

Appendix I Questionnaire Responses

Question	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	Mean	Range
1. I found it easy to learn how to use the application.	4	4	4	4	5	5	4	4	5	3	4.2	3-5
2. Navigation through the case was clear and intuitive.	4	5	3	4	4	5	4	4	5	3	4.1	3-5
3. I did not find it easy to ask the patient questions.	3	2	4	4	5	2	5	2	4	4	3.5	2-5
4. I preferred to ask questions by typing in my questions than selecting from the category lists.	4	4	4	4	2	4	2	5	5	3	3.7	2-5
5. The application was able to recognise most of the questions I asked.	4	3	3	2	2	4	4	2	3	3	3.0	2-4
6. I found it easy to examine the patient.	3	5	3	3	3	5	1	4	3	4	3.4	1-5
7. The specific action of each examination tool button was difficult to interpret.	3	1	2	2	5	2	2	3	2	2	2.4	1-5
8. It was easy to order investigations.	4	5	4	5	3	5	4	4	5	4	4.3	3-5
9. I found using a list box to select investigations was satisfactory.	4	2	4	5	2	4	4	4	5	4	3.8	2-5
10. It was easy to order management options.	4	4	3	3		4	5	4	4	3	3.8	3-5
11. Most of my management requests were recognised.	4	4	2	4	2	4	4	4	4	4	3.6	2-4
12. The review screen was difficult to use.	3	3	2	2	2	2	3	2	1	3	2.3	1-3
13. I found having to classify the importance of my questions and actions helped me to reflect on their usefulness.	5	4	3	5	2	4	3	4	3	4	3.7	2-5
14. I found having to classify the importance of my questions and actions frustrating.	4	2	2	3	5	3	4	3	3	3	3.2	2-5
15. The bar graph was easy to understand.	4	4	2	5	4	5	4	5	5	3	4.1	2-5
16. The bar graph provided useful information.	3	4	4	5	4	5	5	5	5	4	4.4	3-5
17. The pie graph was easy to understand.	3		4	3	1		3	4			3.0	1-4

Question	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	Mean	Range
18. The pie graph provided useful information.	3		4	3	1		3	4			3.0	1-4
19. The line graph was easy to understand.	3	5	1	3	1						2.6	1-5
20. The line graph provided useful information.	3	5	1	3	1						2.6	1-5
21. It was difficult to know what items were critical to the diagnosis or management of the patient from the graph generated in the feedback.	2	2	4	3	3	2	4	3	1	2	2.6	1-4
22. The review screens helped me reflect on the important diagnostic and management issues involved in this case.	4	4	3	4	4	4	5	3	4	3	3.8	3-5
23. Having multiple consultations made the case more realistic.	4	3	4	5	3	5	5	5	5	4	4.3	3-5
24. Having multiple consultations made the case tedious.	2	3	2	2	4	2	2	2	4	3	2.6	2-4
25. I have a greater understanding of the management of hypertriglyceridaemia having completed the case.	4	5	2	3	4	4	4	5	4	2	3.7	2-5
26. I have a greater understanding of the causes of hypertriglyceridaemia having completed the case.	4	5	4	5	1	2	4	4	3	3	3.5	1-5
27. The case was relevant to the understanding of hypertriglyceridaemia.	4	5	4	4	2	4	3	4	3	3	3.6	2-5
28. I found this was an interesting case.	5	4	3	4	3	4	4	4	4	4	3.9	3-5
29. I enjoyed using this virtual patient application	5	4	3	4	5	5	4	4	5	3	4.2	3-5
30. I would not use this simulation again	2	1	2	1	1	1	1	2	1	2	1.4	1-2

Question	GP2	GP3	GP4	GP5	GP6	Mean	Range		EX1	EX2	Mean	Range
1. I found it easy to learn how to use the application.	1	3	3	5	4	3.75	1-5		4	3	3.5	3-4
2. Navigation through the case was clear and intuitive.	2	3	2	5	3	3.25	2-5		4	2	3	2-4
3. I did not find it easy to ask the patient questions.	3	4	4	1	5	3.5	1-5		1	5	3	1-5
4. I preferred to ask questions by typing in my questions than selecting from the category lists.	3	3	4	2	3	3	2-4		3	4	3.5	3-4
5. The application was able to recognise most of the questions I asked.	3	3	2	5	2	3	2-5		4	3	3.5	3-4
6. I found it easy to examine the patient.	4	2	4	3	3	3	2-4		3	4	3.5	3-4
7. The specific action of each examination tool button was difficult to interpret.	2	3	2	1	2	2	1-3		3	1	2	1-3
8. It was easy to order investigations.	5	4	4	5	4	4.25	4-5		5	5	5	5-5
9. I found using a list box to select investigations was satisfactory.	5	3	4	5	4	4	3-5		5	4	4.5	4-5
10. It was easy to order management options.	4	3	1	5	2	2.75	1-5		4	3	3.5	3-4
11. Most of my management requests were recognised.	3	3	1	5	2	2.75	1-5		4	4	4	4-4
12. The review screen was difficult to use.	1	3	5	1	4	3.25	1-5		2	3	2.5	2-3
13. I found having to classify the importance of my questions and actions helped me to reflect on their usefulness.	5	3	2	5	4	3.5	2-5		4	4	4	4-4
14. I found having to classify the importance of my questions and actions frustrating.	2	5	5	1	2	3.25	1-5		2	4	3	2-4
15. The bar graph was easy to understand.	5	3	1	5	3	3	1-5		4	2	3	2-4
16. The bar graph provided useful information.	4	4	2	5	4	3.75	2-5		4	2	3	2-4
17. The pie graph was easy to understand.			3		3	3	3-3		5	2	3.5	2-5

Question	GP2	GP3	GP4	GP5	GP6	Mean	Range		EX1	EX2	Mean	Range
18. The pie graph provided useful information.			2		4	3	2-4		4	3	3.5	3-4
19. The line graph was easy to understand.							0-0			2	2	2-2
20. The line graph provided useful information.							0-0			3	3	3-3
21. It was difficult to know what items were critical to the diagnosis or management of the patient from the graph generated in the feedback.	2		5	1	3	3	1-5		4	3	3.5	3-4
22. The review screens helped me reflect on the important diagnostic and management issues involved in this case.	4	2	3	5	3	3.25	2-5		5	4	4.5	4-5
23. Having multiple consultations made the case more realistic.	4	4	4	5	3	4	3-5		5	5	5	5-5
24. Having multiple consultations made the case tedious.	2	2	3	1	2	2	1-3		1	3	2	1-3
25. I have a greater understanding of the management of hypertriglyceridaemia having completed the case.	3	4	4	3	3	3.5	3-4		5	4	4.5	4-5
26. I have a greater understanding of the causes of hypertriglyceridaemia having completed the case.	4	4	4	3	3	3.5	3-4		4	2	3	2-4
27. The case was relevant to the understanding of hypertriglyceridaemia.	2	4	4	3	3	3.5	2-4		5	3	4	3-5
28. I found this was an interesting case.	4	5	4	5	4	4.5	4-5		5	3	4	3-5
29. I enjoyed using this virtual patient application	4	4	4	5	4	4.25	4-5		5	3	4	3-5
30. I would not use this simulation again	2	2	2	1	2	1.75	1-2		1	3	2	1-3

User	What user liked best	What user liked least
ST01	The examination was very good and interactive, more real than I would have thought.	Rating my action as critical, relevant, or not relevant.
ST02	The review that gave me feedback on my performance	Having to put probability percentages on diagnoses. It felt unnatural to take a history via computer. There was no flow to the questions
ST03	It made me think about my approach to a patient with this condition.	I think it helps most to get immediate feedback about the choices I've put.
ST04	Easy to use. Got you thinking as if the patient was in front of you.	Difficult to get the history questions I wanted. Either typing in incorrect keywords that it didn't recognise and having to keep trying to get the history you wanted.
ST05	Comparisons to peer group	Evaluating each question was tedious
ST06	Gives feedback on the performance and essential questions on the history, investigations and management.	Examination is easy to use but a little bit tedious
ST07	Multiple consultations. Review was very helpful. Expert opinion	Icons were too small. May miss doing investigations due to frustration with technology. Eg ordering blood glucose level.
ST08	The drop down list of questions	
ST09	Easy interaction, Series of consultations	Repetition [This student chose an unusual treatment strategy for the patient which lead to little apparent change in the patient. Consideration for case design]
ST10		Found it difficult, because being computer challenged I had trouble navigating, and found it frustrating when my open ended questions got me know where.
GP2	Good method for feedback: written and graphic.	Doesn't recognise all the elements of a consult. Reflects hospital/specialist "silo" thinking compared to GP "green field"
GP3	Novel way	Still missing elements
GP4	New and different, stimulated thought	Buggy, Graphical interaction a bit difficult

User	What user liked best	What user liked least
GP5	Easy to use	Nil
GP6	Quick feedback	Not being able to see the patient. No psychosocial component.
EX1	Real-time feedback in review. Multiple consultations on a realistic case.	<ol style="list-style-type: none"> 1. The working/provisional diagnosis window popped up too many times (but I can understand why). Suggest once per consultation. 2. Questions overlooked in 1st consultation and added in second consultation were assumed to have been already done.
EX2	Innovative	History taking / asking questions is too artificial. The lists of questions are too long. I wanted to read through the list to ensure that I haven't missed the most appropriate / relevant questions, but by the time I finished reading, I have already forgotten what questions were there at the top.

User	What the user learnt	User comments
ST01	I learnt a bit about the disease (GSD) and how to manage it.	Was really good I thought. Better than PBL in that you have to work it out yourself.
ST02	The difference between cholesterol and triglycerides in terms of clinical management. That there is such a thing as Glycogen Storage Disease Type 1B	
ST03	I learned that Glycogen Storage Disease can disrupt cholesterol, triglycerides, and is related to blood sugar level.	
ST04	Learnt about Type 1B Glycogen Storage Disease which I new nothing about.	With management - some times your decision on what you would choose is based on feedback that the patient gives you which this program does not allow. Eg recommend cornstarch initially and if the patient says no then you would proceed to your next option eg. Gemfibrozil. Can't demonstrate this on the program.
ST05	It helped me think about long term care and learn about compliance	I would definitely use this program in the future if there were diverse cases and enough people to compare my approach to the case.
ST06	Adverse effects of fibrates. Glycogen Storage Disease s. How to run a follow up consultation. Management of triglyceridaemia	May be useful to tabulate results of each consultation on the one table. Eg. For haematology, cholesterol etc. so we can see the changes, if any, through time.
ST07	Management of patient with glycogen storage disorder. Facing which investigation to do.	
ST08	Something about an uncommon cause of hypertriglyceridaemia.	Easy to use
ST09	About hyperlipidaemia and its treatment.	
ST10		Has a great deal of potential. Quite liked the examination interface, and the test interface. Found the questioning / history hard to negotiate. Multiple consultations compounded the frustrations in interface navigation.

User	What the user learnt	User comments
GP2	About Von Gierke's disease	Good exercise, especially for established practitioners who have little opportunity for clinical self audit that is not related to own larger practice.
GP3	Glycogen Storage Disease	Worth developing
GP4	How multi-stream GP consultations are and how difficult this is to simulate in a program like this. How much of the finer points of Glycogen Storage Disease are but a distant memory!	
GP5	Side effects of Gemfibrozil and glycogen storage disorder management.	
GP6	About Von Gierke's disease	The patient didn't seem to progress with the visits.
EX1	Immediate refresher of the relevant case. Immediate improvement in later case consultation.	Great learning tool!! Suggestions: 1. On graphs, feedback should not require right-click but should be the next screen. 2. Option to have a final summary of the case (with expert management)
EX2	Approaches for diagnosis and management of hypertriglyceridaemia.	I've heard in the news last week that Sydney University has changed the approach in exams / assessment to fit in with the best practice of evidence-based medicine. Students are required to quote the clinical trials that give evidence to their decisions. Any plan to incorporate this resource (eg. quoting clinical trials to justify options chosen in the simulation) for medical students? Navigation: Would have got stuck a few times if there were not verbal instructions. Patient interaction: Information from history taking involves

User	What the user learnt	User comments
		<p>70% as non-verbal communication (eg. prompting which questions should follow). This cannot be simulated in case simulations.</p> <p>Reflection: The review screen is useful, but I still do not understand how to read the bar / pie graphs.</p> <p>Learning: Refer to question 26. Are there any summaries of relevant information on hypertriglyceridaemia provided? I didn't check this out.</p>