



Fetal Monitoring Training System Administrators Guide



Chapters Version 4.00.xx / Simulator Version 3.00.xx

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Table of Contents

What is the K2 Fetal Monitoring Training System?	3
<i>Aim of this Guide</i>	3
Getting Started	4
Getting Started	4
<i>Running the Training System</i>	4
<i>Compatibility</i>	4
<i>Logging onto the Training System</i>	5
Administrating the Training System.....	6
<i>User Manager</i>	7
<i>User Details</i>	8
<i>Adding a New User</i>	8
<i>Progress Manager</i>	9
<i>Progress Manager</i>	10
<i>Successfully Integrating the Training System into Your Education Framework</i>	12
Using the Training System.....	14
<i>Progress Facility</i>	17
<i>Book Marking Facility</i>	19
<i>Auto Log off</i>	19
Using the Fetal Monitoring Training Simulator	20
<i>File Window</i>	20
<i>Case History</i>	21
<i>CTG Trace Window</i>	21
<i>Decision Buttons</i>	22
<i>Navigation Buttons</i>	23
<i>Partogram Window</i>	24
<i>Labour Summary Window</i>	26
<i>Post Delivery</i>	26
<i>Conclusion</i>	27
<i>Auto-Log-Off</i>	27
<i>Book Marking Facility</i>	27
Using the Assessment Tool	28
Certification.....	31

What is the K2 Fetal Monitoring Training System?



The Fetal Monitoring Training System is a uniquely interactive online program used by over 50,000 Midwives and Obstetricians worldwide.

The Training System content was developed over 5 years to facilitate user's understanding of the physiology underlying perinatal asphyxia and the reasons for intrapartum fetal monitoring.

Users can familiarise themselves with the principles of CTG interpretation and labour management at their own pace, and in private with flexible access to the training material day or night.



Users can maintain their CTG interpretation and labour management skills by managing real cases through a comprehensive CTG simulator, comparing their management with 3 independent experts and the actual clinical outcome.

An automated Assessment Tool can be used to assess the individuals fetal assessment knowledge.

Aim of this Guide

This guide is for hospital training system administrators and is designed to help you to log on and administrate the Fetal Monitoring Training System.



Getting Started

Running the Training System

To run the Fetal Monitoring Training System, open up a web browser and enter the following address:

<http://training.k2ms.com>

Alternatively, if you are accessing the training system from a hospital you may be provided with a desktop icon (figure 1) which will do the same task. In this case, double click on the desktop icon (shown below) using the left mouse button, as shown below.



**Training
System**

Figure 1 – Desktop Icon example

Compatibility

The Training System is fully compatible with Windows 2000, Windows XP, Windows Vista using Internet Explorer 6, Internet Explorer 7 and Mozilla Firefox web browsers.

The Training System can be used with Linux, Apple Mac and Windows Operating Systems and most web browsers provided that the Flash player is supported and installed.

Please refer to the online help or contact K2 Medical Systems if you experience any issues with accessing and using the Training System.

Logging onto the Training System

When the Training System web page is accessed, you will be asked for your login ID and password. If you have not previously logged into the Training System, your password will either have been emailed to you, passed to you by a K2 System administrator at the hospital or relayed to you by K2 Medical Systems™. Following your first successful login with this password, you will be required to change it to a password of your choice.

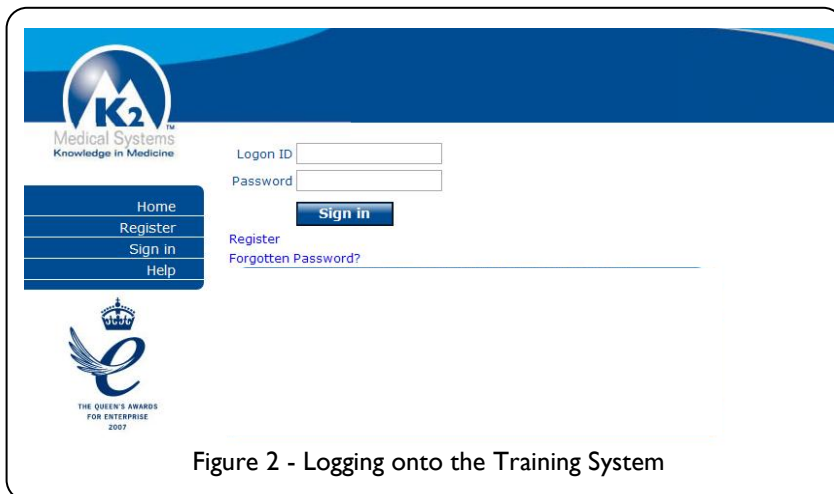


Figure 2 - Logging onto the Training System

Your new password must be between 6 and 16 characters in length and will need to be entered twice to ensure it was not accidentally mistyped in the first instance. Should this be the case you will be requested to retype your password.

We strongly recommend changing your password on a regular basis to help maintain the security of your personal details and more importantly those of all your colleagues that you as an administrator have access to.

Do not reveal or share your password with colleagues.

If your unique LoginID and password are valid, the Home screen for the Training System will be displayed.

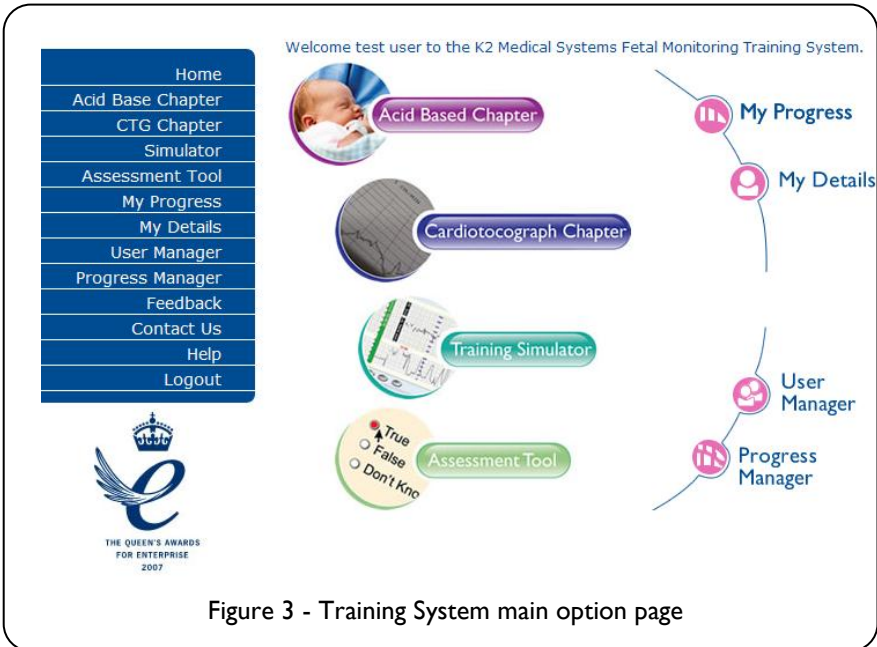


Figure 3 - Training System main option page

Training System Administration

The Home screen provides access to the Training System content as well as the “User Manager” and “Progress Manager”, these provide you with the administration tools to the package. To exit, click on the “Logout” link on the left hand menu.

User Details

By clicking on a LogonID in the second column (above) the user's details can be displayed (figure 5). The screen below allows you to edit the details (with the exception of the Login ID which must remain unique to the user), reset the user's password, remove the user from the hospital's list, view the user's progress and view the dates and times the user has accessed the system.

A user who has been removed from a hospital's list is not removed from the database – only the association with the hospital (and importantly it's license) is removed. Users can therefore associate their account with another hospital and then ask to have it re-activated (this can be done by joining a hospital - via the Users 'My Details' page) and by then contacting K2 Medical Systems or a K2 System administrator at the hospital joined.

As an administrator, you may reset the user's password, remove the user's account from your list or edit their details using the form below. You may also view the user's progress and access times.

User Name	<input type="text" value="phunt"/>
Firstname	<input type="text" value="Peter"/>
Surname	<input type="text" value="Hunt"/>
Designation	<input type="text" value="None"/> ▼
Professional ID	<input type="text"/>
Email	<input type="text" value="peter.hunt@k2ms.com"/>
Role	<input type="text" value="K2Administrator"/> ▼

Back

Submit

Figure 5 – Existing User Details

Adding a New User

To add a new user, click on the **Add User** button from the User Manager. This will display the user details screen (figure 6) as yet empty.

Just fill in the details where appropriate, ensuring that those fields marked with a '*' are not left blank (it is possible to leave the email field blank, but please remember to give the user their login ID and interim password).

The Login ID is the ID that will be used to access the training system over the Internet. This ID will be completely unique to that user and if a user already has the same ID, the system will ask you to choose another.

Entering the correct designation for a user will help identify the different grade groups for report purposes.

For the Professional ID field, it is recommended that you use UKCC pin numbers for midwives and GMC numbers for doctors (or the equivalent as used in your country).

The role field is used to give a user administration rights. This will give that user the same access to the administration options as you.

Clicking on the **Submit** button will submit the user's details and display a temporary password.

This password must be given to the user, along with their login ID before they can access the system. If an email address was entered, the password will be automatically sent to the user.

Hospital Name K2 Medical Systems Pty Ltd

LogonID* Your Logon ID will appear on your printed certificate.

Firstname*

Surname*

email*

Professional ID eg Membership number of your Professional body or other unique code.

Designation None

Role User

Submit

Figure 6 – New User Details

If the User does not have an email address, their logon name and interim password can be recorded on an FMTS Reminder Card (see example below) and given to the user. Please note that users must change their password on their first visit to the website, so it is best to leave the 'My Password' field free for the User to record their preferred password.



Progress Manager

Clicking of the “Progress Manager” link on either the left or right side of the main option page will display the Progress Manager screen (figure 7).



This screen shows a list of all the users and their progress through the Training System chapters, Simulator and Assessment Tool. The last two columns show when the user last logged onto the training system and when they last completed the Training System chapters. If your hospital is part of a group and you have Group Administrator rights you will be able to switch between different Hospitals in your group using the drop down box to the right of the print button (shown below).

Clicking once on a particular column heading will sort the table in ascending order by that column, clicking on the heading again will sort the table in descending order by that column.

K2 Medical Systems Pty Ltd
 Total Users: 44, Active Users: 18, Users completed within the last twelve months: 2

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Click on column of your choice to re-sort the table by that column.
 Click once to sort in an ascending order, click twice to sort in descending order.

Logon ID	First name	Surname	Teaching Package	Simulator Cases	Assessment Tool	Last Logon Time	Certification Date
☹️	0%	0/35	Not attempted		
☹️	0%	0/35	Not attempted	16/03/2007	
☹️	0%	0/35	Not attempted	14/04/2008	
☹️	0%	0/35	Not attempted		
☹️	0%	0/35	Not attempted		
☹️	0%	0/35	Not attempted		
☹️	0%	0/35	Not attempted	23/11/2007	
☹️	0%	0/35	Not attempted	14/05/2007	
☹️	0%	0/35	Not attempted		
☹️	0%	0/35	Not attempted	16/04/2008	
😊	0%	3/35	21 - 13/01/2008	14/04/2008	13/01/2008
☹️	18%	0/35	Not attempted	16/04/2008	
☹️	0%	0/35	Not attempted		
😊	55%	0/35	Not attempted	18/05/2008	
😊	5%	0/35	Not attempted	18/05/2008	
☹️	0%	0/35	Not attempted	13/12/2007	
☹️	0%	0/35	Not attempted	07/07/2007	

[Back](#)

Figure 7 – Progress Summary
(detail intentionally blurred)



A yellow happy or orange sad face to the left of each user's details indicates that user's training activity.



All users start with an orange sad face and earn a yellow happy face once they have completed either 25% of the chapter content or 5 simulator cases.

Click on a user's logon ID to see a list of the sections completed and outstanding by a specific user. This specific progress is the same as displayed when an individual user clicks to see their own progress (figure 8).



Figure 8 – Individual Progress

Successfully Integrating the Training System into Your Education Framework

Please remember that, although the Training System is a very effective tool for improving fetal monitoring knowledge and interpretation skills, it must be incorporated into your education framework for it to remain effective and sustainable. Consider making it a mandatory requirement for all clinical staff involved in Maternity care.

Setting Expectations

Staff should first complete the chapters and then work through the simulation cases. An example Learning Plan is illustrated below. You should decide what best suits your requirements:

Example Learning Plan

Year One	Year Two	Year Three	Year Four
Chapters		Chapters	
Simulator Cases	Simulator Cases	Simulator Cases	Simulator Cases

The assessment tool can also be implemented to assess individual's knowledge pre and post training (although this is not mandatory it should be encouraged).

Group Discussion



Using the K2MS Group Simulator in group sessions improves the learning experience for all staff, as discussion of the case is promoted. K2MS Group Simulator software can be installed to a laptop and projected for these sessions.

The System provides the core training for CTG Interpretation and enables the education team to concentrate on more advanced issues, skills & drills etc. Thereby, increasing the effectiveness of the training team.

Adopted as part of Supervision

Training System progress and use should be monitored by the user's supervisors. This helps reduce the workload for the administrator to a manageable amount and improves accountability.

Advertise

Notice board posters are available from K2 Medical Systems. See example below.



keep your CTG training on track

anywhere... anytime!

**You can now complete your CTG Training
in the Hospital or from Home.**

In Hospital

Look for the K2 icon, click and log on.

At Home

Type in <http://training.k2ms.com> in your
internet browser and add to favourites.

For further information please
contact your administrator.

Name:

Ext No:



0024-9-0002

www.k2ms.com

Using the Training System

When either the “Acid Base Chapter” or “Cardiotocograph Chapter” is selected, you are presented with the chapter’s main menu screen. In our example (figure 9) the user has chosen the “Acid Base Chapter”.




Figure 9 - Acid Base Chapter main screen

The Training System is divided into **chapters, topics and sections**. You will have already seen the available **chapters** (“Acid Base Chapter” and “Cardiotocograph Chapter”) in figure 3.

Using the example of the “Acid Base Chapter” (figure 9), you can see the topics and their sections displayed on the right hand side. To proceed to a topic, the mouse can be used to click on the chosen topic in the menu, or the corresponding letter (a, b, c, d) typed on the keyboard.

You will also notice the three buttons **Progress** , **Help** , & **Exit** at the bottom left of the screen.

We recommend you take time to examine the help screen first, as there are a few shortcut keys that may aid in faster navigation (figure 10).

This screen can be viewed as often as you wish throughout the package and when  button is clicked, you will be returned to the previous screen.

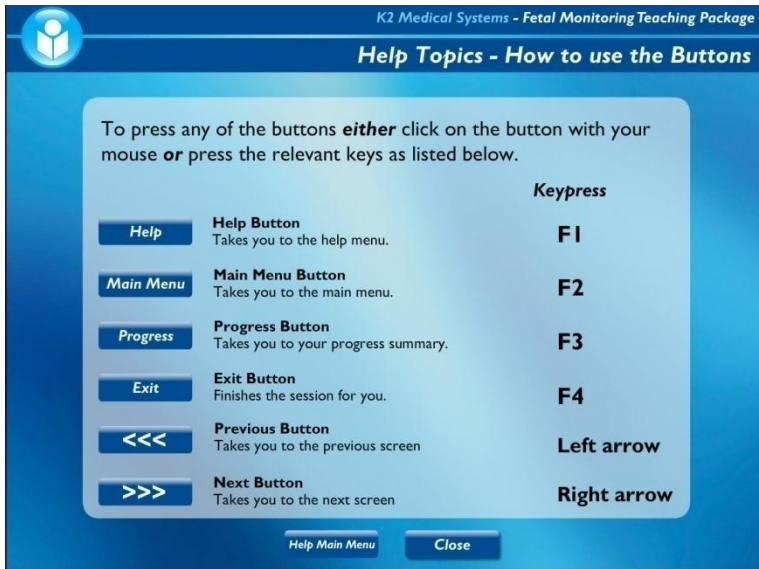


Figure 10 - Explanation of navigation buttons

From the main menu (figure 9), selection of a topic will present you with that topic's section menu (e.g. figure 11). It is mandatory for certification, to complete **all** topic sections including Introductions; we **strongly** recommend these are completed in order.

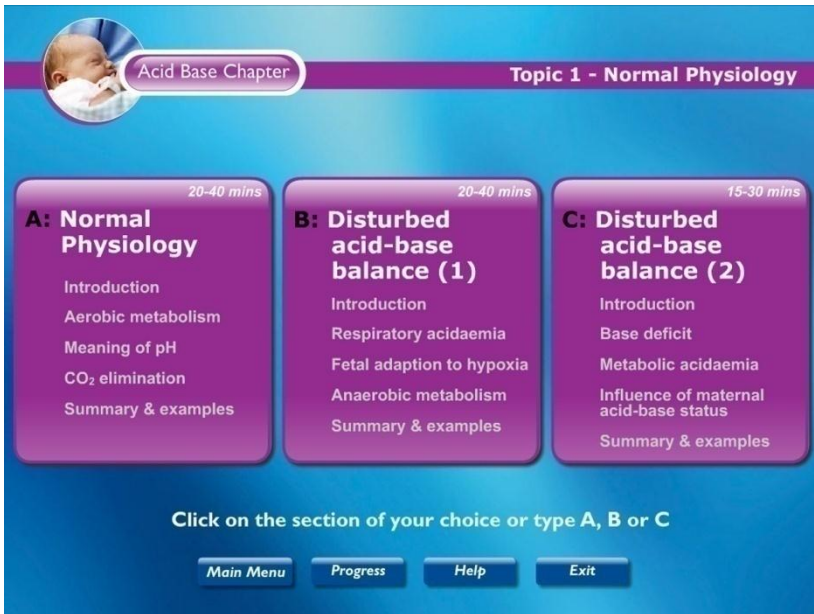


Figure 11 – Example of Section screens

As you can see, each section covers a particular element of the topic. For additional information, a list of the lessons to be covered is displayed in the box under the section heading.

To proceed to a section, the mouse can be used to click on the chosen section in the menu, or the corresponding letter (in this example A, B, C) typed on the keyboard.

Progress Facility

If at any time you wish to review your progress through a chapter, you can click on the **Progress** button. Doing so will present you with the following progress screen (figure 12).




Figure 12 – Chapter Progress

Progress through a chapter is also reflected the main chapter menu (figure 13.) and the chapter section menu (figure 14.).

Cardiotocograph Chapter

Click on the topic of your choice or type A, B, C or D

Introduction to Cardiotocography 10-15 mins 

A:

- Purpose of monitoring
- Physiology
- The systematic approach

Fetal heart rate patterns 1: Basic features 45-70 mins

B:

- Baseline
- Accelerations
- Variability
- Decelerations
- Tocogram

Fetal heart rate patterns 2: 'Not normal' features 40-60 mins

C:

- Baseline tachycardia
- Abnormal variability
- Decelerations
- Baseline bradycardia

Interpreting the CTG 45-75 mins

D:

- Fetal blood sampling
- Clinical background
- Second stage

Progress Help Exit





Figure 13 – Section Progress

Cardiotocograph Chapter

Introduction to Fetal Monitoring

 3-5 mins

A: The purpose of monitoring

Aims, benefits and pitfalls of the intrapartum CTG

3-5 mins

B: A snapshot of fetal physiology

Control of the fetal heart rate

3-5 mins

C: A systematic approach

Some basic principles of CTG interpretation.

Click on the section of your choice or type A, B, or C

Main Menu Progress Help Exit

Figure 14 – Topic Progress

Book Marking Facility

The Training System maintains a bookmark of a user's progress as they work through the sections in each chapter. When a chapter is exited, the page currently being worked on is saved in the bookmark. Next time the user logs on and selects that chapter they will be automatically returned to the last page they were working on.

Note: Users should work through the Acid-Base chapter before working through the CTG chapter. Both chapters have been designed to be worked through in order and hence the CTG chapter will draw on information given in the Acid Base chapter.

Auto Log off

The training system has an inbuilt automatic log-off set to 10 minutes of inactivity (figure 15). This is for security. If a user returns to their computer after a break and finds the application automatically logged them off, they should not worry; their position will have been bookmarked and when next logging onto the system they can resume where they left off.

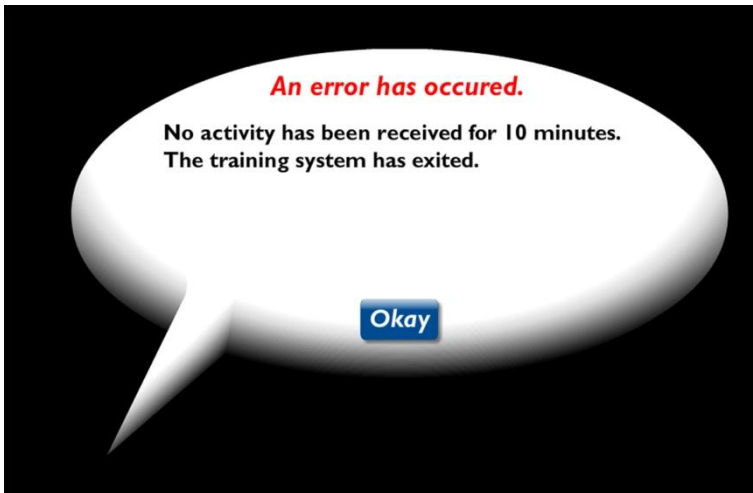


Figure 15 – Auto Log Off Screen

Using the Fetal Monitoring Training Simulator

The goal of the Simulator is to provide a practical environment in which to apply the knowledge learned from the Training System.

On selecting the Training Simulator from the main website menu the file window appears (figure 16).

File Window

Clicking on the File tab at the top of the screen also reveals the Case File Window:

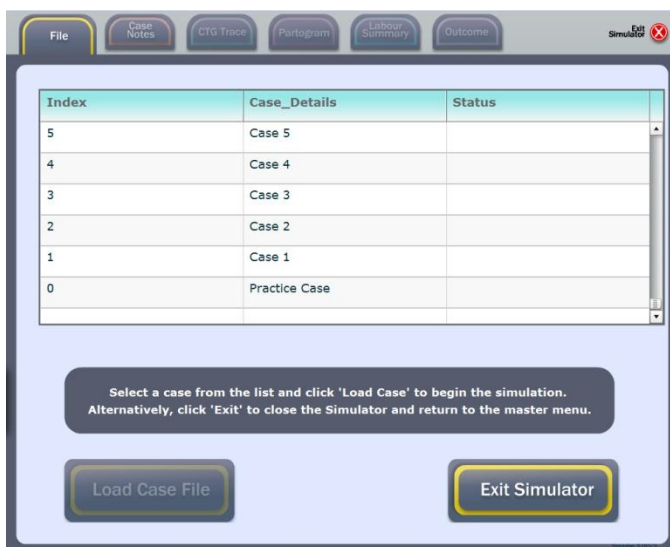


Figure 16 - Simulator case files

The Case File window is used to either load a trace or to exit the simulator. To load a case, select the row containing the required case by clicking on it once with the left mouse button. Then click on the Load Case File button. Please note that the 'Practise Case' does not contribute to your CTG Case review tally.

Selecting a case that shows 'Reviewed' in the status column will load in the whole case for the user to review but they will be unable to score it again.

The case the user currently has open whether the trace is being scored or already completed will be shown as 'current' in the status column, this is to help the user understand which case they currently have open.

Clicking on the Exit Simulator button will close the Simulator program.

Case History

When the case has been loaded a summary of the patient history is given. This information can also be accessed at any time during the review by clicking on the Case Notes tab.

CTG Trace Window

Clicking on the CTG Trace tab reveals the CTG Trace window (figure 17. This is the default window for the simulator):



Figure 17 - Simulator CTG Trace

This is the most important window for the simulator as it is where the trace is shown in 15 minute segments. The user manages the case using the decision buttons situated at the bottom of the window. A marker showing the segment number and the user's management score is displayed on the trace for each managed segment.

Decision Buttons

These are provided to enable you to indicate their preferred management. Once a decision button is clicked, the next segment of trace will be revealed. The protocol is as follows:

1. **No concerns** – I am not concerned for this fetus.
 2. **Some concerns** – I have concerns for the fetus but they are not sufficient to request an FBS. I may take some remedial action (e.g. turn people on their side).
 3. **FBS** - I am sufficiently concerned to request an FBS. When this is clicked, an FBS result will be provided with which you can determine your subsequent management. In certain circumstances an FBS is not possible and the candidate will be informed accordingly.
 4. **Serious Concerns** – The information I have leads me to be seriously concerned for this fetus. I am not going to recommend immediate delivery although I am thinking of delivery and will do so if things deteriorate further.
 5. **Recommend Delivery** – I am so concerned for this fetus that I want to recommend immediate delivery.
- VE. **Vaginal Examination** – This button allows you to carry out a vaginal examination. This option is designed to provide information only and will not cause the next segment of trace to be revealed.

The decision buttons can also be activated using the keys 1 to 5 on the upper left of the computer keyboard. The review is complete when either the trace ends or a recommendation for operative intervention is made.

Clinical Objective: As in clinical practice, the objective is to manage the case with the minimum of intervention without jeopardising the safety of the mother or infant. The emphasis is on interpretation of the CTG in clinical context and intervention should be on this basis and not on lack of progress in labour alone.

The cases included with the Simulator are actual cases (with personal data removed) and the information available for each case therefore depends on what was collected and recorded at the time. We realise that during the management of a real case in clinical practice there may be other things that could be done to alter the CTG (e.g. reduction of syntocinon, change position, etc) which might change the overall decision making process but these options are not available. The case has to be managed with the data available and the focus of the Simulator is on the interpretation of the CTG trace as seen.

We can assure users that the experts referred to in the Simulator were presented with each case in the same manner and with the same information, so comparison with these opinions is meaningful.

Note: Users can assume that all maternal parameters are normal unless specified otherwise, e.g. maternal temperature is normal until informed. There is no syntocinon unless marked on the partogram etc.

Navigation buttons

The row of buttons displayed just above the decision buttons form the Control Panel (figure 18). This allows the available trace to be scrolled forward and backward.

Figure 18 - Simulator navigation buttons



To Beginning / Scroll Back / Stop / Scroll Forward / To End

To Beginning Button: This button will jump the user to the beginning of the trace.

Scroll Back Button: This button will scroll the trace backwards. It has three speeds, on the first click of this button, the scroll speed is set to slow, click on this button again and the scroll speed is set to medium, click on this button a third time and the scroll speed is set to fast.

Stop Button: This button stop the trace if it is scrolling.

Scroll Forward Button: This button will scroll the trace forwards. It has three speeds, on the first click of this button, the scroll speed is set to slow, click on this button again and the scroll speed is set to medium, click on this button a third time and the scroll speed is set to fast.

To End Button: This button will jump the user to either the end of the last scored segment or if reviewing a case, it will jump the user to the very end of the trace.

Scroll Bar: The scroll bar can be found directly under the trace, it enables the user to scroll freely through the trace, the user will only be able to scroll through trace segments that have been scored or if the case has already been reviewed the user can scroll through the whole trace.



Figure 18.1 - Simulator navigation

Partogram window

Clicking on the Partogram tab reveals the Partogram (figure 19).

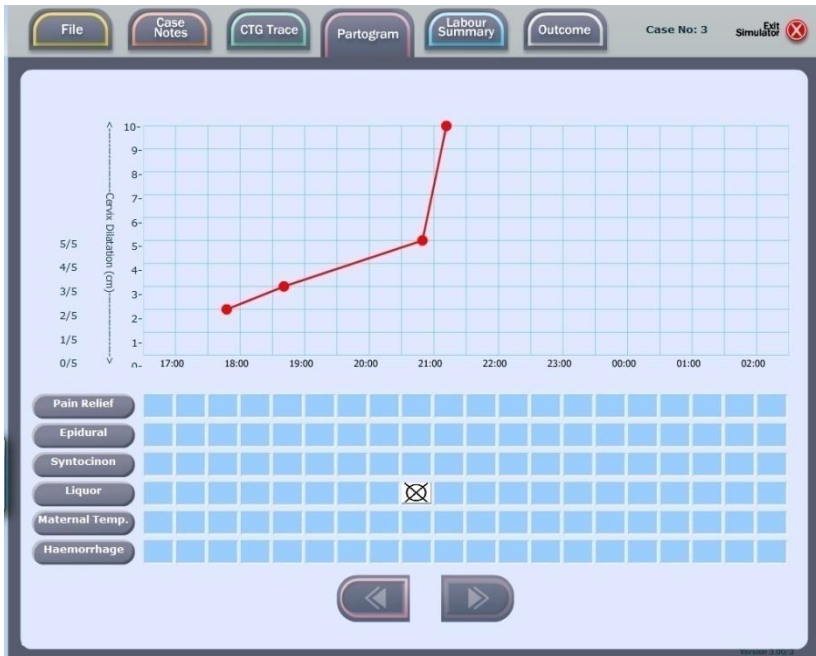


Figure 19 - Simulator Partogram screen

This window provides additional labour information and is updated as the simulation progresses. Cervical dilatation, FBS and pushing are displayed on the upper chart. The lower part of the partogram shows icon images corresponding to certain events that occur during labour.

By hovering over the list on the right hand side (pain relief, epidural, syntocinon. etc) a key will appear demonstrating the meaning of each icon.

The partogram chart can be scrolled forward or backward in one-hour steps from the start of the case using the buttons at the bottom of the window.

Labour Summary Window

Clicking on the Labour Summary tab reveals the Labour Summary (figure 20).

Time	Event	Details
21:15	Pushing	
21:13	Vaginal Examination	10cm
20:53	Liquor	None
20:53	Vaginal Examination	5cm
18:44	Vaginal Examination	3cm
17:51	Vaginal Examination	2cm

Figure 20 - Simulator labour summary screen

This window presents patient details in the top part of the window and event information shown as a list of events in the lower part of the window. The event information list is continually updated as the simulation unfolds and when the list becomes larger than the window, a scrollbar appears on the right hand side of the list to enable it to be scrolled through.

Post Delivery

When the case ends or a decision to deliver is taken a large dialog box will appear center screen indicating that the simulator case has concluded and that outcome details are available via the Conclusion tab.

Conclusion Window

Clicking on the Conclusion tab initially reveals the actual outcome of the infant and all applicable follow up information. Clicking on the Expert Opinion button at top right of the Conclusion window also reveals how 3 independent experts, and in the first ten cases the Plymouth Decision Support System, managed the case. The user can compare their own actions with that of the experts.

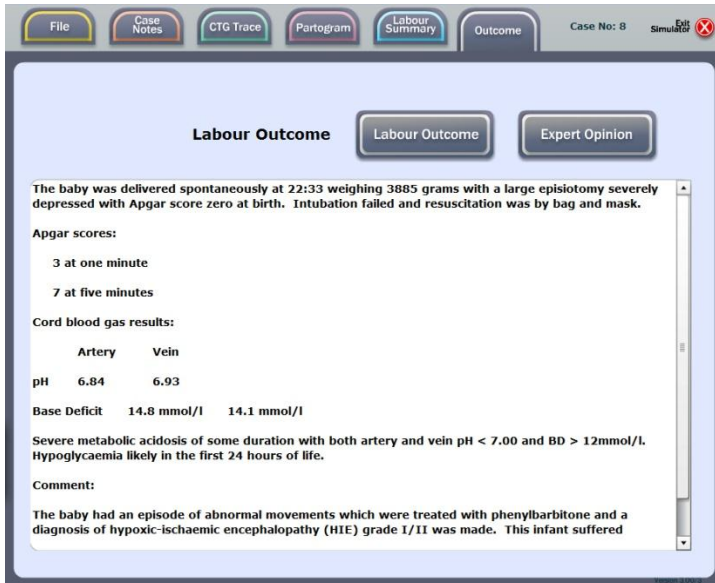


Figure 20.1 - Simulator conclusion screen

Auto-Log-Off

If no key press or mouse click is received for a ten-minute period, then the auto-log-off screen will be shown and the Simulator session ended. Record information is automatically saved before the Simulator closes and your current position in the case will be bookmarked.

Book marking facility

As a case is worked through, a bookmark file is continually updated with your progress. This means that the simulator can be exited at any time without any loss of data. When logging in again at a later time, you will be automatically taken back to where you left off. Once a simulation is started, it must be completed before any other cases can be loaded.

Using the Assessment Tool

In this section we will look at the Assessment Tool (Questionnaire) in some detail.

On selecting the Assessment Tool icon from the main menu the instruction screen appears (figure 21).

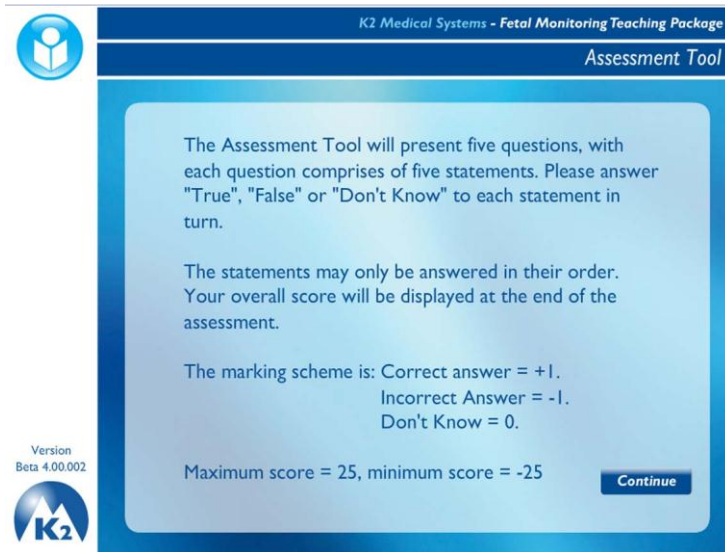


Figure 21 – Assessment Tool instructions

Clicking on the Main Menu button will close the Assessment Tool and return you to the main training system menu. Clicking on the Continue button will begin the assessment tool, displaying the first of five questions (Figure 22).

Note: Once the assessment tool has been started, it cannot be exited until complete.



Question

1

Version 4.00



Figure 22 – Assessment Tool question screen

The Assessment Tool will present you with a number of randomly selected questions, each consisting of five related statements and sometimes an image. You must read each statement and indicate whether the statement is true or false by clicking on the appropriate answer option on the right hand side of the screen. If the answer is not known then the don't know answer option can be selected.

The statement currently being answered is highlighted and once all five statements have been answered, the next question is automatically displayed. If an image contains detail that cannot be clearly seen at the current size, an Enlarge button will be shown which allows a larger version of the image to be viewed.

Once all questions have been answered, a results screen will be displayed giving a break down of answers given and an overall score (see figure 23).

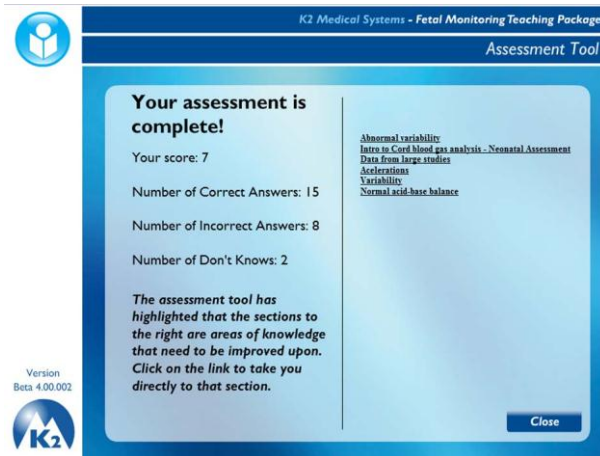


Figure 23 – Assessment Tool results screen

The scoring method used in the assessment tool adds one to the score when a question statement is answered correctly, removes one from the score when a question statement is answered incorrectly and does not alter the score if an answer is unknown. This means that the final score can be a negative number.

In the left hand column you will find a list of links. These are links to sections within the training system. Rather than telling you which answers were incorrect and providing the correct answer we are directing you to the section that contains the correct answer. This, we believe facilitates your learning process.

Clicking on the Main Menu button will close the Assessment Tool and return you to the main menu.

Certification

Users who have worked through **all** sections of **both** chapters of the Training System in the last twelve months will receive a certificate of completion (figure 24). At present the Simulator cases are not included as part of certification, but are detailed in the reports.



Figure 24 - Fetal Monitoring Training System Certificate

Certificates and Training Reports are mailed to the Primary Training System Administrator every 6 months. Please contact your administrator or K2 Medical Systems if you wish to know when the next round of Certificates and Training Reports will be distributed.