATION SET

In this last step you are required to represent your answer as drops per minute by adjusting the administration set accordingly.

Click on the wheel of the fluid control mechanism and drag up or down - so that your answer is represented in the drops/min box (13 in this example).


When you are happy with your answer click on **Next** to proceed to the next question.

You will not be told whether you are correct or otherwise until all questions have been answered.

Intravenous Infusion Questions (Traditional Method)

The prescriber has ordered the following **Intravenous Infusion**.

Complexity Level: **mL/hr & drops/min** fns essential skills es



Patient's Name
Normand Bernardini

Sex Male **Age** 46 years


Height 167 cm **Bodyweight** 63 kg (138.6 lbs)

Body Surface Area 1.71m²

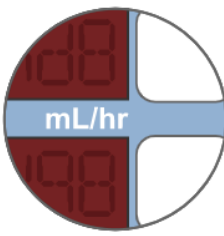
Presenting Complaint
Nil by mouth post-surgery

Allergies
Nil Known


INTRAVENOUS and SUBCUTANEOUS INFUSIONS					
Date	Infusion Fluid		Route	Medicine Added	
	Type / Strength	Volume		Approved Name	Dose
2/12/2019	Glucose 5%	250 mL	Intravenous Infusion	-	--
Indication	Fluid maintenance & replacement		Infusion Duration or Rate	2 hour(s)	
Max Dose / 24hrs	3 Litres/24 hours			Prescriber's Signature	Given By
Instructions	Check plasma electrolytes every 24 hours whilst intravenous fluids are administered			Dr Jones	



Glucose 5%
250 mL



mL/hr



15 drops per mL

ROUNDING !

When required for adults, mL/hr must be rounded to a whole number.
 When required for children, mL/hr must be rounded to 1 decimal place (tenths).
 Drops per Minute must be rounded to a whole number.

RATE CALCULATION - ML/HR **STEP 1**

Carefully study the information above. Use the equation frame below to set up and calculate the required administration rate.
 When you have completed this step, click **NEXT** to continue.

$$\frac{250 \text{ mL}}{2 \text{ hour(s)}} = 125 \text{ mL/hr}$$

NEXT

FIGURE 35 - ANSWERING AN AUTHENTIC DIAGNOSTIC ASSESSMENT QUESTION (IVIS)

Solving an IVI assessment question using the traditional or extended formula method typically involves a two-stage process.

In this first stage you are required to calculate the volume of fluid to be infused per hour i.e. the hourly rate. The first step requires you to extract the relevant information from the prescription

chart and intravenous fluid container – insert this information in the equation model by clicking on each box in turn and typing in the values as in the example.

Click the '?' symbol alongside each numeric value to reveal and select the correct measurement unit for each value (see Figure 23).

When ready, click on **Next** to continue.

SETTING THE VOLUMETRIC PUMP Carefully study the information above. Set the correct rate and volume on the volumetric pump. When you have completed this step, click NEXT to continue.	STEP 2
---	---------------



FIGURE 36 – REPRESENTING YOUR ANSWER AS ML/HOUR

In this next step you are required to represent the hourly rate and total infusion volume on a volumetric infusion pump. The above example shows how 250mL of fluid over 2 hours duration is represented.

To enter the hourly rate value on the pump, click on the **Rate** button then click on the appropriate number keys to represent your answer (125 in the above example).

To enter the total volume to be infused on the pump click on the **Vol** button then click on the appropriate number keys to represent your answer (250 in the above example).

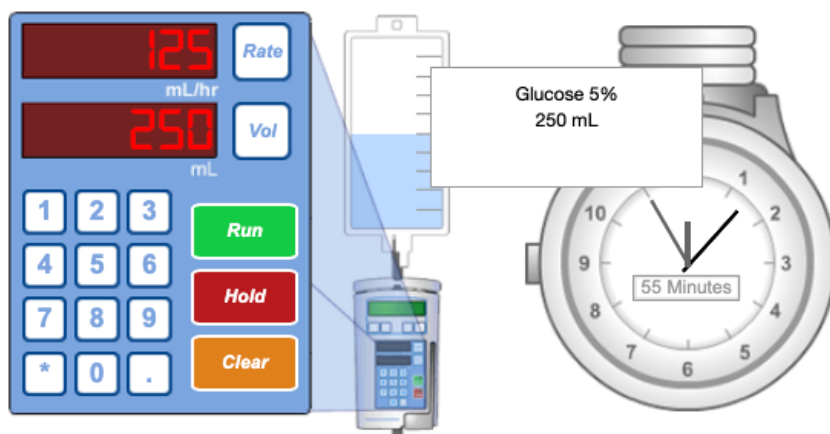


FIGURE 37 – DELIVERING YOUR ANSWER

When you are happy with your answer click on the **Run** button to proceed to the next stage of the problem.

RATE CALCULATION - DROPS/MIN										STEP 3	
250	mL	X	15	drops/mL	=	31	drops/min				
2	hour(s)	X	60	min/hr							

FIGURE 38 – CALCULATING THE DROPS/MIN USING THE TRADITIONAL (EXTENDED FORMULA) METHOD

In this second stage you are required to calculate the number of drops per minute required if you were to deliver this fluid via an IV administration set.

The traditional or extended formula method is based upon four factors – the total volume to be infused (250mL), the duration of the infusion (2 hours), the drop factor of the IV administration set (15 drops/mL) and the number of minutes in an hour (60 min/hour). The equation is set up as in the example above.

First, multiply the two numerators: $250 \times 15 = 3750$

Second, multiply the 2 denominators: $2 \times 60 = 120$

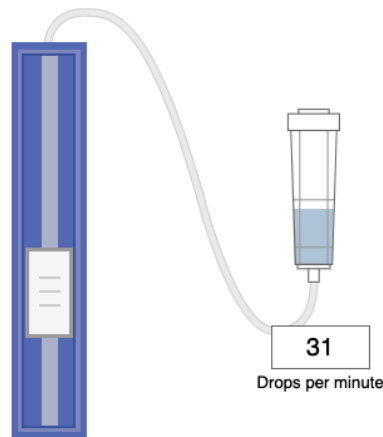
Next, divide the first answer (3750) by the second (120): $3750/120 = 31.25$

This gives the drops per minute rate.

SETTING THE I.V. GIVING SET

STEP 4

Carefully study the information above. Set the correct rate of the I.V. Giving Set.
When you have completed this step, click **NEXT** to continue.



NEXT

FIGURE 39 – REPRESENTING YOUR ANSWER AS DROPS PER MINUTE VIA AN IV ADMINISTRATION SET

In this last step you are required to represent your answer as drops per minute by adjusting the administration set accordingly.

Click on the wheel of the fluid control mechanism and drag up or down - your answer is represented in the drops/min box (31 in this example).

When you are happy with your answer click on **Next** to proceed to the next question.

You will not be told whether you are correct or otherwise until all questions have been answered.

Completing the Assessment

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Click a question number to enter review mode

You have completed the assessment.
You may review your answers by clicking the question numbers above.
Click **SAVE & EXIT** at any time to save & exit the assessment.

SAVE & EXIT

FIGURE 40 - COMPLETING THE ASSESSMENT AND BEING INVITED TO REVIEW ANY QUESTIONS

When all questions have been answered you will be told that the exercise is complete and offered the opportunity to review any questions before finishing the assessment – this provides an opportunity to check your answers or to retry any question you might have been unhappy with.

Using Review Mode

Click on the small box that represents the question number to enter review mode.

Reviewing Question 26 of 38

RETRY QUESTION
CONTINUE ASSESSMENT

The prescriber has ordered the following drug.

Complexity Level: **Complex Dose**
fns essential skills es

Patient's Name
Shin Hibbs

Sex **Female** Age **47 years**

Height **160 cm** Bodyweight **72 kg (158.4 lbs)**

Body Surface Area **1.79m²**

Presenting Complaint
Post Anesthesia Respiratory Depression

Allergies
NII Known

AS REQUIRED MEDICINES			Date	Time
Date	Medicine (print generic name)			
2/12/2019	Doxapram Hydrochloride Injection			
Dose	72 mg	Route	Slow Intravenous Injection	
Dose Calculation	-	Max Dose	1.5 mg/kg/dose	
Indication	Post Anesthesia Respiratory Depression			
Frequency	Every 1 hour, as required	Prescriber's Signature	Dr Jones	Pharm

Doxapram Hydrochloride Injection
400 mg per 20 mL

Drug Monograph

For Use in safeMedicate Only

Medication Name
Doxapram Hydrochloride Injection

Indication
Post Anesthesia Respiratory Depression

Administration Route
Slow Intravenous Injection

Dose
72 mg Every 1 hour, as required

Maximum Dose
1.5 mg/kg/dose

Dispensed Dose
400 mg per 20 mL

YOUR ANSWER

ROUNDING
For volumes greater than 1mL, round to tenths. For volumes less than 1mL, round to hundredths. !

DOSE / VOLUME CALCULATION

72

mg

x

20

mL

=

3.6

mL

400

mg

ADMINISTER THE CORRECT DOSE/VOLUME OF DRUG

YOUR CALCULATOR USAGE 🧮

72 ÷ 400 * 20 = 3.6

FIGURE 41 - REVIEWING AN ASSESSMENT QUESTION

In the above example we have chosen to review Question 26 - note that the question is re-presented and beneath is your solution to the problem.

If you wish to change this answer, then click on the **'Retry Question'** button – you will need to redo the entire question.

If you are happy with your answer, then click on the **'Continue Assessment'** button to move on.

Ending the Assessment

Once you have finished reviewing any questions click **'Save and Exit'** (see Fig. 40).

You will be returned to the main assessment page and you will not be able to retry any further questions in this assessment.

Authentic Assessment (AA) Problems

FNS Essential Skills AA		Assessment Password
Time	10:00	<input type="text"/>
Date	05/12/2019	<input type="button" value="Start"/>
Duration	60 minutes	
Allowed Attempts	3	
Type	Formative Assessment	
Area of Practice	Foundation	
Calculator	On	

FIGURE 42 - BEGINNING THE ASSESSMENT

Launch the **Assessments** module as described in the previous section of this guide. Any assessments scheduled for you will be listed as in the example above.

Enter the assessment password and click **Start**.

This assessment will comprise of 40 questions.

- 10 questions from Tablets & Capsules.
- 10 questions from Liquid Medicines.
- 10 questions from Injections.
- 10 questions from I.V. Infusions.

For each question you will be required to prepare the correct dosage to be administered.

If you do not complete the assessment within the time limit you will be allowed to complete the question you are currently working on. The assessment will then be saved.

FNS Essential Skills AA		Rounding Requirements
Time	10:00:00	Tablets & Capsules: No Rounding Required.
Date	05/12/2019	Liquid Medicines & Injections: Answers greater than 1mL, round to 1 decimal place. Answers less than 1mL, round 2 decimal places.
Duration	60.0 minutes	I.V. Infusions: Adult - mL/hr rounded to the nearest whole number. Child - mL/hr rounded to 1 decimal place. Drops/min rounded to the nearest whole number.
Remaining Attempts	3 of 3	Answers with trailing zeroes will not be accepted.
Type	Formative Assessment	
Area of Practice	Foundation	
Calculator	On	

FIGURE 43 - DETAILS OF THE ASSESSMENT


The next screen provides an overview of the assessment format. Click **Start Assessment** when you are ready to begin.

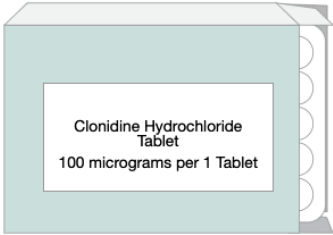
A typical Authentic Assessment question requires you to extract the relevant information from the medication prescription and medication product label and calculate the answer. You are not required to show how to set up the problem in an equation. All that is required is a final answer. Your instructor will inform you whether you are able to use pencil and paper or a calculator to assist you.

Tablets and Capsules Questions

The prescriber has ordered the following drug.

Complexity Level: **Sub Unit Dose** fns essential skills es

 Patient's Name Danny Galeana Sex Male Age 30 years Height 178 cm Bodyweight 100 kg Body Surface Area 2.22m² Presenting Complaint hypertension Allergies Nil Known	ROUTINELY SCHEDULED MEDICINES		Date 5/12/2019
	Date 5/12/2019	Medicine (print generic name) Clonidine Hydrochloride Tablet	Administration Times 06:00
	Dose 50 microgram	Route ORAL	-
	Dose Calculation -	Max Dose 1.2 mg per day	14:00
	Indication Hypertension	Prescriber's Signature Dr Jones	Pharm -
			22:00



Drug Monograph
For Use in safeMedicate Only

Medication Name
Clonidine Hydrochloride Tablet

Indication
Hypertension

Administration Route
ORAL

Dose
50 microgram Three times a day, every eight hours


Maximum Dose
1.2 mg per day

Dispensed Dose
100 micrograms per 1 Tablet

ADMINISTER THE CORRECT AMOUNT OF TABLETS

STEP 1

Carefully study the information above. Move the appropriate amount of tablets in to the medicine cup.
When you have completed this step, click **NEXT** to continue.



NEXT

FIGURE 44 - ANSWERING AN AUTHENTIC ASSESSMENT PROBLEM (TABLETS AND CAPSULES)

Using the information available to you on the prescription chart and medication container label, calculate the dose to be administered.

Represent the amount of medication that should be administered by clicking on and dragging the correct number of tablets/capsules required into the medicine cup as shown in the example above.

When you are happy with your answer, click the **Next** button to proceed to the next question.

Note that for any AA assessment, each medication domain question will be presented in a similar format as shown in figure 44).

Healthcare Numeracy Assessment Questions

The screenshot displays the assessment interface for 'Question 1 of 60'. At the top right, it shows 'Time Remaining: 240 minutes'. Below this is a progress bar with 60 numbered boxes, where box 1 is highlighted. The question title is 'Addition of Whole Numbers', followed by the instruction: 'Calculating the total, or sum by combining two or more numbers.' An example is provided: 'For Example: • 165 + 125 + 10 + 5 = 305'. Below the example, it says 'Watch the video to see a tutorial on how to answer these questions.' A video player on the right shows a play button and the title 'Answering Questions Using The Text Entry Box'. At the bottom, there is a 'CONTINUE' button and the text 'When you are ready to continue the assessment, click CONTINUE.'

Figure 45 HNA – HOW TO ANSWER AN ADDITION QUESTION

In the above example you will see that the numbered boxes at the top of the screen identify your position within the question sequence – in this example Question 1 of 60. Your time remaining to complete the assessment is shown in the title bar of the screen which is highlighted in the image above.

In this first step you are prompted to watch the video tutorial on the right-hand side. Hover your mouse over the video and click to watch the example on how to answer the questions for this section.

When you are ready to start the section, click '**Continue**' to begin.

Addition of Whole Numbers
Carefully read the question below.

Solve the **addition** problem. Type your answer in the box below.

$$998 + 802 =$$

My answer is

When you are ready to proceed to the next question, click **CONTINUE**.

DON'T KNOW **CONTINUE**

Figure 46 ANSWERING AN ADDITION QUESTION (HNA)

As shown in the figure above, you must work out the equation and insert your answer by clicking on the text box and typing in the numeric value.

If you need some guidance on how to answer this type of question, Click the '?' symbol on the top right-hand side to re-watch the video tutorial.

Addition of Whole Numbers
Carefully read the question below.

Solve the **addition** problem. Type your answer in the box below.

$$998 + 802 =$$

My answer is

When you are ready to proceed to the next question, click **CONTINUE**.

DON'T KNOW **CONTINUE**

Figure 47 USING THE CALCULATOR

If your organisation has allowed calculator use for this assessment, you can use the calculator provided as shown in the figure above, to work out the equation. To use the calculator, click on the numeric values, in this example $998 + 802$ and then follow with the equals (=) sign to arrive at the answer of 1800. Once you've finished using the calculator click the 'OFF' button to close the calculator.

The screenshot shows a question interface titled "Addition of Whole Numbers". It includes instructions to read the question carefully and solve the problem. The equation $998 + 802 =$ is displayed. Below the equation is a text box containing the answer "1800". At the bottom, there are buttons for "DON'T KNOW" and "CONTINUE".

Addition of Whole Numbers
Carefully read the question below.

Solve the **addition** problem. Type your answer in the box below.

$998 + 802 =$

My answer is

When you are ready to proceed to the next question, click **CONTINUE**.

DON'T KNOW **CONTINUE**

Figure 48 ANSWERING THE QUESTION

Insert your answer by clicking on the text box and typing in the numeric values as shown above.

When your happy with your answer click '**Continue**' to move on to the next question.

Once you've completed the 3 questions in each domain, you will be presented with the image shown below. At this stage you will have the opportunity to review and retry the questions for this

section. Note, that you will only be able to review/retry this section at this stage. Once you've clicked '**Continue**' you will move on to the next section and will not be able to revisit this section.

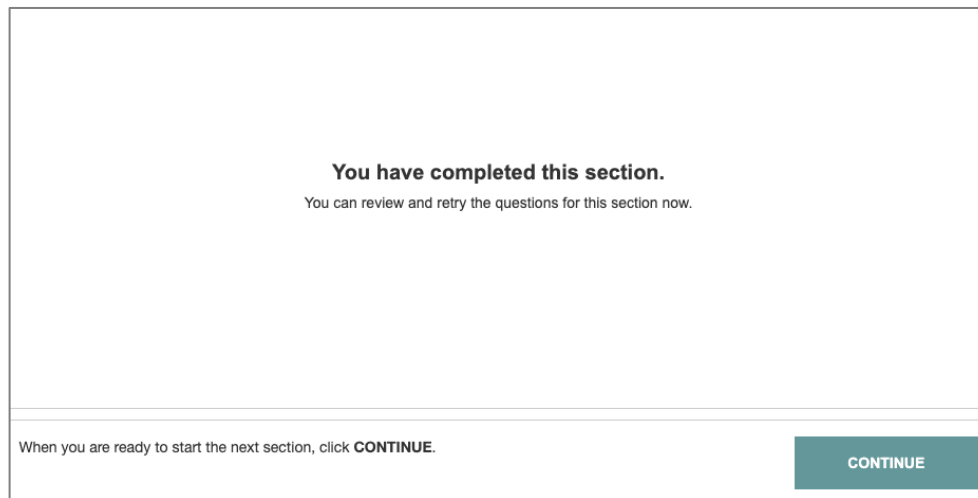


Figure 49 COMPLETING SECTION (HNA)

You will now be presented with the section. As shown in the figure below, you will have the opportunity to watch a video tutorial on how to answer these types of questions.

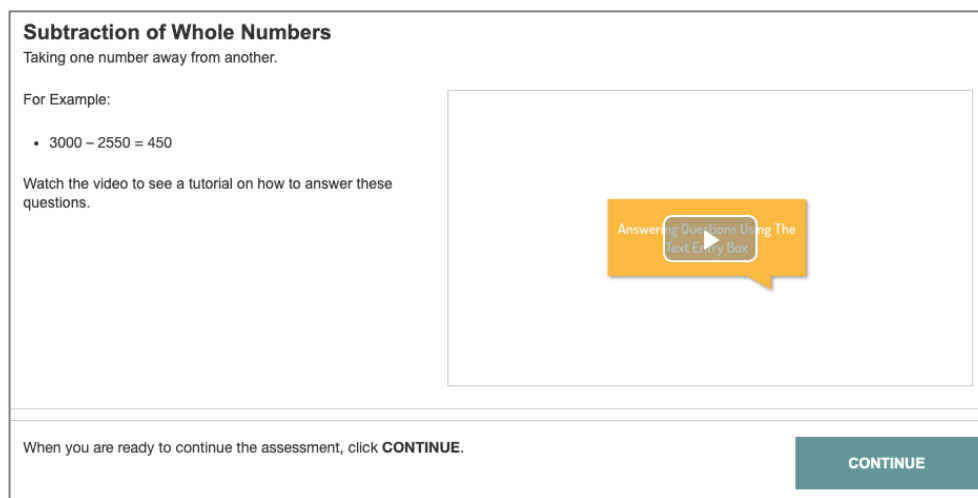




Figure 50 ANSWERING A SUBTRACTION QUESTION

As shown below, you will be presented with the question. In this example 950-665. If you don't know the answer to this equation, then you have the option to click '**Don't Know**' and click '**Continue**' to confirm you want to move on to the next question.

Subtraction of Whole Numbers  

Carefully read the question below.

Solve the **subtraction** problem. Type your answer in the box below.

950 - 665 =

My answer is

You have indicated that you **DON'T KNOW** the answer to this question.
Click **CONTINUE** to confirm and move to the next question.

Figure 51 – INDICATING 'DON'T KNOW' IN AN EQUATION

You will then move on to the next question and as stated before, you have the opportunity to review and retry all questions in that section. Below, is an example of what you will see if you review a question that you choose '**Don't Know**' as your answer. At this stage, if you wish to retry this answer then click on the '**Retry**' button and will be able to redo the entire question.

Subtraction of Whole Numbers
You are reviewing **Question 5**

Solve the **subtraction** problem. Type your answer in the box below.

$$950 - 665 =$$

YOUR ANSWER

You Chose **Don't Know**

RETRY CONTINUE

Figure 52 REVIEWING QUESTION

Once you are happy with your answer, click the '**Continue**' button to move on.

Completing the Assessment

Once you have completed all numeracy domains in each section, click '**Finish**' to save the assessment.

Current Section Complete Time Remaining: **118 minutes**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60				

You have completed this section.
You can review and retry the questions for this section now.

To save and exit the assessment, click **FINISH**.

FINISH

Figure 53 SAVING ASSESSMENT

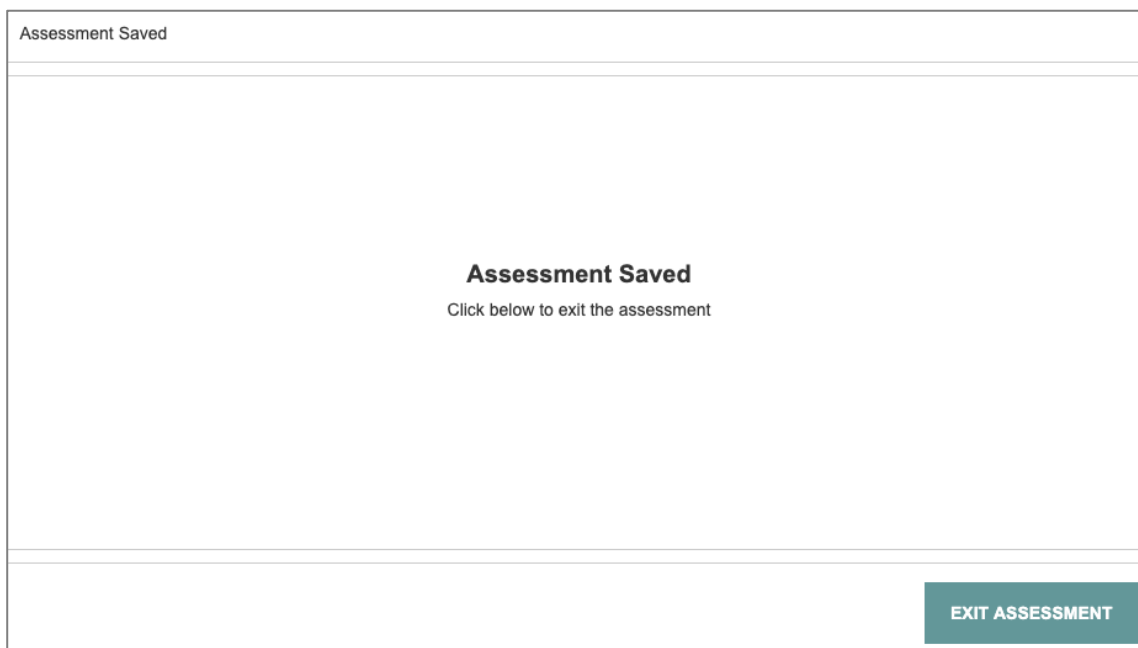


Figure 54 EXIT ASSESSMENT

Your assessment will then be saved. Click **'Exit Assessment'** to return to the main assessment page.

Note: you will not be able to retry any further questions in this assessment.

Viewing Your Assessment Results and Feedback

The *Assessment* panel lists assessments that have been scheduled for you by your institution as shown in the example below. Note that the list shows the date of the assessment and the module it is related to.

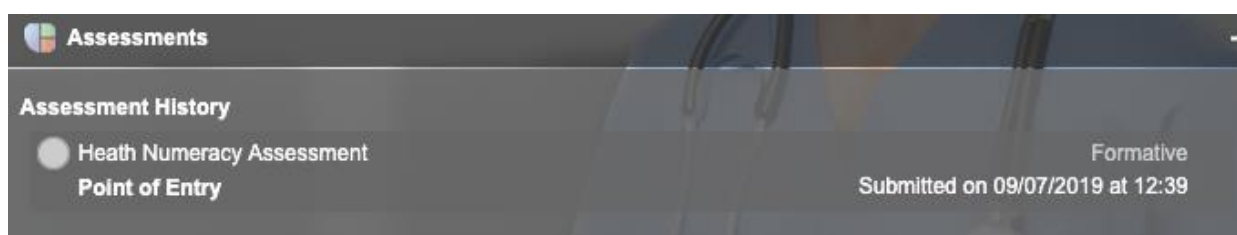


Figure 55 ASSESSMENT HISTORY LIST

Click directly over the chosen assessment in the list to open a summary of your results for that assessment.

Assessment Summary

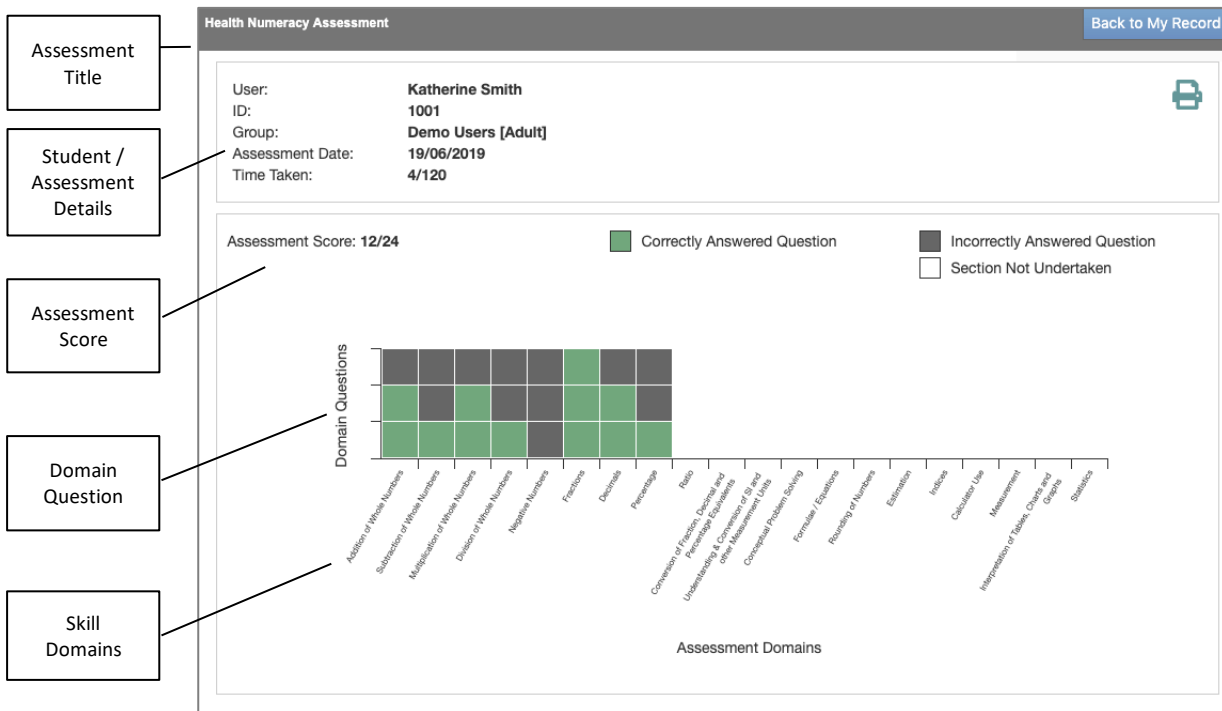


Figure 56 ASSESSMENT SUMMARY

An **Assessment Summary** screen is shown that provides an overview of how you scored on each 3 questions per skill domain (*addition of whole numbers, multiplication, percentage etc.,*). Alongside each question are color-coded blocks that show correctly answered questions, incorrectly answered questions and sections not undertaken. A key for these can be found above the summary.

As you can see from the summary above, for all questions that were answered correct are coloured in **green**, incorrect are coloured **grey** and any sections that were **not** undertaken are coloured in white.

In this example the student was assessed on Addition of Whole Numbers, Subtraction of Whole Numbers, Multiplication of Whole Numbers, Division of Whole Numbers, Negative Numbers, Fractions, Decimals and Percentage.

Hover your mouse directly over a row to highlight a particular question and click to view the detailed feedback. The figure below illustrates what the typical feedback format for an Addition of Whole Numbers question looks like. Note that feedback for other assessment domains (subtraction, multiplication, division etc.,) will follow a similar format.

Correctly Answered Question

User: **Kirsty Weeks**
ID:
Group: **Directors BETA Group**
Assessment Date: **09/07/2019**
Time Taken: **104/240**

Addition of Whole Numbers ✔
Question 3 - You have answered this question correctly
Solve the **addition** problem. Type your answer in the box below.

$1000 + 500 + 55 + 15 =$

CORRECT ANSWER

1570

YOUR ANSWER

1570 ✔

Calculator Feedback

BACK TO SUMMARY

Figure 57 DETAILED FEEDBACK FOR CORRECT ANSWER

Note that there are 3 main components to the feedback for the question.

1. The top portion of the screen represents the question.
2. The centre portion of the screen shows the correct answer to the equation.
3. The lower portion of the screen shows your answer to the equation and affords a discrete comparison with that of the correct solution above. If you've used a calculator to solve the problem, the keystrokes will be recorded in the calculator feedback section of the screen.

Incorrect Answered Question

Addition of Whole Numbers ✖

Question 3 - You have answered this question incorrectly

Solve the **addition** problem. Type your answer in the box below.



$$1000 + 500 + 55 + 15 =$$

CORRECT ANSWER

1570

YOUR ANSWER

1560 ✖

Calculator Feedback

[BACK TO SUMMARY](#)

Figure 58 FEEDBACK FOR INCORRECT ANSWER

Note that the feedback is set out the same as the previous example.

In this example, the student has been marked incorrect due to a calculation error. Any incorrect answers will be marked with a red cross to indicate where the student has made an error.

Once you've finished reviewing the question click '**Back To Summary**' to return to the Assessment Summary Page. Note, you have the option to print your Assessment Summary by clicking the icon highlighted below.

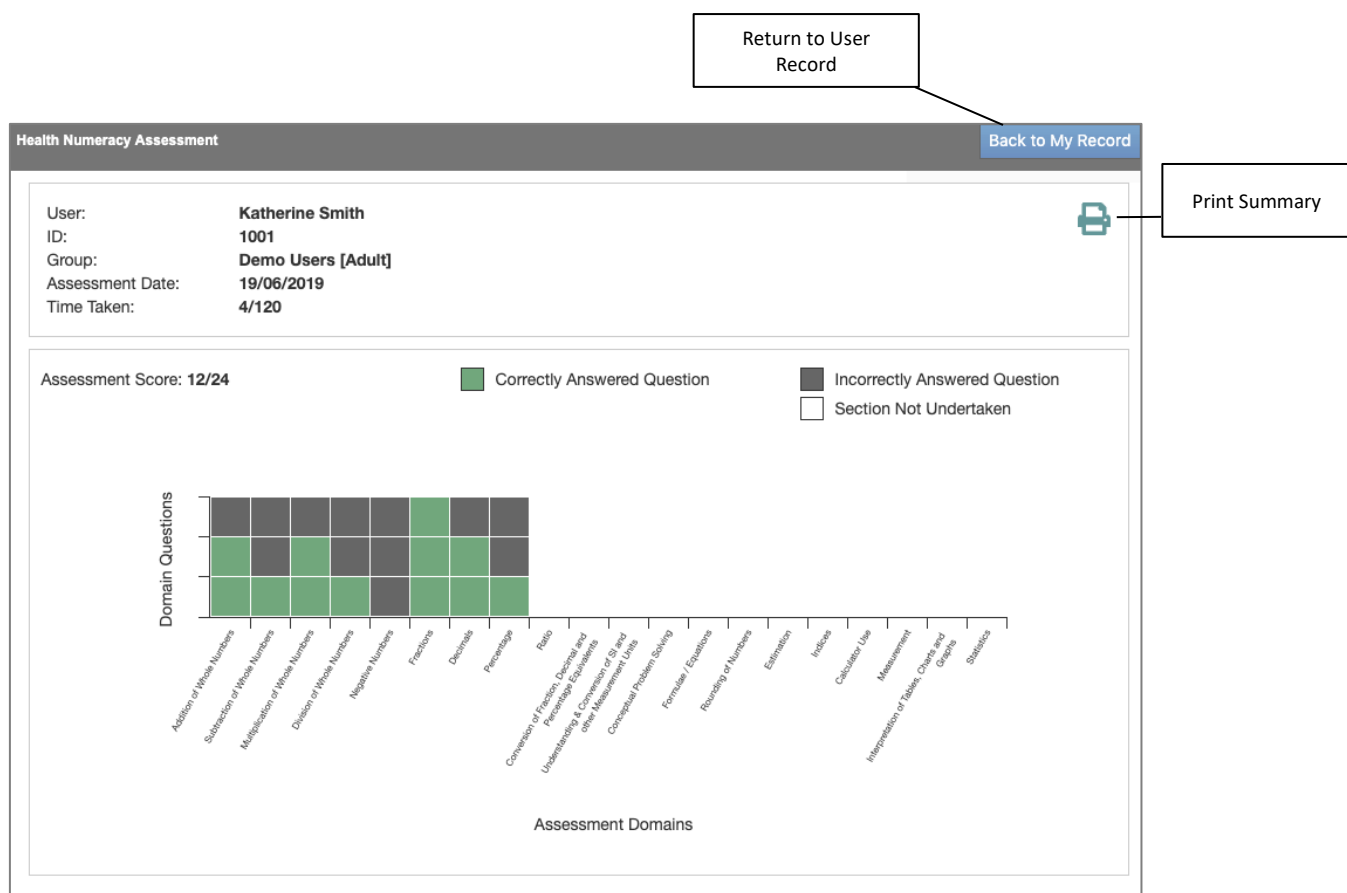


Figure 59 ASSESSMENT SUMMARY WITH PRINT OPTION

Once you've reviewed each question of your assessment, click '**Back to My Record**' to return to your personal User Record.

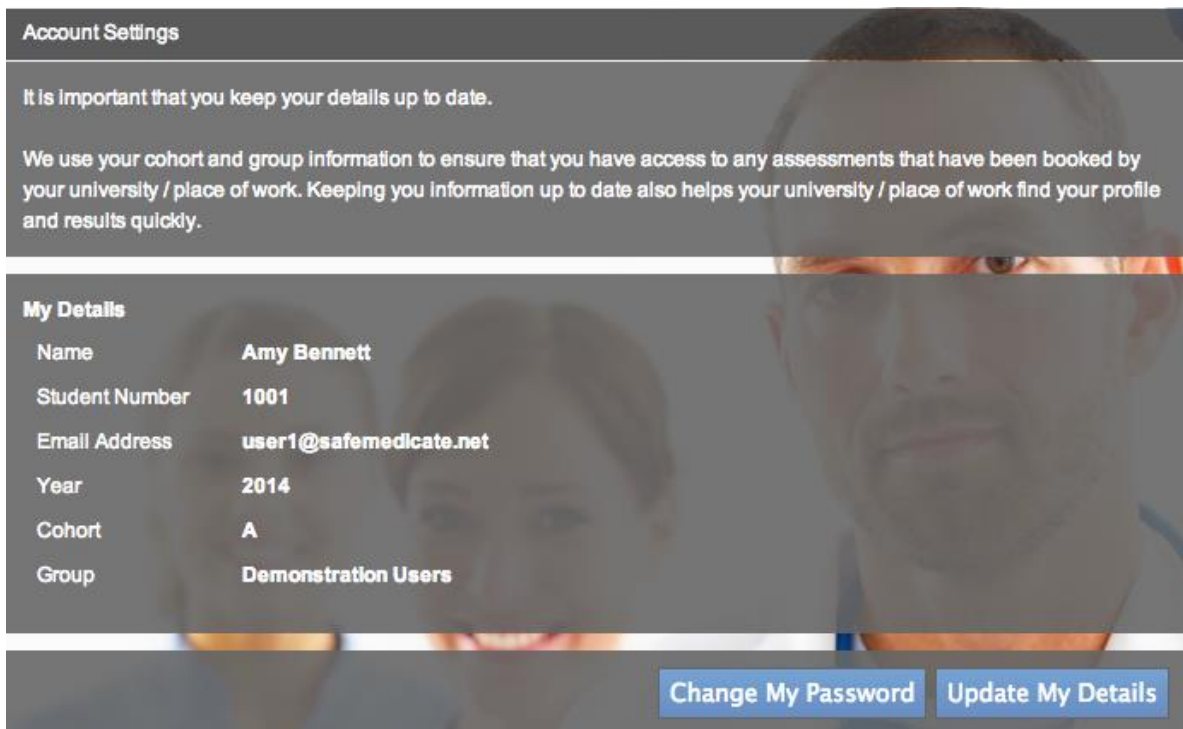
Your Account Settings

Hovering your mouse over the **Account Settings** menu item will open a sub menu comprising three options:

1. Your Details
2. Module Access
3. Terms and Conditions

Your Details

The **Your Details** menu item will show your basic contact details and course related information as shown in the example below.



Account Settings

It is important that you keep your details up to date.

We use your cohort and group information to ensure that you have access to any assessments that have been booked by your university / place of work. Keeping your information up to date also helps your university / place of work find your profile and results quickly.

My Details

Name	Amy Bennett
Student Number	1001
Email Address	user1@safemedicate.net
Year	2014
Cohort	A
Group	Demonstration Users

[Change My Password](#) [Update My Details](#)

FIGURE 60 - ACCOUNT SETTINGS | YOUR DETAILS

Changing Your Password

1. Click on the **Change My Password** button to open the dialog shown below.



Change My Password

Current Password

New Password

Confirm New Password

[Cancel](#) [Change My Password](#)

FIGURE 61 - THE CHANGE MY PASSWORD DIALOG

2. Enter your current password.
3. Enter your new password.
4. Enter your new password a second time to confirm.
5. Click on **Change My Password** to complete the action.

Editing Your User Details

Click **Update My Details** (see Figure 55) to open the dialog shown below to make changes to your user record. Please keep this information up-to-date as it's important for your university/hospital in terms of ensuring they can find your profile and assessment results easily.

Make any necessary changes and click **Update Changes** to complete the action.

Account Settings

It is important that you keep your details up to date.

We use your cohort and group information to ensure that you have access to any assessments that have been booked by your university / place of work. Keeping you information up to date also helps your university / place of work find your profile and results quickly.

Privacy Notice

Want to know how we use your data? Please read our [Privacy Notice](#).

My Details

First Name	John
Last Name	Doe
Student Number	*****
Email Address	JohnD@safemedicate.com
Group	AW Team

My Privacy Options

I agree to being contacted about safeMedicate updates and offers.

Cancel Update Changes

FIGURE 62 - THE EDIT USER DETAILS DIALOG

Note: Only change your group allocation if asked to do so by your instructor or administrator. If you are not associated with the correct group, you will not be able to sit any assessments that have been scheduled for you.

Module Access

The **Module Access** menu item lists your *safeMedicate* modules and their expiration dates as in the example below.

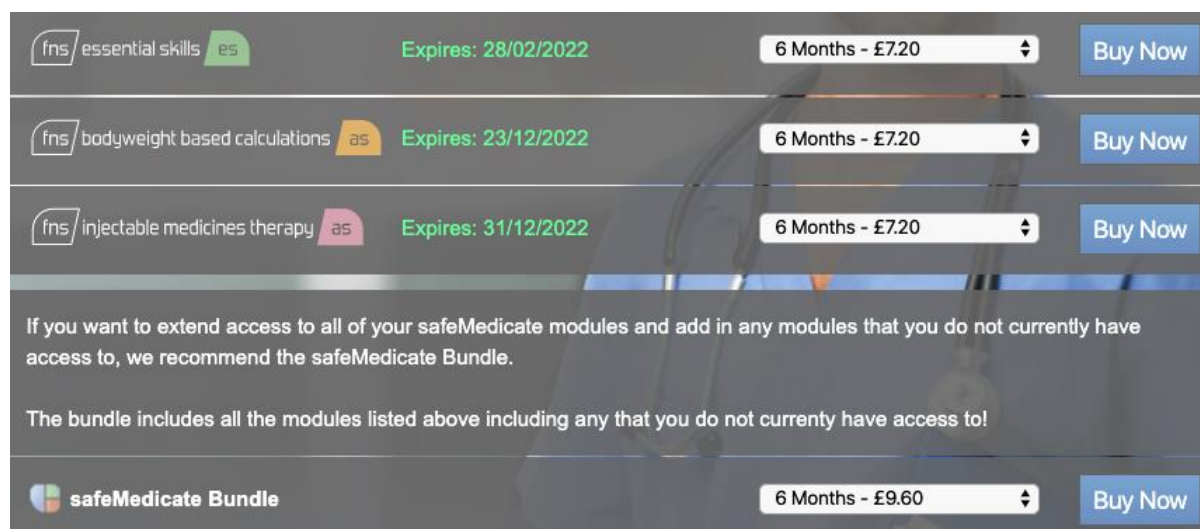


FIGURE 63 – ACCOUNT SETTINGS | MODULE ACCESS PAGE

If you need to extend access to your *safeMedicate* account, then you can make an in-app purchase of individual modules or the **safeMedicate Bundle** that comprises all modules.

1. Use the list box associated with the module(s) you wish to purchase to select a time period (e.g. 12 months) for the new license.
2. Click on **Buy Now**.
3. You will be taken to the secure **PayPal** payment screen to complete your purchase. You can choose to pay using your PayPal account or with any major debit or credit card.

Terms and Conditions

The [Terms and Conditions](#) menu item will open a separate tab explaining our *End User Terms and Conditions* in PDF format.

Getting Help When You Need It

If you are experiencing problems, we provide direct access to our Customer Support Services. Hovering your mouse over the **Support** menu item will open a sub menu comprising 5 options:

1. User Guide
2. Knowledge Base
3. Video Tutorials
4. Local Administrator

5. Submit Support Ticket

User Guide

Use this menu item to open or download an online copy of this guide.

Knowledge Base

Click on the **Knowledge Base** menu item to open the Knowledge Base in a separate window shown below.

safeMedicate Customer Support > Knowledge Base

KNOWLEDGE BASE

Search our Knowledge Base of frequently asked questions.

Registration and login

- I do not have a username but I would like to use safeMedicate
- I can log in but I am receiving an Account Expired message.
- I have been given my username but I do not have a registration key.
- Why do you need my email address?
- When registering my username, the system says my email choices must match.
- When registering my username, the system says my password choices must match.

[See all 11 articles](#)

Assessments

- ★ I have an assessment booked but I can't see it?
- How do I find my assessment results in ADA?
- How do I print my assessment results from ADA?
- I have to undertake an Assessment, but I have not been given a password.
- My assessment password doesn't work.
- I want to do an assessment, I have a password to do so, but I am receiving a NO ASSESSMENT BOOKED message.

[See all 7 articles](#)

FIGURE 64 - KNOWLEDGE BASE HOME SCREEN

Here you will be able to search or view through our frequently asked questions and potential solutions to a particular problem.

Video Tutorials

Click on the **Video Tutorials** menu item to open the Video Tutorials in a separate window shown below.

safeMedicate Customer Support > Video Tutorials | Show me ...

VIDEO TUTORIALS | SHOW ME ...

Learn how to get the most out of safeMedicate with our step-by-step tutorial videos. Use the video control options at the foot of the playback window to control the video quality to suit your monitor and download speeds.

Essential Skills 2018

- How to test your device's compatibility
- How to register your safeMedicate account
- How to find features and functions within safeMedicate (Part 1)
- How to access the learning modules (Part 2)
- How to understand your 'Personal Record' (Part 3)
- How to print your 'User Record'

[See all 17 articles](#)

Essential Skills Basics (pre-2018)

- How To Practice Your Skills (Pre 2018)
- How to view module access
- How to test your device's compatibility with safeMedicate
- How to transfer your data
- How to locate and take practice assessments

Administration Functions

- How to monitor user engagement: Part 1 – institution engagement
- How to monitor user engagement: Part 2 – group engagement
- How to monitor user engagement: Part 3 – individual engagement
- How to book/schedule an assessment
- How to edit the details of a booked/scheduled assessment
- How to view assessment results: Part 1 – Cohort performance

[See all 12 articles](#)

FIGURE 65 VIDEO TUTORIALS HOMEPAGE

Here you will be able to view our step-by-step tutorial videos on using aspects of Essential Skills.

Local Administrator

The Local Administrator is the person within your university/organization that you should contact for support in the first instance. Click on the **Local Administrator** menu item to show the figure below.

The screenshot displays a user support interface with a background image of a smiling male doctor in blue scrubs. The interface is divided into three main sections:

- User Support:** A dark grey header. Below it, text reads "For the following queries please contact your local administrator." followed by a list of five items, each with a red square icon:
 - Account Settings (including username, password & group allocation)
 - Feedback
 - Module Access
 - Assessment Booking
 - Assessment Password
- Your Local Administrator:** A dark grey header. Below it, a table lists contact details:

Name	John Doe
Telephone	01111 123456
Email	info@safemedicate.com
Comment	Contact between 09:00 and 17:00
- Technical Support:** A dark grey header. Below it, text reads "For technical queries please contact [safeMedicate Technical Support](#)."

FIGURE 66 - THE USER SUPPORT PAGE

The top section of the screen shows a list of the typical things that you should contact your Local Administrator about.

The contact details for your Local Administrator should be visible in the central section of the screen.

The lower section of the screen provides direct access to the *safeMedicate Technical Support* services as described below.

Submit Support Ticket

Click on the **Submit Support Ticket** menu item to open the dialog shown below at the bottom right of the screen.

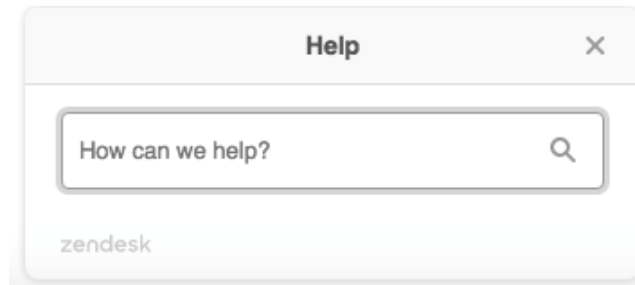


FIGURE 67 – SUBMITTING A SUPPORT TICKET

Please try and describe your problem as best you can – this will assist our intelligent search function to scan our *Knowledge Base* to try and provide an immediate answer.

Type in your question to start searching FAQ's related to your problem from our *Knowledge Base*.

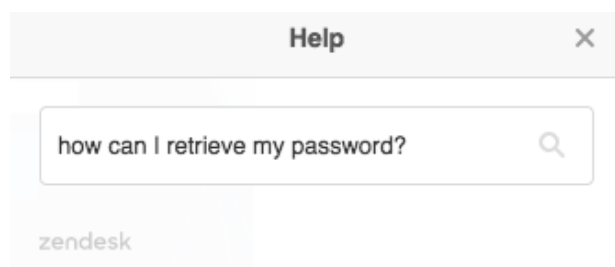


FIGURE 68 - SEARCHING THE KNOWLEDGE BASE FOR AN ANSWER

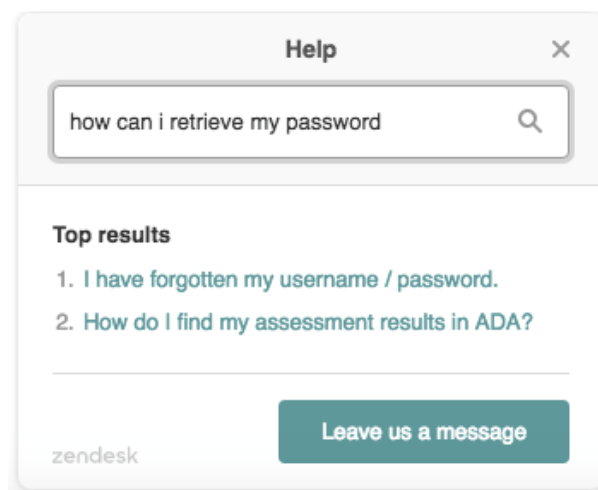


FIGURE 69 TOP RESULTS OF KNOWLEDGE BASE

The figure above shows the Top Results from our Knowledge Base that may provide an immediate answer to your query.

If a topic appears to address your problem, then click on the link to open the answer directly from our *Knowledge Base*. Answers may take the form of a set of instructions or even a video resource.

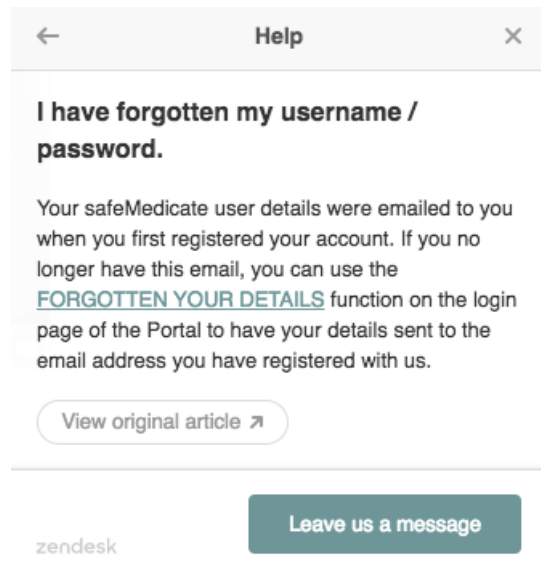


FIGURE 70 - KNOWLEDGE BASE ENTRY THAT ANSWERS PROBLEM POSED

If none of the listed answers appear to address your problem, then click the button at the bottom right of the dialog – **Leave us a message**. This will open another dialog shown below.

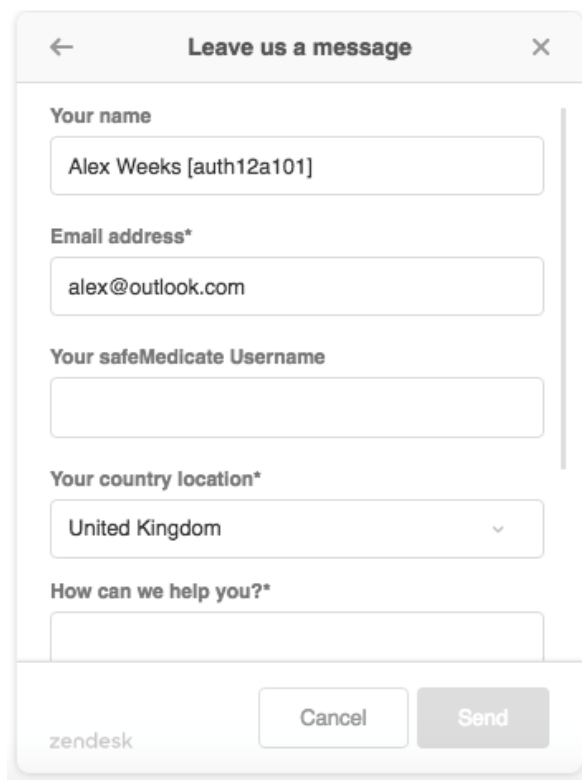


FIGURE 71 - PROVIDING ADDITIONAL DETAILS TO SUBMIT A SUPPORT TICKET

Note that as you are already logged in to safeMedicate, your name, username (in brackets following your name) and email address have already been entered for you.

Select your country location from the list box if it is not correct by default. This will ensure that the appropriate support team deals promptly with your support request.

Use the **How can we help you?** box to provide us with as much information as you can about your query. For example, what were you trying to do? / what actually happened? / did you receive an error message?

Use the **Attachments** section to optionally include any file such as a screenshot that will help us to resolve your query.

When you have entered the details click **Send** – you will receive a confirmation. Our Customer Support Team will be alerted to your Support Ticket and will be in touch with you shortly via email.

Please note that our Customer Support Team operates **between 09.00–17.00 on Monday to Friday only**. This may result in a delay to your query being answered depending on the day/time it is submitted on.