What do critical care nurses require from a clinical information system: is it possible for a system to meet these needs?

Peter Norrie

A thesis submitted to the faculty of Health and Community Studies, School of Nursing and Midwifery in partial fulfilment of the requirements for the degree of Doctor of Philosophy

De Montfort University

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Appendix 1

Staff information form used in phase one

University Hospitals of Leicester
Leicester Royal Infirmary in Association with DeMontfort University

Staff Information

Titles of Studies:

- Evaluating the effectiveness of the Clinical Information System (CIS) on the working practice of the Health Care Professionals within the Critical Care Unit — Irene Duncan (Training & Quality Manager & CIS Project lead, LRI)
- The impact of a computerized Clinical Information System on the Role of Critical Care Nurse — Peter Norrie (Senior Lecturer, DMU)

Date of Study: March 2000

Questions and Answer

Q1  What is the study about?
A  To identify how health care professions will interact with the new Clinical Information System.

Q2  What will happen to me if I do not want to take part in the study?
A  It will not affect you, your term & conditions and employment status will remain unchanged.

Q3  What am I actually being asked to agree to – what am I going to be asked to do?
A  You will be asked specific questions (see attached questionnaire) and the interviews might take approximately 40 minutes.

Q4  What are the potential benefits in participating this study?
A  This study is to evaluate how the Clinical Information System works for staff. It will also explore whether it supports the nurses by liberating time for more nursing care and providing accurate/timely clinical data. It would also identify what changes could be made to improve the working life of Health Care professionals.

Q5  Where does the information gained from the study go to, what will be done with the information gained from the study and who will have access to the information gained from the study?
A  Information will remain with Peter Norrie, Irene Duncan and may be shared with their personal supervisors to assist in data analysis, publications through papers, lectures and presentations.

Q6  What about confidentiality and anonymity – how will it/they be maintained?
A  As stated in the consent form, after transcribing, Peter Norrie and Irene Duncan will ensure the tapes be destroyed. No names will be mentioned in any publications or presentations. Individuals will be grouped, so those individuals cannot be identified.

Q7  Should anything go wrong, what indemnity/compensation mechanism is in place – and by whom?
A  If you have any concerns, you have your usual Rights to appeal through Grievance Procedure and usual line of Report.

Q8  What if I want to ask more questions – who should I contact and how may I contact them?
A  Contact Names and Telephone Numbers:
   Irene Duncan  LRI  0116 2585466 or 0116 2585298
   Peter Norrie DMU  0116 2013914
Appendix 2

Transcription of interviews from Leicester Royal Infirmary
The 'pre implementation' site

Interview 1
Interviewer: Peter Norrie (PMN)
Participant: Sister A
Clinical Grade: F

PMN: Thank you very much for agreeing to take part in these interviews. I would just like to go over the fact that anything that you say here will be anonymous and will be non-attributable to you. I would also like you just to confirm that you have received the consent form that you have signed.

Sister A: Yes.

PMN: Are you happy to proceed with the interview?

Sister A: I am.

PMN: OK, that’s great. I would like to say a little bit about the timing as well. I am expecting this to last something like 30 minutes, but who can tell, it all depends upon your answers obviously.

Sister A: OK.

PMN: What I will try and do is split it into two parts and I will try to keep them to time, 15 minutes for each, 15 minutes for the second part and then 10 minutes for perhaps any points that might arise. But we will just have to see how we go with that. OK?

Sister A: Yes.

PMN: Now, my first question is, just really to sort of open up the interview and give me some idea about where you come from, if you could just tell me a little bit about yourself and your career.

Sister A: Right. I trained in Leicester. I have been nursing for 9 years and qualified for 7 years. I started out in Medicine here at Research Site and then branched out 6 years ago into ITU and started out in combined ITU and Coronary Care.

PMN: Oh yes, where was that?

Sister A: Great Yarmouth.

PMN: Oh really?

Sister A: At Yarmouth Hospital. I was about 3 years there. I did the ITU course there and started to get some management experience, and then
branched out and went to Cardiff and worked at the University Hospital there in a bigger ITU with some neuro experience and paediatric experience. I spent about a year there and then went to Peterborough.

PMN: You've really travelled around then haven't you.

Sister A: Yes, and I came here for the Sister's post.

PMN: Oh right, so is this your first F grade post?

Sister A: It is yes.

PMN: Fantastic. How long have you been here for now?

Sister A: I think coming up for 8 months.

PMN: OK. How are you finding it. Are you enjoying it here in Leicester?

Sister A: Yes. I'm enjoying it a lot. It's a great challenge.

PMN: OK. A challenge!

Sister A: Yes, it is.

PMN: That's fine thanks. So you have obviously got a very good grounding in ITU and you are an established practitioner. You know all about ITU then. So working in ITU, can you tell me what gives you satisfaction about your role as a nurse.

Sister A: Well, I think the attraction for me to ITU is the fact that I can give 1 to 1 nursing care and that I can give that patient really 100% whereas compared to elsewhere I felt that I had to divide my time and I wasn't really able to give as much. I think that's the big attraction for me in ITU, to be involved from right at the beginning and see it all the way through, that's the big thing I think. And the degree I think of illness that people have. It's a challenge because you are trying to recover and get them better. Sometimes you do sometimes you don't. I think that is what attracts me towards it.

PMN: I can certainly understand that. Anything else?

Sister A: I think I like the fact it is a closer team in ITU as well across the board. You don't always get that in other environments that you work in. And I think that you have more autonomy as a nurse here in ITU.

PMN: Yes, in what way?

Sister A: Well, just generally, You're I think a strong patient advocate, your experience is acknowledged, and the fact that you are with the patient most of the time so that when it comes to treatment change you are included.
PMN: I can certainly identify with what you’re saying.

Sister A: You definitely have more say.

PMN: OK, good. You have given me a very good idea about what it is within the work that gives you satisfaction. Two sides to every coin. What is it within working in ITU that can give you dissatisfaction? Not necessarily all the time but perhaps on occasion.

Sister A: Obviously the pressures and from my position, bed occupancy and the fact that you can’t always accommodate patients.

PMN: These both sound really interesting. Can you tell me a little bit more about them? You said pressures, and having worked in ITU I know exactly what you mean. Can you pick out some of the specific things.

Sister A: Things like staffing levels for example. Not enough staff to care for patients. And the experience skill mix, in my position that sometimes can be quite difficult.

PMN: Now in your position, do you mean as a Sister?

Sister A: Yes.

PMN: OK, can you just tell me a little bit more about that because I think these are very important and interesting points.

Sister A: I think it is from an organisational point of view, ensuring safety and sometimes it can be quite difficult from the point of view that you are trying to organise and ensure that everybody is cared for properly and that the staff are supported, but if the resources are a little bit thin you don’t always succeed in delivering the standards that you want to achieve.

PMN: OK, I certainly understand that, and does that tie in with the other point that you mentioned, occupancy?

Sister A: Yes, definitely, in that it is typical of ITU that there is always somebody wanting and requiring a bed and it is prioritising which is the most needy.

PMN: You have also said that you contribute and that is an important part of the role.

Sister A: Exactly, yes.

PMN: So in some ways it’s almost a two-edged sword isn’t it?

Sister A: That’s right.
PMN: That's excellent thanks. Now, if we could just move on a little bit to a slightly more focussed question now. Something that you haven't mentioned before. One of the most obvious features about the critical care, ITU environment is the amount of technology that is actually involved in patient care. Do you have any strong feelings about that?

Sister A: Well, it doesn't really phase me. I think that you can become too focussed on it. I see it as an instrument to help me care for my patients. At the end of the day they are paramount, and it is tools really that help make your work a lot easier, as in delivering care.

PMN: Well I suppose in ITU there is always a lot of technology. Can you identify some things that actually help you care for your patients.

Sister A: I suppose some of the monitoring equipment is essential because without that we would be .... It would be very time consuming I think without it. The manual sort of methods of keeping.... I think from an observation point of view. And without ventilators where would we be?

PMN: That's right. And the ventilators of course have got a lot of information technology built into them. So you have been in ITU for quite a while now, is it 6 years?

Sister A: Yes.

PMN: Can you see a difference between the equipment that you use now and perhaps equipment used 6 years ago?

Sister A: Yes things have moved forward quite considerably.

PMN: In what sort of way?

Sister A: Well, ventilators for example. Ventilation modes have changed and make it a lot more easy to ventilate a patient and they require less sedation and it is more comfortable for them. So ventilators have moved on. Haemofiltration machines have moved on, they have got automated whereas before it was all calculations and figures and time consuming in that you were loading your pumps to go, to put your fluid back and draining ....

PMN: I've been there!

Sister A: Whereas now it is all one piece of equipment that delivers and removes so that you have got two jobs in one done really.

PMN: Right, excellent. Thanks very much. Again, just moving the frame on slightly now, as you know the project that we are looking into is all about the computerised system that is going to come in. What do you understand by the terms "information technology" or "computerisation" relevant to the clinical area?
Sister A: I suppose it is moving forward really. I think the plan is to make our system more computerised so that the information is at hand.

PMN: It’s a big term really.

Sister A: Yes.

PMN: If I was to say to you “information technology is a wonderful thing”, what would you understand by that term “information technology”, if anything?

Sister A: You automatically think of a computer don’t you?

PMN: Yes, you certainly do.

Sister A: And in all the information in one area.

PMN: OK, so pooling information together?

Sister A: Exactly, yes.

PMN: If we could compare that, or if we just talk about how we traditionally collected patient data, how do you feel about the traditional method of patient data collection, documentation and charting?

Sister A: I feel it is adequate. We obtain the information that we need and we have got a constant record. I think it is time consuming, especially some of the written work and it sometimes can be quite repetitive.

PMN: If I pick you up on that, you said you think it is adequate, in what terms do you think it is adequate? What is it adequate to do?

Sister A: Well, if we take observation which is a big part of nursing care, you have got a record from hour to hour really and any changes within that time so there is a constant record, documented down from an observation point of view.

PMN: Certainly we have been doing it like this for decades so it can’t be all that…..

Sister A: It works and the information is there, all at a glance really, rather than reams of paper, it is all there on one sheet.

PMN: So when you say it is adequate do you mean that you feel confident that it gives you the records you need to follow your patient through?

Sister A: Yes, definitely.

PMN: But you also said it is time consuming, which again I can certainly .... What do you think are the main elements that use up all your time?
Sister A: Well I think at the end it's the assessment that I think is sometimes quite time consuming and that they are quite repetitive and the ....

PMN: That sounds very interesting. How do you mean. What sort of aspects of assessment?

Sister A: Especially the daily assessment as in sometimes there are very little changes in ITU and yet there are reams and reams of documentation, basically saying the same thing.

PMN: That's very interesting actually, thanks. Now, my next question. We may have covered some of this already, but let's just see if anything else comes up. What do you see as the advantages with using current methods of documentation. Can you list up to three main advantages.

Sister A: As you say, the information is all in one place.

PMN: And where would that be?

Sister A: At the patient's bed-side, so it's all with that patient, everything you need to know. I would hope that it would be accurate.

PMN: That would be nice, wouldn't it! So accuracy. What else?

Sister A: So it's physically at the bed-side, so anyone can access it, hopefully its accurate, and nurses as you say, spend a lot of time actually charting this

PMN: So I'm sure it would be. That's something we might return to later on. Any others ....... in terms of, do you see it being very accessible – we know where it is – is it an accessible record?

Sister A: Yes, I think so.

PMN: I mean, nurses spend a lot of time with their different coloured pens, doing their charts don't they, so that they take a real pride in their charts, so that they can actually ....

Sister A: It's all there.

PMN: The other side of the coin again. What do you see as the disadvantages of using the current set of documentation?

Sister A: Confidentiality.

PMN: Tell me about that.

Sister A: I think, because they are so easily accessible, anybody can see them, although we police it, in that it is restricted to nursing and medical staff, there is always that risk.
PMN: Has that happened to you recently.

Sister A: It has happened on one occasion, I had a relative reading the notes. I suppose we could say that really they are entitled to but they obviously have to apply through the appropriate channels.

PMN: That's a bit of a hot potato isn't it?

Sister A: Exactly. But they do have to apply through the appropriate channels to do that, so the fact that they were there, it was easy for them, they were accessible for them and it was difficult to say, "well I'm sorry but you are not able to read them. You'll have to seek permission to do so". That would be a disadvantage I think really.

PMN: Anything else?

Sister A: Thinks can get lost. Unfortunately with reams of paper things can get lost or mislaid.

PMN: And they can be a terrible mess as well can't they.

Sister A: Definitely. I know it has been known for things to get mixed up, so again you've got that risk, and things get lost if they've been filed away in the wrong folder. I would say they were the down sides with the types of documentation we have got at the minute.

PMN: Anything else?

Sister A: Obviously there is the time aspect.

PMN: Well, that's right, it can be very time consuming can't it. Now, lets talk about the CIS implementation that is due this Summer. What do you know or understand about the CIS implementation in the ITU?

Sister A: Now, how I understand it is .......

PMN: I know less about it than you do, so I am not trying to trip you up.

Sister A: OK. We are going to have a computerised system which will be gradually introduced to cover all our documentation from observations, right down through to evaluation of care and ordering of care for the patient, to be used by both nursing and medical staff. So it will be individual to that patient, and basically all the information will be there. I understand that eventually once the system is operational, it will be pre set and it will be a matter of putting the information in and then it will be a permanent record. That is how I understand it.

PMN: That's pretty much my understanding about how it will work as well.
The next question I think you may have covered actually in that, but we will see if anything else comes up. Do you understand actually what the capabilities of the Clinical Information System are?

**Sister A:** I think they are quite vast really. The fact that it is going to be used by both nursing and medical staff, so for once there is going to be a joint input rather than at the moment nursing and medical documentation is separate. It will be all together and it will be a multidisciplinary team, so everybody will use the system.

**PMN:** Well that’s right. You’ve mentioned doctors and nurses ...  

**Sister A:** But there are physios and dieticians and you yourself, so everybody will be able to use the system, so I think it will be good that all information will be together.

**PMN:** You sound very positive about that, at least potentially positive, is that how you feel?

**Sister A:** Yes. I have recently completed a questionnaire on CIS and what order things should be prioritised with regard to being introduced and from that it seems quite positive and I think that if it is going to lighten the workload and you have got more time to spend with your patient, then I am all for it.

**PMN:** Fantastic. OK. So you have told me about the capabilities of what it can do. Again the next question is related, but not perhaps immediately, directly ... What are your expectations of the Clinical Information System.

**Sister A:** Right well. They are quite high actually. I am expecting it to be all singing and dancing! No, I am basically hoping that it will take on all the roles that are documentation fulfilled now so that it will be a matter of that it will be established and once it is established it is just a matter of putting the information in. I am a bit concerned about the fact that computers fail.

**PMN:** Absolutely, yes.

**Sister A:** That concerns me a little bit. And that if that happens, then are we going to be stuck for information. That is a down side. And will we have to have two forms of ...

**PMN:** Some sort of parallel charting?

**Sister A:** Yes, and if we do then its not really benefiting if that’s the case.

**PMN:** So you see reliability as being a big issue?

**Sister A:** Yes, I think its got to be.

**PMN:** I think anyone who has actually got some experience working with computers would agree with you. Anything else?
Sister A: don't know if I've sort of diverged a bit there.

PMN: No, no, that's absolutely fine. The question was what are your expectations and you said well, you've already gone through quite a lot of the things you hope it will do but that you are a bit worried about reliability.

Sister A: Yes, that's it really. I think if it can provide that then its quite positive.

PMN: Again, this question you may have covered some aspects, but really at this point in time can you perceive any advantages with using the Clinical Information System?

Sister A: Well, apart from the time aspect, the information being together, to prevent loss, and it will all be confidential this way because only those that have got access to the system will be able to retrieve the information. And obviously I should think there would be restricted access to certain areas, so that you only need the information that is pertinent to you.

PMN: And again, at this point in time can you perceive any disadvantages of using the CIS? We talked about the possibility of it crashing.

Sister A: Yes, which is a major issue, because you would just lose everything.

PMN: It's fairly major, yes!

Sister A: The other thing I suppose is training. It is going to be quite time consuming in getting everybody up to scratch, really.

PMN: Yes, there is quite a big turnover of staff in an ITU as well isn't there.

Sister A: It's going to be a constant thing really.

PMN: Because it is quite difficult when perhaps people have been working on a ward, to get them to feel comfortable within ITU anyway, isn't it.

Sister A: Yes, so it's another thing to come to terms with really so I think training will be quite difficult.

PMN: Any other disadvantages you can identify?

Sister A: No, I don't think so.

PMN: We are on to the last one now. How do you think that the current use of computerisation within the unit affects your role as a nurse, just the current way that we use information technology, and you have identified things like monitoring and the equipment. How do you think it affects you as a nurse?
Appendix 2

Sister A: I think it makes my job a lot easier. I think it helps providing new care for our patients. Without it we would be really struggling in this environment. I think we are quite heavily dependent on it here. I think it is good for us all because it keeps us up to date and up to scratch with things. We need to know the things we are using, we have to understand why and how it all works in order to care for your patient properly, so I think it has quite a big impact.

PMN: Coming to terms with all the equipment on an ITU is quite hard in itself isn’t it?

Sister A: That’s right, but I think it is very important that you know how to use it correctly and use it to its best advantage and that you can convey that information on because, like we have said before, there is a vast turnover, and making sure that everybody understands.

PMN: OK, well thanks very much, that’s all the questions and that’s done in excellent time, so thank you. Are there any other points which you would just like to raise, which you think are perhaps potentially interesting for the future, or do you think perhaps we have covered .....yes. Well there was one point that you raised that I thought was very interesting. You talked about accuracy and in fact there has been some stuff written about the way that when you are looking after a patient there is a fantastic amount of information and a very important role of the nurse is to actually filter out of that information what is important for the patient and record it, so if you like, they edit a lot of data, and I think it will be interesting to see when they actually get this Clinical Information System up and running what is going to happen. Are we actually going to be swamped by vast amounts of information.

Sister A: Or can we actually pick out what’s important.

PMN: : So it will be interesting to see what comes of that. Thank you very much for your time.

Sister A: Thank you.
Appendix 2

Interview 2
Interviewers: Peter Norrie (PMN) and Sr. Irene Duncan (ID)
Participant: Sister B
Clinical Grade: F

PMN: Thank you for coming in here to talk to us for a little bit of time. We are going to run through some questions. Can you just confirm for the tape that you have actually signed a consent form please.

Sister B: I have signed a consent form.

PMN: OK. And you are happy with the sort of content of the questions that we are going to ask.

Sister B: Absolutely.

PMN: Fantastic. OK, well lets crack on then. The first thing just as sort of an introduction to give us some sort of base line about yourself, could you just tell me a little bit about yourself and your career?

Sister B: I qualified in '92, so I have been qualified for 8 years. For the past 2 years I have been working as an F grade on the Unit. I have always worked within Critical Care bar 6 months when I went and did a pain control job and my role includes facilitating the Unit on a daily basis.

PMN: Anything else that are important aspects of your job. What other aspects are there?

Sister B: Prioritising, organising care, planning care, other projects that I am involved in, NVQ's, epidurals, there are lots of other projects that I run in the Unit, mentoring as well.

PMN: Right, fine, thanks very much.
So you have spent a lot of time in Critical Care. You must know it pretty well from one end to the other. Can you tell me about working here specifically in ITU. What gives you satisfaction about your role as a nurse.

Sister B: I think looking after the acutely ill patient and on a one to one, two to one basis, organising and facilitating the Unit on a daily basis, but really giving nursing care to critically ill patients, seeing them get better, seeing them come back and even if that is not the end, then giving them dignity with death. But other things as well, not just clinically: supporting staff, seeing someone who has done their training, has maybe been with us as a student and being able to teach them and then seeing them reflect on how well they are getting on and them looking after a critically ill patient and then them teaching other new members of staff, sort of cascading information.

PMN: Fine. You said a couple of times there, you mentioned that what you really like is to do with the acutely ill or critically ill. Can you just sort of tell me why you find that satisfying particularly.
Sister B: I think because some patients are here for such a long time that you are seeing them when they really are, and their family really are sort of in a situation which is completely new to them, and being able to give them the support, being able to get them through that period in their lives when obviously it may have been a complete shock to them coming into the Unit, and then just being able to support them until they get better really. But offering good standards of care, quality of care as well and being proud to deliver that standard of care so they know that if it was my loved one that was lying in that bed, then I would like to think that they would receive the same sort of quality standard of care that I would like to deliver.

PMN: OK, thanks very much. The other side of that is that working in ITU you spend a lot of time, and it obviously gives you a lot of satisfaction – the other side of the coin is can you identify things within the working environment that cause you dissatisfaction or you are not particularly happy with?

Sister B: I don’t think it is a question of dissatisfaction. I think everybody gets stressed working on the Unit and it is not particularly that you are not happy, I think it is how you adapt to working under such stresses that cause you to worry and plan your day i.e. no intensive care beds, no pressure on beds, pressure on staff, staffing levels, pressure on training needs, having time to do it. So it is not so much dissatisfaction its sort of stresses and how you organise your day to overcome those and we all deal with it differently, and have different coping mechanisms as well.

PMN: Sister B: Now, you mentioned some stressors there, things that cause you stress, things like bed status.

Sister B: Bed status, yes.

PMN: Can you just sort of go through them?

Sister B: Bed status, as in when there are patients that need an intensive care bed and for one reason or another there isn’t one available, whether it be that there is not a staffed bed through sickness, whether it be that we are waiting to get patients back to the ward, and there are no ward beds available, so it all has a knock on affect and cascades throughout the staff and of course that causes staff friction as well, so its managing that and trying to keep everybody happy.

PMN: Which is a very difficult thing to do!

Sister B: As well as the patient!

PMN: Things that you went through there again, I think the stuff that you are saying is quite interesting, is almost all from a managerial sort of angle. I was just wondering if there was perhaps some stuff on a more personal level. I mean, imagine perhaps you are working one day and the place is adequately staffed and there is reasonable skill mix but you might still come across some
things that personally make you unhappy or cause you some stress or some dissatisfaction.

**Sister B:** I guess that's things that are not done to a level that you would see as satisfactory, whether you have taken over from a particular person and things haven't been done, drugs haven't been given, care hasn't been delivered how you would anticipate to your standard that it should be. And it is not always done and that is not always when the Unit is very busy. In fact it could be when the Unit is very quiet and you see the other side of the scale that things are not done when really they should have been done, so the quality has not been delivered that you are used to, so that would upset me, I guess as well.

**PMN:** I was also just wondering, like, say you are actually looking after a patient yourself and you are caring for relatives and for the patient, things that are actually at the bed-side, are there any things there that give you dissatisfaction and can cause you stress – there may not be, I am just quite interested.

**Sister B:** I guess if you have, I don't know really, it depends which sort of patients you look after as well, as to whether it causes you stress or not. If you have a particularly aggressive or abusive patient, not that they are aggressive or abusive for one reason, but we do have patients like that, and we have families who because of the situation they are in that are particularly stressed as well at that time and you are the front person that they are going to take it out on.

**PMN:** You're the ideal person aren't you.

**Sister B:** Yes of course you are, but that is part and parcel of the job and you learn to deal with it and depending on who you are and what type of person you are I think everybody deals with it differently, but that could be a stressor as well.

**PMN:** Very good, thanks very much. Now, one of the obvious features about Critical Care environment is the amount of technology that is involved in patient care. How do you feel about that? It is a very technical area isn't it?

**Sister B:** It is a very technical area, but on the other hand it is a necessity as well and all the technology that is there is there for a reason from my personal view point, the monitors. Patients in Intensive Care need to be monitored 24 hours a day. You need to have alarms set on the monitors, so it alerts you if anything is untoward. The pumps need to be there to be delivered as well, so I would say yes it is a lot of technology, but at the end of the day it is a necessity, but the patient needs it and the patient comes first and the technology supports the patient.

**PMN:** OK, I mean do you feel that the amount of technology that is in the environment helps you or do you feel it hinders you, or is it a mix of the two?
Sister B: Mix of the two I would say. Depending on staff training, if staff are used to using the technology and they have had adequate training in it, then yes, and if everyone knows how it works, then it works well. If people don’t, then it falls down and also if it is faulty and things like that. The new pulse oximetry machines for example, ....if people don’t understand what they can do, then it is always labelled as “no its bad” because people don’t understand how to use it. So if people are trained to use it, then I think that’s an advantage.

PMN: That’s interesting, that again kind of brings you back to some of the management issues that you talked about earlier on doesn’t it. I don’t know if you have looked at the way that the level of technology that was in the Unit 5 or 6 years ago and compared it with the sort of stuff that’s going on now, can you come to any particular conclusions about the way that technology is being used.

Sister B: I think it is obviously being used to support and sort of collect more data than it ever was and it is used to sort of be able to reflect I think and record things that have happened now, we can look back on the screens and see what happened in the last hour, we can get printouts from that and we never used to be able to do that, so it is moving forward.

PMN: It kind of begs the question that you can do that, but does that actually help you at all?

Sister B: Well we don’t do it to be quite honest. You can do it, but it comes back to training because people don’t know how to do it. If someone has had a run of beat arrhythmias on their ECG you can look back and record it and see what was it, but people don’t know how to do it, so it comes back down to training.

PMN: I suppose also, on whether or not you have got the time to do it?

Sister B: And whether you’ve got the time to do it, yes.

PMN: That’s another issue. OK. Thanks very much. My last question before I hand over to my colleague here - Can you tell me what you understand by the term “information technology and computerisation” applied to the clinical area?

Sister B: My first, as in not knowing a great deal about it, would be computers, and using computers to aid recording information, collect data, which is very difficult to do at the moment and have a data base with information fed into it, somebody programming it and people having access to it.

PMN: It’s not an examination, honestly!

Sister B: I didn’t grow up with computers.
Appendix 2

PMN: I mean, if you think about some of the equipment that’s out there like some of the new high tech ventilators, they have essentially got computers built in to them haven't they and the monitoring system as well. Again, do you feel that sort of level of technology actually helps you, or perhaps hinders you, or again a mix of the two?

Sister B: I guess it helps you, but you need to know how to use it and you need to know how to put it right if it goes wrong, and you need to have a back up so you can access things if it does fail I suppose.

PMN: Because computers are famous for that aren't they.

Sister B: Yes, but I mean I think it is a good idea.

PMN: OK, thanks very much.

ID: Just going back to what you say earlier on about management, how do you feel about the current documentation system like the chart and the way we collect data. How do you feel about our current system?

Sister B: The current system is easy to use and the staff are used to it. I think they are the two benefits of it at the moment. I don't think it is particularly ideal. I don't think it is particularly brilliant and I think it has lots of drawbacks to it as well, but on the upper note, the benefits of it are that the staff know how to use it, they have been used to it for years and it is easy to use.

ID: So what do you feel are the drawbacks of the current system then?

Sister B: The drawbacks that I find personally, are that the charts are not always legible, you can't always read what has been written. They are not very good for data collection when we go back and do all the augmented care data and things, you have to constantly look back through the charts, you need to look back and see when the patients last had cultures done and things like specific clinical care performed and they are not always entirely accurate, they don't always reflect a true picture i.e. if it has not happened on that hour every hour, if they have had a cardiac arrest or if they have had a run of VT and the nurse has forgotten to chart it or what has been delivered, they are not entirely accurate.

ID: You have heard about the Clinical Information System, we are going to implement it, there is a project going on at the moment, how do you feel about that, what do you understand by Clinical Information System?

Sister B: I think, from what I can understand of it, and the posters that have been around and things, are that it is really getting used to write every thing that is on the chart and things that are in use at the moment, whether it be care plans, observations, clinical care that's performed, it is a way of putting all that onto a computer data base and people having access to that to record
everything through that rather than by written documentation. Well it is documentation, but in a different source.

ID: Electronic rather than manual. Yes, OK. Have you had any perception about what the system would be capable of doing. For instance you talk about collecting clinical data.

Sister B: Well, collecting clinical data, and obviously it would be able to pick up completely accurately everything that has happened with that patient from the monitor itself. Feeding in care plans as well, and when lines have been changed, everything from the clinical system I suppose, feeding, what feeding things there are and how much aspirate they've had, everything that you would record normally and more maybe you can put onto the computer.

ID: How do you feel about the way we collect lab results at the moment? Do you think CIS will have those capabilities?

Sister B: It would be nice if CIS could tie in with the lab results that are from the lab so they would come directly into the computer and then the doctors can access it rather than it being either telephoned through or coming through on pieces of fax paper that then get lost and given to the wrong people and not recorded accurately, because they haven't been printed thoroughly, as it were. So if it tied in with that, then it would be a concise way and an easy accessible way to record lab results.

ID: So do you feel about the care planning and the nursing evaluations and assessments will be more superior electronically than the documentation we have got now on paper.

Sister B: Well I would like to think that it shouldn't be any different, but I would imagine that it will be, because people don't always have time to sit down and do a thorough care plan like we used to do 8 years ago. I guess, even though I feel strongly that care plans should be individualised, they still will be, but there will be a more structured way of being able to record nursing care and planning nursing care.

ID: Because when you are going back to the care plan now and documentation ....

Sister B: It is not always performed and you can indeed when you go round and look at the care plans and they haven't been updated for 3 weeks, but with CIS I would hope that they could be updated daily. If it is accessible and it is easy to do and it saves time then it will work very well. I think nurses are particularly bad at documenting and documentation and I think to work round that, but people need to be trained adequately to use it. They need to know how to use it because people are notoriously frightened of computers. I myself, particularly, I have never grown up with them, so the training for them needs to be put in place and structured, and if that is all done, they will be able to be used accurately and well.
ID: About CIS, what do you perceive is the main advantage with this new system and how do you perceive is the main disadvantage of this system?

Sister B: Disadvantages, I guess are going to be people like me of the older generation who are scared stiff with computers, (I'm over thirty now!), so people being frightened to use it and training. And the advantages, if it works well, are the fact that we can get all this data collection, we can do audits from it, we can get all the information that we need from it and get rid of all the numerous pieces of paper that are duplicated ten times over on the Unit that all say the same thing. So that is what I would perceive to be the advantages of it.

ID: Do you think ultimately that we will save nursing time?

Sister B: Ultimately, in the long term, we are bound to. In the short term I doubt it, because we will have to do a lot of training, but in the long term one would hope that it would save time.

ID: Apart from not growing up with computers, have you got any other fears about an electronic system?

Sister B: I think people's fears of it are that you would lose all the information, but if it is backed up properly with discs, then I don't think that is a problem in this day and age, but I think that is what people would be scared of.

ID: If the system completely shut down or crashed ..... 

Sister B: And access to it as well, confidentiality matters and things like that as well. As a patient I would be worried that all my clinical details were on that rather than patients have this idea that their little notes are there and the people that should read them are allowed to read them because they have access to them. I think people would worry that if it was on a computer, that their details would be allowed to be given and anyone could access it, but of course that won't be the case.

ID: Well, I haven't anything further to ask and I think Peter is going to finalise it.

PMN: Yes, just a catch all question to see if there are any points that you want to raise further. Can I just ask you how do think that the current use of information technology and computerisation or whatever you want to call it, within the Unit affects your role as a nurse?

Sister B: As it will be or as it is now?

PMN: As it is at the moment.

Sister B: i.e. not as in the computer, as in any technology.

PMN: Yes, just as in all the technology that is out there.
Sister B: How does it affect my role.

PMN: Yes.

Sister B: Maintaining safety I suppose.

PMN: That's pretty important.

Sister B: Yes, you know, setting alarm limits as well, using it well, efficiently. Safety of the technology, maintaining the pumps and the ventilators, but maintaining the safety of the patients as well by having your alarms set and things like that.

PMN: Yes, that's fine. There is no right or wrong, we are interested in your views.

Sister B: At the end of the day the patient is in the bed and the technology surrounds the patient. That's very much my view, but the technology is there to help you and help the patient.

PMN: Thank you very much.
Appendix 2

Interview 3
Interviewers: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Charge Nurse C
Clinical Grade: F

PMN: John, thanks very much for agreeing to do this interview with us. Could you just confirm to me that you have signed the consent form.

Charge Nurse C: I have.

PMN: And that you are happy for us to go ahead.

Charge Nurse C: I am.

PMN: OK. Just to get started off and to give us a little background information, could you tell us a little bit about yourself and your career?

Charge Nurse C: I have been a Registered Nurse since April 1991. Initially I had staffing experience on both acute medicine and surgery, and then moved on to ITU, so I have actually been on ITU for about 6 years.

PMN: OK. Anything else?

Charge Nurse C: I have worked abroad, so I have got some experience of intensive care in a different health setting, and I have worked in a couple of different hospitals, so I have seen ITU from various perspectives.

PMN: Fine, OK. You obviously know a lot about ITU and have expertise in the speciality. You have chosen ITU, then to pursue your career. Can you tell me what it is about ITU that gives you satisfaction about your role as a Nurse.

Charge Nurse C: The satisfaction comes from both one to one nursing and also the amount of input that we have with the patient’s relatives. That gives me a lot of job satisfaction as well.

PMN: OK. Anything else?

Charge Nurse C: No, that’s it.

PMN: The other side of the coin, then. There must be some things about your ITU environment that cause you dissatisfaction. Can you identify any of those?

Charge Nurse C: Yes. Working with less than optimum numbers is an extremely stressful situation and can lead to a lot of dissatisfaction with the job. There are some other areas that cause dissatisfaction for me. That is when it appears that we are carrying on a treatment which seems futile, and that often is quiet disheartening as well.
PMN: OK. So you have mentioned two areas there, sort of stress, workload, numbers, those sort of issues, and prolonging treatment. Is there anything else about ..... 

Charge Nurse C: No, I quite enjoy ITU, so I don't have a lot of dissatisfactions. If I did, I would have chosen to have gone somewhere else by now.

PMN: OK, fair enough. Now, one of the obvious features about the critical care environment is just the amount of technology that's involved in patient care. Again, no rights or wrongs, do you have any sort of feelings about that, about the technology that is out there on the Unit?

Charge Nurse C: I can't say I have given it any great thought, because you expect to see high-tech equipment in use and if you are coming into Intensive Care, you have to be sort of prepared for that, and things are changing all the time so you are seeing new equipment which is allowing you to do things that you have never been able to do before. So as far as how I feel about it, I expect it to be there and I expect us to keep moving forward.

PMN: I don't know if perhaps when you go back to your early days in ITU, is it something that perhaps drew you into the environment?

Charge Nurse C: I found it very interesting, the amount of equipment that was in use, and I suppose that was one of the factors that drew me in to ITU.

PMN: It is initially quite challenging isn't it?

Charge Nurse C: Yes, yes.

PMN: I certainly remember that from my own practice. OK Just one more question from me and then I will hand you over to Irene for some more questions. What do you understand by the term 'Information Technology', or 'Computerisation' as applied to the clinical area.

Charge Nurse C: What I understand is that charting that is being done manually at the moment will be taken over by the Information Technology System and the idea being that it should do two things really, it should give us very, very accurate information and we can go to any point on a time-scale and look at things, which we are unable to do at the moment. So it is going to offer us a lot of advantages in that sphere, and presumably it is going to free up our time because we spend a lot of time every hour charting and documenting things, so hopefully it is going to free up our time to actually give care as opposed to doing some paperwork.

PMN: Yes, I mean, if you were to take some of the bits of equipment that are out there and take them apart, like some of the very modern ventilators for example, I mean essentially they have got computer chips inside them and they are very sophisticated. Do you feel that they support you in the work that you do, that sort of technical backup?
Charge Nurse C: If we are talking about that example of the ventilator, then I mean because they have now got computerised chips, they are able to do far more things, and you can now ventilate people much more individually than you were able to do before, so if you have got a difficult ventilated patient, there is usually some mode that is going to suit them. That wasn't available before.

PMN: That's fantastic certainly for the patient. Do you feel it helps you at all in your role as a nurse?

Charge Nurse C: Well, it is constantly giving me information, second by second, so I can see what is happening to the patient, so yes, it is supporting me.

PMN: OK, fine. Thanks very much, I will hand you over to Irene.

ID: Thank you for coming anyway John. I think by now you have got the idea about what the purpose of this interview is really. From my part of the study it is looking at staff attitudes about the Clinical Information System in comparison to post implementation really, so I think some of the questions that you have already answered to Peter, what really I want to know is how do you feel about the current documentation and charting system?

Charge Nurse C: They are very time-consuming. They only show that particular, you know, they are on the hour, they don't particularly show us what is happening in-between-times and if we did want to document that, it is extremely difficult to document it and make it legible. The chart tends to become a mess and you don't get any information from it. And, you know, its not giving us a complete story really, so it is just a snippet every hour that we are charting, that we are documenting.

ID: So you have identified a disadvantage of the current system haven't you. Is there anything else that you feel dissatisfied with the current system in relation to legality, confidentiality?

Charge Nurse C: Well I always did feel that the information is there, it is on the Unit and it is not particularly secure. Anybody walking past potentially has access to that information, so it is not secure as far as the patient's confidentiality goes, and from our point of view I doubt very much that it is the best way that we could be doing things.

ID: Could you see any advantage at all?

Charge Nurse C: I suppose any advantage, I am not just thinking about the observations, I am thinking about paperwork generally, and I suppose it lets us get an idea of the patient because, especially when they first arrive, and we are doing the admission sheet and things like that, we are looking at things like what is their previous medical history, who is the next of kin and all that sort of thing, so we are getting everything in some sort of order and that is
possible because it is being done by hand, but I can't imagine that that's an advantage because somehow or other you are going to have to gain the same information whichever system you use. I don't see that writing everything down, doing every manually in this day and age is the best way that you can be doing things.

ID: You have probably heard a lot about the Clinical Information System. I think it has been long coming hasn't it. What are your perceptions about the Clinical Information System? What do you think it is capable of doing? Have you got any concept about that?

Charge Nurse C: I think what they're capable of is giving us access to the patient's current status and taking that from the moment they come in and so we can recall events at any time. All that information is stored. The other thing is that it is shared information. Whereas before members of the multidisciplinary team have had their own little sections, they will all be contributing and so all the relevant information will all be together, and we will all be contributing and we all be using that information.

ID: You are right. So do you think it has the capability to save your time once the system is up and running?

Charge Nurse C: I am presuming that its going to be user-friendly, in which case, it is probably going to be slow to start off, until we get the hang of it, it shouldn't take us long, and then it will be really easy and quick to get the information that you want.

ID: So have you had any fear about the CIS or have you had any perception about what can be the disadvantages?

Charge Nurse C: The disadvantage would be if the system shut down and you lost the information, and I presume that there is some sort of back up so that doesn't happen. At the moment because, you know, it is quite new to us, I can't actually visualise any problems that it is going to give us. Most people have had something to do with computers and most of that is computer friendly, so that it is telling you what to do, it is not difficult to use. So I don't really see any disadvantages at the moment.

ID: You feel quite positive?

Charge Nurse C: I am looking forward to it coming in, yes.

ID: Good, yes, that's good. You're the first person!

Charge Nurse C: Am I? Just shows how naive I am!

ID: That's it really, I haven't got any more to say or ask really.

PMN: Let's just finish off with one catch-all question to see if there are any issues that you might like to raise or which you feel are relevant. How do you
think that the current use of information technology, or computerisation, whatever you want to call it, within the Unit actually affects your role as a nurse?

Charge Nurse C: Well, the amount of information technology and things that we have got at the moment is extremely poor, so we don't have very much, and also the trained nurses gaining access to that hasn't been seen as a priority and so this is probably one of the poorest areas I have every seen as far as IT and it is quite frustrating to have a machine sitting there that you can't access to get the stuff out that you want.

PMN: Can you give me an example of that?

Charge Nurse C: If we want lab results we have tackled the problem now, in as much as we have got a sort of universal password and we can get in, that wasn't the case up until a few months ago. We were relying on the nursing auxiliaries having training. We have not always got an auxiliary on and it was not only that, it was the registering the patient in Intensive Care, getting labels, just things that make life a lot easier, they sometimes had to wait until the next morning. That's not good for us and it is not good for administration generally. For instance, somebody is trying to find the patient and the information that they get, taking it from the computer is old information because it has not been updated, so that kind of makes the whole system redundant if it is not kept up to date.

PMN: Any other sort of points that you would like to make?

Charge Nurse C: No. I am presuming that you will speak to us again down the line and see how we feel?

PMN: You may not be in that sample! So you may get let off.

ID: I am not sure. I am using the same sample so that the data comes from the same person otherwise there is not point doing pre and post implementation I think. The sample will be the same.

PMN: Well, congratulations John!

Charge Nurse C: Thank you, I will see you in a few months!

PMN: Thank you very much.
Appendix 2

Interview 4
Interviewers: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Sister D
Clinical Grade: F

PMN: Thanks very much for agreeing to help us with these interviews. Could you just tell me for the record that you are happy and you give your consent to take part in these interviews?

Sister D: Yes, I am happy and I give my consent to take part in the interviews.

PMN: Thank you very much. Just to start the ball rolling then, could you tell me a little bit about yourself and your career so far?

Sister D: I have been a Sister for 2 years nearly now, but 8 months of that was 'acting up' and then I got my position last Summer. I have worked in Intensive Care since I qualified actually on this Unit.

PMN: How long ago was that?

Sister D: Six years, so I have been here 6 years. I have done the ITU course, 998, I've done the Degree, I have studied at De Montfort University.

PMN: Well done.

Sister D: I am not sure what I want to do next. I am having a bit of a rest from study at the moment.

PMN: Good for you. OK, that's fine. So you have been actually working on this Unit for 6 years and you must have a good idea, fairly sort of well rounded idea of what the role of an Intensive Care nurse or sister entails. Could you identify some of the things about your work that actually gives you satisfaction as a nurse?

Sister D: I quite like the one to one aspect in Intensive Care and the acuteness of the area as well and also the contact with the families and relatives.

PMN: OK, so there are three things there. So you like this one to one relationship that you have with your patient. Could you just sort of explore that a little bit further, what sort of particular aspects of that do you enjoy?

Sister D: The fact that you can spend time with the one patient and do things that you perhaps wouldn't have time to do on a ward, personal hygiene and things like CVVH. You do everything, you make up the drugs for that patient, you assess the skin, everything, it's the whole holistic approach to that one patient.
PMN: I can see exactly what you mean, can you sort of identify why you enjoy that so much?

Sister D: Just because I feel that I have actually given a good quality and standard of care. When I have finished the day I feel that I have usually have given what I can, whereas I think if I had more than one patient as in on the ward I would feel quite frustrated.

PMN: OK, yes, that's quite clear. And the other thing that you said, was that you like the acuteness. Obviously working in Intensive Care you don't get much more acute than that do you? What it is it about working with acutely ill patients that you enjoy?

Sister D: It keeps your mind ......you have always got to be on top of things, you have always got to be thinking ahead, prioritising and I keep yourself up to date.

PMN: So it is quite challenging?

Sister D: Yes, challenging, yes.

PMN: OK, fine thanks. Right, now, the flip side to that coin, you have worked here for 6 years, there must be some things about your work that you know, you feel less satisfied with or you are not all that happy with. I am not suggesting that there are things you can't do, or anything like that, but can you identify some of those things?

Sister D: Obviously when we are busy and people are coming in and we have got no-where to send them. Its just when it is really, really, really busy and we have got more than one patient each, when we shouldn't really have, that's when I find it frustrating.

PMN: OK, so that's talking about workload, is that right?

Sister D: Yes, workload, and sometimes the skill mix leads to dissatisfaction, if you come on and somebody has phoned in sick or something and I've got a poor skill mix.

PMN: So, working as a Sister, especially, do you find that's a problem?

Sister D: Well, you notice it a lot more, because the responsibility lies with you on that shift.

PMN: Ok, fine, thanks, anything else, more sort of generally about working within the Unit, stuff like availability of equipment, other members of the multidisciplinary team, you know, just anything really?

Sister D: There is not really anything, I mean we are quite well equipped really, I would think we are, and I think the staff work together well as a team. Some of the medical staff can be straining at times, a lot of the junior ones,
but they are all new and they don’t know the area, so they need to get used to the area.

PMN: That’s quite an interesting aspect. Is it perhaps because you are very familiar with the area and what can be done for patients, and they are less familiar?

Sister D: Probably, yes. And sometimes relationships between our consultants and other consultants in the hospital isn’t very good, a communication break down.

PMN: Communication issues.

Sister D: And it leaves a situation sometimes. I can’t think of any major, major ones.

PMN: Good, OK, thanks. Right, next question then. One of the obvious features about the critical care environment is the amount of technology involved in patient care. How do you feel about that?

Sister D: Obviously they need that technology or else it wouldn’t be at the bedside. I have got no problem with using it because I have been trained to use it and I am happy to use it. Obviously if anything new is brought in I would want training on it before I was happy to use it.

PMN: Yes, I mean training is quite a big issue isn’t it.

Sister D: At the end of the day, once everything is running as in the infusion pump, ventilation, then there is still a patient there with basic needs.

PMN: Ok, yes, sure. Do you feel generally that the machinery and the computerised systems that you have out there, do you feel that they actually support the way that you work or do you feel sometimes that they can hinder the way that you work, or a mix of the two?

Sister D: Probably a mix of the two really, yes. You know, we do rely on like the gas machine, obviously that’s a form of technology isn’t it. We need that to see what’s going on. We get results out of the computer sometimes ……

PMN: And sometimes not!

Sister D: That’s useful instead of having to wait to phone from the lab, little things, so yes it does support. I can’t really sort of think of anything that hinders apart from when you’ve got a lot of equipment round the bed, that’s the only time, when its sort of dangerous for lifting and handling.

PMN: So generally you are feeling quite positive about the equipment and you feel it actually helps your work?

Sister D: Yes.
PMN: OK. Last question from me for a little bit then. What do you understand by the term ‘information technology’ or ‘computerisation’ and how it relates to working on the Unit?

Sister D: Well, I just thing information technology is computerised working. At the moment we have got the PAS system.

PMN: What’s that?

Sister D: Patient Administration System for the hospital and we have got obviously the results computer and we are not really computerised on the monitors but there is an element of ......., and obviously hopefully the CIS will computerise all the documentation as well.

PMN: I mean, a lot of the equipment out there like some of your posh ventilator, they basically have built in computers as well.

Sister D: And you can down load can’t you from them.

PMN: That’s right, yes. OK. I’ll hand you over to Irene.

ID: Thank you any way Susan. What I am asking you is your baby, actually, about documentation! A whole area of interest really! How do you feel about our current charting system and documentation at the moment?

Sister D: I feel that, particularly like admission things, they are very repetitive. We write things down, (noise on tape) writes the same thing down, the ward then writes the same thing down and we could admit a carotid from the ward for a few hours and we write everything down again, which is why we were looking at the work with the front sheet at one point but it never actually came off did it?

ID: Yes, that’s right, yes.

Sister D: I think it is very repetitive at the minute and time consuming and time wasting to be honest.

ID: How about the process of when you are doing transfer of a patient, how do you feel about the documentation .......

Sister D: Again it is quite time consuming and I know we photocopy the charts quite a bit, but like I said, it will be nice to be able to just, you know, get everything down loaded that’s being going on while the patient stayed and send it to the ward with them.

ID: A print out, yes.

Sister D: Yes, that’s it.
ID: You have kind of like answered my next question already, but what I really want to find out, you know, looking at the advantages, or not quite satisfied area, what are the things that you are satisfied with, with our current charting? How do you feel about, you know, the data, are they all together, or fragmented, or?

Sister D: Yes, I suppose it is all together. The results aren't there are they on the chart and I am not sure how good the doctors are at prescribing fluids and doing each bag and little things like that, I don't know if that will be addressed or not by CIS but it is all together, yes, apart from the results. It would be nice to have the results on the sheet as well, really, and what the doctors say on the round would be nice probably to have, because I noticed when I did some Bank work on PIC upstairs, they have a plan for the day on the doctors round and I think that is quite nice, and they had like a drawing of lines, or an outline of a body and then had like every morning when they did the new chart, they would put in where the lines were and what date they went in on it. It was just like little things like that, because all the specimens and that are written on the chart, but again in its in the folder isn't it separate.

ID: Yes, so when you want to get at information its all like bits here and bits there isn't it, quite difficult to collate it together to formulate decision making isn't really. You probably know about the Clinical Information System. What is your initial perception about what it does and what it is capable of doing. What is your perception?

Sister D: Well initially I thought that it was going to just sort of take over the sort of obs that we do now on the chart. That will just be sort of implemented initially, so that we will be chart less as such and it will all be on some software. And then, with parameters, which I know you were looking at, sort of respiratory and when it would alarm and what it would tell you if it was in VT or VF or whatever. But my perceptions of it were that eventually you would be able to get results from the labs perhaps and all the nursing notes and medical notes may be on ......

ID: Collaborative, care planning or whatever, assessment, yes. That's good, its practically what is entailed ....

Sister D: But that's obviously going to take longer.

ID: Well, hopefully, going back to answering the questions about whether we collect to the lab system or not, hopefully .......

Sister D: And Pharmacy, and things like that, because I was talking to somebody that came from, which hospital, oh it was a private hospital, and they were saying that they could tap in and order things from Pharmacy.

ID: It is quite likely to have that happen, but probably it is quite a way down the road, because Pharmacy is getting a system in, so once the system is going, we could link in with them, so hopefully we would do that eventually, like you say, so it is quite a sort of hopeful area to look into really in the future.
Sister D: Do you see any advantages in CIS at this point?

Sister D: Yes, I think well it will make everything legible ....

PMN: It's a start isn't it!

Sister D: And it will sort of be standardising it won't it as such which hopefully should be standardised. And again, well I think initially it will take longer to sort of get things onto the computer as peoples IT skills need to brushed up, but I think once they are used to it, then it will probably be better, but it is probably going to take quite a long time.

ID: How do feel for the initial period, having the two systems running?

Well there's not really anything ..........you can't really sort of just going from one to the other without people training can you? What to do, you'll have a bit of an overlap somewhere I would have thought. So you see overlap with a bit of paper documentation before we really get everybody skilled up. Right, OK. Could you see any disadvantages?

Sister D: Disadvantages of CIS?

ID: Yes.

Sister D: I know it sounds silly, and I am not the worlds best person on computers, but what if the system goes down, how do you go on then with all your paper work and things, do we lose everything, or would you be able to ..........?

ID: What happen is, if there is a crash or whatever, hopefully, there wouldn't be, what you do then, the contingency plan is to go back to paper charting until the problem is sorted out, but whatever is automated is still there and you can go back to retrieve it. It is the biggest fear, you know, about what do I do if the system has crashed, I have lost everything.

Sister D: I mean, companies have huge accounts on computers don't they of things, and probably don't have it on paper anymore, but you know its just when .......... The other thing is again I think with IT skills, initially it is going to take quite a bit of time to implement but hopefully once .............

ID: And that's it really, I don't think I have anything else to ask you. Peter has got one last question.

PMN: Just a last question, Susan, just to pick up any points that might have been raised, or you might have though about. How do you think that the current use of information technology or computerisation whatever you want to call it within the Unit affects your role as a nurse?

Sister D: Affects my role ......
PMN: Just sort of the way we use computers or computerised equipment at the moment.

Sister D: I suppose — it's a hard question really — it affects us all everyday doesn't it. I don't know if you are talking about even ventilators or not ......

PMN: Yes.

Sister D: We have never had computerised care plans have we, I know the wards had it here and they didn't get on with it did they? I suppose it does affect us all on a daily basis really because even if you are using the gas machine, you are going to get results from the computer. Hopefully it enhances the role.

ID: I am not quite sure how it enhances it, because we have not really experienced it yet have we really?

Sister D: Not CIS, but at the minute, we probably have not got enough to enhance it, like sometimes you can't get into the computer and its annoying, so perhaps sometimes it doesn't benefit you.

ID: Its quite piece meal.

Sister D: And sometimes that can affect your role. You waste more time sometimes.

ID: So perhaps something that actually integrates all these pieces together.

Sister D: And as well, they are not near the bed-side, hopefully CIS will be near the bed-side. At the minute you have to go the desk away from your patient. So that will be better.

PMN: OK. That's a good point. OK, we'll end on that positive note.
Interview 5
Interviewer: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Staff Nurse E
Clinical Grade: E

PMN: Thank you very much for agreeing to take part in this interview. Could you just confirm for the tape that you give your consent for it to be taped.

Staff Nurse E: Yes.

PMN: OK. Thanks very much. Now, just for the first part so I have established a base line, I would be quite interested if you could tell me a little bit about yourself and your career so far.

Staff Nurse E: I have worked in Intensive Care since I qualified in 1991, so have now got about 9 years experience. I am an E grade staff nurse. I have been an E grade since 1996. Work-wise I have always worked in this one Unit and I have not really considered working anywhere else as yet.

PMN: OK. So you have been on this Unit and in Intensive Care for quite a long time now. Would you say that you are an established practitioner, confident that you feel that you are familiar with everything that goes on in the clinical environment?

Staff Nurse E: Within my role, yes. There are areas obviously that I will always feel that I want to increase my knowledge base and all my skills but again there are other aspects of work on the Unit which I am not familiar with such as some of the facilitation issues and so on which maybe I will get some more experience of in the future.

PMN: So it seems to be what you're saying is that clinically you feel very confident but perhaps there are things like management issues which you feel less confident about. Is that about right?

Staff Nurse E: That's about right. If I am truly reflective about it I think there are lots of things that I still am clinically not sure about.

PMN: You never learn everything do you in ITU?

Staff Nurse E: No, and when you do it changes.

PMN: OK. Thanks. So you have worked on this Unit. You are obviously established in Intensive Care and you have been here for some time. So you must like it I guess? Can you tell me what is it that gives you satisfaction from working in this critical care environment?

Staff Nurse E: Difficult question. Its strange, because some time that I recently had off sick and I have actually missed the work quite a lot and I think there are a number of factors involved, besides the money. I think working as part of a team, I enjoy, and trying to promote sort of like team-work. But also I
think it is because I am in an area that I feel reasonably familiar with and I can use that information to the best of my ability. That sometimes makes it difficult to consider working in totally new areas because it scares you thinking you are going to have to learn from scratch.

PMN: OK.

Staff Nurse E: But I do think the work here, it does make a difference, I mean all nursing makes a difference.

PMN: If I could just try and focus you a little bit more, I don't know what sort of work you have been doing today, but you have identified the fact that you enjoy working as a member of a team, which I can well understand, but there are a lot of other things about working within the ITU. Can you just identify some things perhaps just that you have been doing today, that you know, you have felt good about, that you have felt positive about and have enjoyed doing?

Staff Nurse E: I like it when things come together i.e., when you can manage a situation well and organise yourself well and it goes smoothly and you can deal with potentially difficult situations without a problem. Trying to actually piece together what is going on, I like because it means you can use your knowledge and your experience probably more directly. I don't consider it to be my job to diagnose but there are things that I can point out that will help the doctors.

PMN: It seems to me what you are saying is that you have got a number of skills and you actually get pleasure from using them in an appropriate setting?

Staff Nurse E: Yes, skills, some of the technical side of the skills, and also I mean things like supporting families I enjoy doing. It is not always easy but again it is a skill that you learn over time.

PMN: All right, thanks very much. The flip side of that coin now. You have been working on ITU for a number of years and you have identified what gives you satisfaction. Can you identify some things that cause you dissatisfaction or things that you don't enjoy or that might upset you?

Staff Nurse E: I don't think there are that many things that upset me. I would say one for definite is when people fail to appreciate your workload. So, for example, when doctors may say "lets get this patient to a ward in an hour" and they just really haven't got a clue what is involved. That makes me really mad sometimes.

PMN: OK. That's actually quite interesting. Could we just explore that just a little bit more? In that sort of scenario, getting a patient to a ward in an hour, what are the difficult things for you, what are the challenging things for you to do?
Staff Nurse E: There are a number of specific things that you have to do. Those are in addition to your normal duties as well. So, for example, you may need to get somebody to photocopy the chart, there is the paperwork to get into the folders, there is the negotiating with the ward or the surgical on call just to try and get a bed in the first place, your MRSA screens, you have still got your drugs to give, your nursing care to give, your juniors to support, your colleagues to help and obviously ... them to help you as well. The patients are quite often what we describe as high dependency i.e. lower medical dependency but high dependency in terms of nursing. So all these things you have to explain, you can't just do the things, you have to explain to the patient what is happening, why we're doing this, why we are taking the lines out and as well as that cope with anything else that just happens to be thrown at you. So, you know, it is frustrating, because even just trying to get through to a ward, the number of times you can try phoning and its engaged and, you know, until you've crossed those hurdles you can't get the patient out and again sometimes senior staff and sometimes senior doctors will look at you and say "well why isn't this patient out, you obviously you must be doing something wrong".

PMN: Fine. That's very clear, thanks. Can you identify anything else perhaps? That's one issue, perhaps there is something on a day to day basis that gives you some dissatisfaction?

Staff Nurse E: I would say discourtesy, when people appear to be going out of their way to cause aggravation, or may be it's just that they are not aware the way that they are coming across because, you know, some people can easily upset others without trying.

PMN: Certainly, yes, it can be a very tense environment can't it?

Staff Nurse E: It can be a very tense environment and I think if you have got a lot of experienced staff nurses stuck together in a small environment where everybody has got there own ideas and so forth, then there are potentials for friction, but I believe that team work and support and harmony on the Unit are something that we have to work at and sometimes that means being self aware, sometimes it means having the guts to turn round and say "I'm sorry, you know, I was out of order", some people just can't seem to do that and I think that's sad.

PMN: OK. Can I just move on a little bit now, thanks. One of the obvious features about the critical care environment is the amount of technology involved in patient care. Can I just ask you personally how do you feel about that?

Staff Nurse E: It depends on the type of technology. I don't have a problem with technology if it is helping the patient and its helping you to nurse the patient and my ultimate goal is for that patient to get better. We are in the business of saving lives and the priority is always going to be that. I think you have to have some idea of the technical background of the equipment you are working with simply so that you can deal with problems or understand
problems, its sort of trouble shooting, whether its from an IV pump to a CVVH machine. You know, if you know something about how they work, you can deal with the problem there and then.

PMN: OK. So quite a sophisticated understanding of what they do and how they do it.

Staff Nurse E: Yes. For example, CVVH, if that starts to play up you can lose the whole circuit in a matter of 5 minutes. If you have got some idea of what is going on you may be able to rectify it, whereas if you had to wait for a technician to come in, that's it, its gone, you might say goodbye to the patient. On the other hand I think sometimes technology does increase your work-load and your responsibilities, so for example when CVVH was brought in, that was another thing that we could start doing that we didn't do before. There were more skills to learn, more work, learning to organise yourself around that, so ...

PMN: OK, so can I just ask you, the fact that there is a lot of medical technology in Intensive Care, was it perhaps one of the things that attracted you in or not?

Staff Nurse E: No.

PMN: Do you have any strong feeling about it?

Staff Nurse E: No, no. I came initially to Intensive Care because I had reasonably positive experiences as a student nurse working with high dependency patients who had often come from the Intensive Care, and I enjoyed the total patient care aspect of it. My original aim was to come to Intensive Care to build up some skills and knowledge and go back to the ward. I just never got round to going back to the ward.

PMN: And here you are. OK. Thanks very much. This is my last question for the moment before I hand over to Irene. Can you tell me, what do you understand by the term 'information technology' or 'computerisation' and how it can affect the way you work in the clinical area?

Staff Nurse E: I don't know how to put it into words. It is the utilisation of data, being able to .... I mean you need information, but the way you process information will make a big difference as to whether that information is of any use. So it has to be up to date, it has to be relevant. Information technology, computers and so forth can help with that if it is properly set up and constantly reviewed. My own opinion would be that sometimes there is an over optimistic view of what technology can do for us in terms of ...... because it is there to help you, it can't replace human skills.

PMN: OK. Fine, that's a good point for me to hand you over to Irene.

ID: I think you were talking earlier on about transferring patients from the Unit, it does take time because of paperwork and that sort of thing. I just want a
little bit more to find out, prompt you a bit more how you really feel about the
current manual documentation and manual charting, the care planning and
that sort of thing. How do you feel about it?

Staff Nurse E: I think in terms of charting itself, I think we have a problem
and I think we always have, because the amount of information that has been
offered to the wards has always been like the last 24, 48 hours worth, or
whatever we can photocopy or get on to a TPR chart. Now, that doesn't really
give a full indication to the wards, whether they use it or not, of what has
happened to a person say over two weeks. I mean, they may have been
regularly spiking with pyrexias and you won't see that unless you really
hunted through the notes.
In terms of the documentation itself, I think there are flaws to it, there are set
backs to it. I think possible one of the problems that all documentation faces
is that it keeps having little bits added on, another chart to fill in, another score
to work out, another this, another piece of paper, can you do this or whatever
and so it becomes very fragmented. I personally would like to see a complete
overhaul and the production of a single package that covers it all because I
think if things come in bit by bit and they are fragmented, they don't get done.
You know, people forget about the Waterlow Score or the lifting and handling
bit to fill in and I think it does get people down a bit, you know, there seems to
be the constant reams of information that is required, but I think also people
have to feel that that information is being used to a positive use. I don't know,
may be wards should have people who are specifically employed to collect
that sort of data to make sure that it does get done and get used, I don't know.

ID: So you see quite a lot of disadvantages. How do you feel about the
information that we have got now with the current documentation, are they all
there? Are they all relevant for you to form a picture of what exactly is going
on with that patient?

Staff Nurse E: Right, I think the documentation will never do that under any
circumstances because you can read through, for example, medical notes,
and you can spot quite clearly the inaccuracies in one form or another. I think
in reality we get the information through looking at the patient, making our
assessment using the monitor, looking at the trends on the chart, looking at
the medical notes and probably more so looking at the nursing evaluation
than the actual care plan. It may be down to the way the care plan is at the
moment. The whole point of a care plan is to improve patient care or to aid it.
Whether ours actually do that at the moment is questionable, or maybe just
that we lack the discipline to use it more. I do feel it is useful for junior staff to
have and to think about the way they are going to evaluate, but I've read a fair
bit of research that questions whether care plans in ITU can ever be up to
date because things change so quickly. But on the whole, you see because I
have been here so long, I am so used to knowing where to go to find the
information, whether it is the chart, or paperwork, or the patient, it would be
nice if that could be more brought together.

ID: Can you see any advantages of the current system?
Staff Nurse E: Of the current system?

ID: Yes.

Staff Nurse E: Yes. I think there are some advantages from sort of like manual paper work, which, may be it is just the way we work now, there is no reason why we could do without them. I would imagine, for example, if you had a system that automatically read what your pump infusions were at or what your ventilator settings were at, would that necessarily encourage people to check and to re-look, to see what is going on. I mean, for things like vital signs, we are always looking, we just happen to record them every hour. I don't know whether people would get lazy on that if they found that something was doing it for them.

ID: So you are talking about a disadvantage of the system if that is the automated data collection, is that what you are saying?

Staff Nurse E: It could be, but I mean, I think part of the exercise of actually, the manual side of things where you are having to look for information, record it, is that it teaches, particularly junior staff, to look for that information and to learn where to go for that information. But again, there is no saying that we shouldn't be able to use a more computerised system. It may be that we need to change the way that we approach it in attitude.

ID: Right. That brings me to my next question about what is your perception of the “Clinical Information System”. You may know that we are working on that project. What is your perception, do you know what it can do?

Staff Nurse E: Not in as much detail as I would have liked. Maybe some of the views I have had about it are because I have only had snippets of information. In general terms from the previous projects that we have done, I think there are serious failings because they were put together by people who weren't nurses and didn't realise nursing needs i.e. the people who are going to have to work with this, and I think that caused major problems because there was a lack of insight or appreciation. Whether that would apply to the CIS as it is now, I would imagine one of the advantages, you could argue, would be for more accurate data collection in terms of legal defence, and I can see where that is coming from, especially from the American side of things, but you know, do you want to get into a situation where everything is, how can I put it, the documentation is there more for legal defence than actually to benefit the patient. I don't know. We'll have to see.

ID: Just going back to what you are saying, can you see an advantage of CIS saving you time, you know, with paperwork?

Staff Nurse E: I think there probably are areas where it would.

ID: Can you give me some idea of what your perception of that would be?
Staff Nurse E: I can’t. I would have to see it. I would have to have people show me well this is what it can do and this is how it can help you, preferably by somebody who knows the work and who knows what is involved. I try to be reasonably open-minded about it but like I say, previous experience does tend to leave me a little bit cynical. I won’t dismiss the innovation out of hand but I am not prepared to accept something blindly, you know, I have to see how it can work. I suppose I am open-minded in some ways.

ID: Right. Can you see any disadvantages of CIS?

Staff Nurse E: Again, difficult to say. I think one of the big disadvantages is going to be getting it implemented, as with any form of change in the clinical area, especially a major change like this. That is not necessarily to say that there will be automatic resistance to it, there may be in some quarters, but it is just such a mental, philosophical leap, that people might find it quite intimidating.

ID: It is quite interesting you say that there might be from some quarters? What sort of quarters are you talking about, those who haven’t got IT skills or those people who just don’t like change, or?

Staff Nurse E: I can’t say that automatically people with no IT skills will you know, it is always going to be daunting for some people, you know, and it will be daunting for me, and I have got a fair bit of IT experience, but its because change brings different responsibilities and while you gain from change, it brings on high work loads so you are trying to get people who possible have just got comfortable with their roles and their responsibilities and now if you are not careful you are like turning them on their head and I think you get some resistance because it causes stress, because people don’t feel that they are in as much control as they once were. Mind you I think that applies to all forms of stress, if people don’t feel they are in control, if they don’t feel ...... if they were to feel that CIS is being done to them and not with them, then ....

ID: Could you expand a little bit more about, why did you say CIS “done to them, not with them”, could you just define that slightly”?

Staff Nurse E: Well, its like any form of change, that you are more likely I believe, to get a positive reaction to change if the people who are going to be involved in it have some degree of ownership in that change and how it happens. I mean, the classic resistance is to have somebody, not just in nursing, but in any corporation, have somebody come from outside the environment and basically say you are going to do this, and this and whatever.

ID: Do you see CIS that way?

Staff Nurse E: I don’t particularly. I am probably more optimistic about the system we are working on now because I believe there has been a lot more nursing input than there was before.
ID: Do you see it like the CIS will have any benefits, like to the patients, maybe not directly, indirectly towards your quality of care?

Staff Nurse E: If it can free up time, yes, it would, but I think it can also take time as well, especially if people don’t for example have keyboard skills. And going back to what I said, if people just rely on the system to make the observations for them, without actually looking at the information then you have got a problem there. I think one of the things that occurred to me, about CIS that would actually take up more time was that you are going to get certain parameters that are wrong, that the CIS will record, now they will flag them, they will come up in red I understand, things like when you try and measure blood pressure and you are doing a blood gas or your CVP happens to be hanging down on the floor, I don’t know, I just had the feeling that I was going to be spending a lot of time rectifying those than actually....maybe it is just something that you learn to do in time, but that puts me off a lot.

ID: I think initially, with any changes, learning new things, initially we are going to take more time. Do you see a long-term benefit with it?

Staff Nurse E: I think there probably will be, but I also believe that we are very much in un-chartered waters. We will probably find, you know, good things and bad things as we go along. It is like when you look at, to give an example, articles on the Scope of Professional practice, you had about six articles came out straight away, and then nothing for about a year and a half and that was because it wasn’t until it had been in for a year and a half that people would start saying “well this is a good thing about it, this is not a good thing about it” and I think that would apply to CIS.

ID: Just one last question before I pass you back to Peter again. Do you have any personal fear or anxiety about the system, anything computerised?

Staff Nurse E: No, my only real concern is that there is over optimism of what it can achieve.

ID: Can you expand that?

Staff Nurse E: Well for example, somebody once said of the old system it will come up on the screen and it will tell you when to give you Cephuroxime, I don’t want a machine to tell me when to give my Cephuroxime!

ID: You mean as a reminder?

Staff Nurse E: Well, I don’t know, was the system going to be “give the Cephuroxime now and if you haven’t done it now well why haven’t you done it now;?"

ID: I think .... won’t take it negatively because you could be quite busy really, can’t you doing things and if the computer can say “bing!” , you know, “time to give Cephuroxime” as a reminder, I see it is as a positive, not necessarily
negative .... I don't think it is the computer telling you when to give it, but it is a reminder, there is a difference ...... do you see?

Staff Nurse E: I think it ...... I think what it is is difficult to put into words, I think we have got to always remember that a lot of what we do is based on human skills, so for example with computerised duty rostering, I know that you can write something to actually add up the figures and add up the hours, but it actually takes some skill to actually write itself, which a computer cannot do.

ID: OK.

PMN: That is probably quite a good point for me to actually ask just a final question, which may or may not pick up points. How do you feel that the current use of information technology or computerisation within the Unit actually affects your role as a nurse? Do you feel it supports you, do you feel it works against you, or are you neutral?

Staff Nurse E: I think a lot of it you become blind to because you are so used to it. Such as the monitoring, the monitoring is information technology.

PMN: Absolutely, yes.

Staff Nurse E: You do take it for granted in some ways, so hopefully if you have a system that works well, you can integrate it into the Unit, then again you will start to take that for granted in some ways, i.e. that you are confident with it and it becomes part of your practice. It has always got to be there to support. I don't want it to dominate.

PMN: All right, I think that is probably a good point to finish. I think that is quite an interesting point. All right, well thank you very much for attending this interview.

Staff Nurse E: Thank you.
Appendix 2

Interview 6
Interviewer: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Staff Nurse F
Clinical Grade: E

PMN: Thank you very much for agreeing to do an interview with us. Could you just confirm for us that you actually consent to doing a taped interview?

Staff Nurse F: I have done.

PMN: That’s lovely, thanks. Now, I am going to start off with some questions and then Irene has got some questions as well. To start the interview, just to give me some idea about your background and where you are now, could you tell me a little bit about yourself and your career?

Staff Nurse F: I have been for the last year prior to working here doing Agency in London and Dublin and prior to that I worked abroad in Oman, Saudi Arabia, and before that in London, and I trained in Berkshire.

PMN: OK. So how long have you been working in ITU for.

Staff Nurse F: In ITU, since 1998.

PMN: OK, so that is 2 and a bit years?

Staff Nurse F: Yes.

PMN: And you are working as a grade E nurse at the moment.

Staff Nurse F: I am.

PMN: So, do you feel yourself as an established practitioner in ITU, or.....?

Staff Nurse F: I do, yes.

PMN: And you feel comfortable working within the environment.

Staff Nurse F: I do.

PMN: You are familiar with it.

Staff Nurse F: I am.

PMN: OK. That’s lovely. Obviously you have chosen to work in Intensive Care, can I just ask you if you could tell me some of the things which actually give you satisfaction working within ...?

Staff Nurse F: Within the NHS as it is today, one of the things that I find best about working in ITU is the amount of resources that are available to the ITU area as opposed to the ward areas, and also the staffing levels obviously tend
to be a lot better and therefore your team work is so much better and your staff morale is much better at that rate as well.

PMN: OK. So what you have touched on there are the staff that you work with, which I can certainly understand, and you have also mentioned resources generally.

Staff Nurse F: Resources across the board, yes, whether its staffing levels or what you have got available to you to help you care for your patient.

PMN: I would like to just follow that up a little bit because it is quite interesting for me. What do you think are the things that you like in ITU that actually do help you look after your patient, apart from staffing levels?

Staff Nurse F: The provision of your technical equipment and also the ancillary stuff that you need to monitor your patient from hour to hour or whatever.

PMN: OK. Fine, thanks very much. The other side of that particular coin, can you tell me, can you identify anything within the Intensive Care environment that actually causes you dissatisfaction or that you are unhappy with?

Staff Nurse F: Conflict between different teams of doctors and lack of communication between them and communication probably from ongoing shifts, particularly if you are in a busy situation and just the general chaos of paperwork at the end of the day, especially now because I have got a patient who is going to be discharged shortly and there is a mountain of paperwork, that is all repetitive paperwork, that I need to complete in order to get him to the ward, which obviously means, because I have two patients, it takes a lot of my time, and time away from caring for the patient.

PMN: Time that presumably could be better spent?

Staff Nurse F: Much better spent.

PMN: OK, so basically a lot of communication issues. Is there anything else that you ...?

Staff Nurse F: Not really, actually, no, no.

PMN: That's the main things that come to mind. OK, that's fine, thanks. Now, one of the obvious features about the Critical Care environment is the amount of technology that is involved in looking after your patients. Can me tell me generally how you feel about using all this technology, whether it is there to support you or whether it opposes you, or whatever?

Staff Nurse F: Well obviously there is a lot of technology and sometimes, depending where you are in your career and what you have been doing, some of it you may have come across and mastered a certain amount of familiarity with it and obviously I think updating and sort of refreshing your memory is
very important, but having the people there who can do that for you and having some student doing that and the provision of time in which you are allowed to do that as well and be sort of allowed to ask the questions without feeling that you are in any way inadequate for asking them.

PMN: OK, so you are almost talking about training issues.

Staff Nurse F: Yes, training, yes, or just refreshing, more so that even training in a way.

PMN: OK, so like getting updates and feeling comfortable with it. I mean, would you say generally that like for example you take some of the nice ventilators out there, they have all got embedded chips and they are all computer controlled essentially, so do you feel, and the same is true of the monitoring system, do you feel that that technology actually supports you in your role as a nurse or do you feel that it can generate as many problems as it solves?

Staff Nurse F: Basically it depends on what you are doing with the information that you are receiving and a lot of the time whether you actually need the invasive monitoring to the extent that you are using it, and whether the people who you are providing the information for, namely the doctors, are actually wanting this information or doing anything with it.

PMN: So just because we have the equipment doesn't necessarily mean that we have to use it.

Staff Nurse F: Yes, I think in a lot of cases patients are monitored to a great extent for things that don't need to be monitored for.

PMN: OK, that's quite interesting.

Staff Nurse F: Yes, your patient are not may be cardiology patients but they are still sitting there with all their leads intact and you are not giving them any drugs that might give in any way cause rhythm disturbances but you are still having them attached to monitors.

PMN: OK, thanks. Anything else.

Staff Nurse F: No.

PMN: Just the last question now from me before I hand you over to Irene. Just, what do you understand by the use of the terms 'information technology' or 'computerisation' and how they can affect the clinical area?

Staff Nurse F: For me computerisation is sort of trying to bring everything together on something, a screen in front of you without having to go into the corners of the room or of the Unit trying to find that information or to go to numerous different people to try and find that information. But obviously, whatever you put in to the computer is only as good as what is being put in to
it. So as long as that information that has been put in is correct, then I don't see a problem with computers as long as a) they are correct, and b) its appropriate.

PMN: Yes. All kind of there to support you.

Staff Nurse F: Yes.

PMN: OK, thanks. I will hand you over to Irene.

ID: Just to carry on what you were talking about earlier, you talked a lot about a lot of paper work and things like that. My question to you is how do you feel about that apart from say the repetitions? Is there anything else you feel about the current documentation that is good or bad, or what the advantages or disadvantages?

Staff Nurse F: Well certainly a lot of the documentation is very good because it makes you ask questions that you might not otherwise be asking, or it helps you to focus in on a certain aspect of the patients care, but I do find that because a lot of it is repetitive, a lot of it is time-consuming and it is a bit chaotic at times because you have got so many pieces of paper.

ID: So that is the main disadvantage isn't it really? The information is everywhere..... and then when you want to transfer patients you spend a lot of time trying to get it together. Are there any advantages? Are the documents we have got now accurate, you can find all the information there, or do you have to search everywhere for it?

Staff Nurse F: Well obviously you can only find the information there if somebody else has gone and put it in, and in a lot of cases the information is there if the person has had time to put it all in and in other cases it is not there and you are wondering a) whether or not it was not, and b) if it has been done, why has it not been recorded or what was the result of whatever might have been checked upon or done. So it is very much hit and miss, if the relevant bit you want is not there, or the relevant bit might be there.

ID: OK. The other thing I am asking about, have you got any sort of perception about what the Clinical Information System is?

Staff Nurse F: Well, more so from what I hope it will be, in that it will be just a coming together of all the information, bringing it all in, stream lining it and hopefully using it in such a way that if say I was going to transfer my patient today, I would be able to put the information into the computer and send it hopefully to the ward without my having to write anything down or even having to type it all again, I can just select it from the various aspects of his care and put it on to sort of a discharge sheet within the computer and send it to where ever it is that I am sending him.

ID: Do you find any advantages with that system? Can you see any disadvantages? If you could give me a few ...?
Staff Nurse F: Well, I mean, given what happened to the stock market yesterday obviously there is the potential for that sort of thing to happen within a sort of a medical setting as well, so obviously, and also like I said the information is obviously only as good as we are putting in and a lot of time I think because computers are relatively new to us, that we would be more trusting of what we see on computers as opposed to what we see in writing and therefore sometimes questionable information might not be questioned because it is written in front of you on the screen.

ID: Do you see as an advantage that it is going to save you time with this system when it is going to be implemented?

Staff Nurse F: I am hoping that once we are all familiar with computers, that obviously, yes it will save time. I mean you only have to think of if you want to write a letter at home on the computer, then you can do it so much quicker than free-handing it. So obviously after you are familiar with your typing skills, so I am hoping that it will be time saving and just easier to view if somebody comes along and asks you for information that you would be able to press a few buttons and show, if say the Surgeon comes along and asks you for information, then you would be able to show him relevant information. Or if a family member comes along and asks you what did the Surgeon say, or what is he doing today, then maybe you would be able to go into the screen and say well this is what procedure has been - whatever is relevant for saying to whomever you are dealing with, to just be able to go into the computer and pick out that information without trying to go through reams of notes.

ID: That sounds very positive. Have you personally got any fear or reservation about this system?

Staff Nurse F: Well obviously I have a fear of the initial stages of it going in and of the period of getting familiar with it, then obviously of the chaos of that period and obviously of the extra loading and work. And computers, you know we have been traditionally told are going to save us all this paperwork, but to date it hasn't really, you know in a lot of businesses, obviously computers are pretty new to us, but in businesses, as well, I don't know whether they have actually saved a lot of paperwork at the end of the day.

PMN: I think there is quite a lot of evidence that they might actually generate extra paperwork.

ID: That's it then really. That's very positive. I haven't got any more questions.

PMN: Staff Nurse F: If I could just sign off on just a last open question really, just to pick up on any points that you may have raised and may want to pursue. How do you think that the current use of information technology or computerisation within the Unit affects your role as a nurse?
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Staff Nurse F: Well, I shouldn't imagine that it would affect my role as from what I perceive it is going to be a support system and so therefore it shouldn't affect in such a way as to be negative really. It should affect it in such a way that it can provide you with more time.

PMN: OK. How about the current way as they stand on the Unit at the moment?

Staff Nurse F: How do you mean?

PMN: Well the use of computerisation and information technology actually within the Unit at the moment. How do you think that affects the way you work? Just rather than the CIS happening in the future, I am just wondering how you ...?

Staff Nurse F: Well, we don't really, OK, we have the space labs and we have that computer that we have for the lab results which nobody seems to be able to function and if that is anything to go by then we are going to be in big trouble!

PMN: I hope not!

Staff Nurse F: I mean, what we have got there at the moment is quite supportive, apart from the computer, so like you say it is going to hopefully.

PMN: It will maximise the use of the computer ......

Staff Nurse F:
I think it is so dated looking anyway that nobody really wants to bother with it.

PMN: OK. Thank you very much for your time.
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Interview 7
Interviewer: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Staff Nurse G
Clinical Grade: E

PMN: Jill, thank you for saying that you will take part in this interview. Could you just confirm for the machine that you actually give your consent to taking part in this interview and having it tape recorded?

Staff Nurse G: Yes, I do.

PMN: Thank you very much. Without any further ado I'll start off then. Here is the first question. You know that we are interested in this Clinical Information System that is going to be implemented, and so on. What we are doing at the moment is just like setting some base lines about what people's views and opinions about the system and computerisation within the Unit. So just to sort of get the ball rolling, could you tell me a little bit about yourself and your career and how you ended up working where you are?

Staff Nurse G: Do you want me to do my age and things?

PMN: If you feel it is relevant!

Staff Nurse G: Well, I am 31 years old and I have worked here for 6 ½ years. I started, when I qualified in 1992 to do some medicine for 8 months and then came here originally for 6 months experience and I am still here 6 years later. I don't know what else to say about my career. I have done my ITU course and I have been involved in teaching and things on the Unit, but nothing dramatic, I am waiting for Irene to give me something good to do!

PMN: OK, so you've been here, what 6 years.

Staff Nurse G: 6 years, yes.

PMN: 6 years, OK, so obviously you know the ins and outs of this Unit and your way around it. Working here in the Intensive Care Unit, what gives you satisfaction about your role as a nurse?

Staff Nurse G: I like to see the work I plan in the morning being completed by the time I go home and the patient progressing from being really ill to doing really well. That is nice. It is very satisfying when you know things you set out in the morning get completed and you can go home thinking "yes, I've really done well with that patient, you know, I've extubated them and I have got them ready for the ward and their family are happy". So that's really where I get my satisfaction from, that's why I work here really.

PMN: OK. Right, that's fine. I can quite understand that. If you think just perhaps about the broader ITU environment, you know the things about working in that sort of environment?
Staff Nurse G: That I enjoy?

PMN: Yes.

Staff Nurse G: I like the team-work. I had an A & E nurse this morning working with me and she was saying what I liked about it and we work well as a team and I think that is one of the biggest aspects of it, and I like that everyday is different on ITU, there are never two days that are the same which is another sort of inspirational aspect of it which can be very satisfying. Some days you can be very busy and you get a real buzz out of working here. Good for your adrenaline surging isn’t it. So yes, team-work and the fact that it is very different, that everyday is different are probably the two main reasons yes.

PMN: OK. Fine. The other side of the coin. You have worked in this environment for quite a while now. You know it inside and out. Can you identify things that you are less happy about, things that make you dissatisfied or unhappy?

Staff Nurse G: Nothing really makes me unhappy I would imagine. No, no I like working here. Some days when the skill mix is poor and you end up working on one side and you are doing probably four peoples IV drugs, I go home thinking, “Oh my God, did I put the right name at the top of the chitty, you know, because you can, when you are going from bed to bed, bed to bed, you can get disorientated, so that, I think from a safety aspect, that’s probably sometimes quite scary, but other than that, there is nothing I don’t like about ITU, no. You couldn’t work here if you didn’t like it. You wouldn’t be able to cope, because it is so busy. Since it has been 16 beds, its so different its unbelievable, the change in the pace is so different. So I think if you didn’t love it, you wouldn’t stay here, or I certainly wouldn’t any way.

PMN: You make it sound like a calling, like joining the priesthood.

Staff Nurse G: I’ve got to admit, I mean, I’ve tried something else and I didn’t like it, and I came straight back here and its amazing, you don’t realise how much you belong to somewhere, until you leave it and try something else and then you think “Oh God, you know, the grass is never greener on the other side”, for me anyway.

PMN: All right, excellent. OK. Thank you very much. Now one of the obvious features about the critical care environment is the amount of technology that is involved in patient care. Do you have any sort of strong feelings about that? Does is attract you, does it repel you?

Staff Nurse G: I think it should work in unison with your experience, things like extubation and things like that, weaning patients. I mean, I don’t need to do blood gasses and watch saturations all the time to be able to wean a patient from a ventilator because experience has taught me clinical signs looking at the patient, which I think some people come here because they love the technological side of it, you know, they love the monitors and
everything, and you know, something simple like the saturation probe goes
down to 80%, they panic and rather than looking at the patient clinically and
saying, is it on their finger, is there something going off ...

PMN: Are they blue!

**Staff Nurse G:** Yes. Do you know what I mean, they don’t look at colour and
pallor and things like that and they just go straight and panic and I think that’s
where technology and experience should work together, I don’t think it should
be all technology. I think your experience is really important.

PMN: Absolutely.

**Staff Nurse G:** And not enough people do that.

PMN: OK. That’s quite interesting in itself. Do you feel generally that the
technology that is out there, say the ventilators, the monitors and whatever,
do you feel that it actually supports your work as a nurse? Do you feel
sometimes you are fighting against it?

**Staff Nurse G:** Oh no, I don’t feel as though I’m fighting against it, I use it as
an associate to assess the patient in the process of care that I am doing. I
don’t, I mean some people think it is the be all and end all, whereas
personally I don’t. It is a tool, if anything, like a blood pressure cuff that you
use to take somebody’s blood pressure, a ventilator helps somebody breath
at a time when they need it. I don’t think that’s a priority, I think a nurses
clinical observation is more important than technology, but I think that you
have to use them both in this area to be safe with your patient if that makes
sense. Does that make sense?

PMN: Yes, perfect sense. Last question from me for the moment then is what
do you understand by the term “computerisation” or “information technology”
applied to the Unit where you work?

**Staff Nurse G:** At present, just monitoring really and I don’t know.

PMN: A lot of equipment out there like the ventilators are quite sophisticated
and they have got embedded computer chips.

**Staff Nurse G:** I wouldn’t think of those as, well I suppose “technology” I
would, but I wouldn’t look at them as computers, I always think of like the
monitors, you know the blood pressure stuff and all that sort of thing sort of
being the computerisation side of things rather than I do the ventilators. I
don’t know why, I don’t know, that is just the way I look at it. I’ve forgotten the
question now! Oh yes.

ID: What about the labs?
Staff Nurse G: Yes, the labs, yes, they're sort of technology aren't they. Computerisation, what else have we got apart from monitoring, ventilators, Irene's office, CIS. I've led you into that now!

PMN: That's right.

ID: Obviously you have some concept, you know, about the CIS project at the moment. What I really want is a base line, how do you feel about our current manual documentation, the traditional way of doing things, you know with the charting and nursing documentation?

Staff Nurse G: I think it is very time consuming.

ID: Right, OK.

Staff Nurse G: I'm discharging a patient this afternoon and I must have spent an hour sorting out, writing out forms and copying charts and its ridiculous!

ID: Just going back to what you said to Peter earlier on about time consuming, you know, is it part of the dissatisfaction side of it because you just spend so much time just trying to chase paper, trying to get it done, rather than looking after your patient?

Staff Nurse G: Yes, because you would much rather be there sort of caring for them than I would be sitting at the end of the bed writing out drug charts, forms and copying TPR charts out, which not being horrible, they go to the ward, they end up being filed and never looked at again anyway, so it's a pointless waste of time isn’t it.

ID: I would just like to just probe you a little more in that area. So, apart from like time wasting, you know, what are the things that you feel are not quite an advantage to us at the moment about our charting and documentation? The whole concept about documentation basically, the record of information of patients.

Staff Nurse G: I think there are too many forms that need to be filled in. I think it needs condensing.

ID: So it is quite fragmented?

Staff Nurse G: Oh, yes, you repeat yourself so many times and you must right out peoples pressure area scores about 14 times, which I find totally ridiculous. I have filled out three pressure area forms and then written it on the discharge summary and then you write it up in your little notes, that's five times I have discussed the same aspect of care which is stupid.

ID: So in terms of those repetitions, how about accuracy?

Staff Nurse G: Well, it depends if you are filling out all the forms doesn't it, unless you get somebody else to fill them out, then you are going to get a
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diversification on your results. I mean if you are filling it all out for yourself then obviously it is going to be the same isn't it, but I think if say I finished half of it and Susan took over and finished the other half, then I think you can obviously get grey areas where it's not the same.

ID: How about, going back to charting, how do you feel, how accurate the fluid balance is?

Staff Nurse G: It depends who has got the calculator! We used to check them didn't we religiously every night at mid-night, didn't we, but nobody seems to do that anymore. I don't think, do you mean actual charting or actually......

ID: Actually calculating it.

Staff Nurse G: I don't think that people write things done, like drugs and things, people miss-out all the time, so I don't think it is always as accurate as it should be. There is sometimes you come along and you look and think there is no way that it can be that and you check it. You know, you do get discrepancies don't you, because people hit another nought or something and don't realise and you are half asleep and you just write down whatever's there, so yes, I mean we're not perfect.

ID: We've talked about the down side of it. How about, is there any good side of it?

Staff Nurse G: You have to use your brain to tap the numbers in. No, not really, there is nothing good about having to sit there for half an hour ....

ID: Is there any advantage about it?

Staff Nurse G: There is, actually the advantage of doing your own fluid balance is that by adding them up yourself, you then know what your balance is for that patient and then you can assess according to their condition whether that's good or bad, so if you didn't possibly do it yourself, you probably wouldn't check it...

ID: You would probably ignore it ......

Staff Nurse G: Do you know what I mean, you'd ignore it and not sort of be able to titrate management that way.

ID: What is your perception about the Clinical Information System. You probably hear me talking about it and, you know, have some idea. What is your actual perception of what the system is all about?

Staff Nurse G: I am assuming – I don't know, I must admit I don't know a lot about it – I am assuming that it is a condensation onto sort of monitoring of
patient care, so you are doing everything through the monitors or through some sort of keyboard pad and reducing the paperwork. Is that right?

ID: Yes it is automated data collection. You know, instead of you physically putting down what the blood pressure is, the monitor sends the information to the system and then the system would just, you know, with all the flow sheets that I configure, would just show up, so really instead of manually doing it, it is automated, automatic.

Staff Nurse G: So is there any recognition that you have actually identified that has been done, as a nurse, that you have actually checked it or not, it just does it automatically and you don’t have to do anything?

ID: It does it automatically but there will have like warning sounds in critical range, in warning range. They say that although the system automates the data, the flow sheets are designed in a way that if it deviates from the normal range then it will like flash at you so that you can do something about this figure data.

Staff Nurse G: What no more hourly obs?

ID: Things like TPR and things like that will be all automated, no you don’t physically go to the chart to write it down. This is why the study is interesting, to see whether it will save time or not.

Staff Nurse G: Oh right.

ID: So it’s a concept about ..... 

Staff Nurse G: Anything that reduces paperwork is fantastic.

ID: And also the ability of that is to link in with other systems like the path lab system. Data will be automated from the path lab ...

Staff Nurse G: Like your results and things.

ID: Yes, but we are not that far yet, hopefully it will be the end of the year, and it will also link in with PAS system, you know, once you input data, lets say the Ward Clerk admits the patient, you won’t have to admit the patient to the system again...

Staff Nurse G: Oh right, its already done.

ID: So right, now you have some concept about what the CIS system is about, roughly or briefly, how do you feel about it? Do you think there is an advantage? I think I probably mentioned about a couple of advantages.

Staff Nurse G: Well I think its great, yes, if its less time consuming and you can spend more time with your patients and the families then it has obviously got to be a good thing. My only worry is that people observe the monitoring,
because some people just saunter round and never look at what is going on and I think that is one thing about hourly obs, you have to look at what is going on and you look at the whole picture whereas with that system if you don't write anything down, I would be concerned that some people wouldn't be, oh no they would, they would, there's nobody that wouldn't, no I think its good. Yes I think it would be much better.

**ID:** So, the advantage is time....

**Staff Nurse G:** Advantages, it is less time consuming and especially things like results coming straight to you, that would be excellent, because there is such a....now they get faxed through and the fax machine gets stuck and you get all these black squiggly lines and then you ring the lab and then they say we won't give you them and you have to go through the computer, and half an hour later you have got them back. But that is fantastic to have them come straight to your bed station.

**ID:** So talking in terms of that, apart from time saving it will also help you with accuracy.

**Staff Nurse G:** Accuracy, yes that's right, yes.

**ID:** OK. Can you see any disadvantages of this system?

**Staff Nurse G:** No, not really, only that people have to observe the monitoring and there is no sort of record that you have been doing that, that would be my only .......with new sort of staff that can't recognise trends and things, that would be my worry, but that's all really.

**ID:** So what you are saying, what you see on the chart, the trend for three days .......

**Staff Nurse G:** Yes, yes, well that's right, a blood pressure of 90 might be normal for one particular patient, but it might not be for somebody else and you don't want them coming along and panicking about something that's been a norm, but I suppose you learn about that anyway don't you.

**ID:** Have you got any personal fear about using the system?

**Staff Nurse G:** No, I've my own computer at home. My five year old son is better on a computer than I am!

**ID:** OK. How do you feel about, I think Peter asked you about how do you view things being computerised, have you got any fears in that area? How do you trust the technology?

**Staff Nurse G:** I suppose you could worry about it taking over your role in one way, you could have technicians who are unqualified watching monitors if they are taught how to look for trends and things, that's quite a scary potential!
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Staff Nurse G:
Yes, I mean you could couldn’t you, and then just have sort of NVQ level people doing washings and turnings and that sort of thing – that’s quite a scary thought. They’d never get rid of us though, no. No, technology doesn’t frighten me as long as it is used appropriately, you know, as long as people still use their clinical skills, I think…….

ID: What about the computer crashing?

Staff Nurse G: 
Well I suppose you would worry about that wouldn’t you. Would you not keep back up written, or back up files?

ID: Yes.

Staff Nurse G: But you have a risk with manually written things getting lost, don’t you, notes go missing all the time, so, it doesn’t matter where you store it there is always potential isn’t there.

ID: That’s very useful actually Jill, so I will just hand over to Peter.

Staff Nurse G: 
Have you finished with me now?

PMN: Just about, there is really just one last question Jill, which just might sort of raise some issues. How do you think the current use of information technology or computerisation whatever you want to call it, within the Unit, affects your role as a nurse, how do you feel?

Staff Nurse G: As it is now. Well as I said earlier, it is sort of a partner in crime really, sort of a partner in care I always look at it as. I mean without it, it is convenient having arterial lines that are transduced and CVP lines that are transduced because you can monitor your patient constantly and that is what critical care is all about. So I don’t think that you could ever get rid of it, I mean, I think it is good that you are making it more helpful by taking away paper work and things that keep you nearer to the patient, but I wouldn’t like it to go too far, but I don’t think it ever will anyway.

PMN: Maybe in ten years time?

Staff Nurse G: Well, in 10 years time I hope to be retired! But no, I have no problem with it. No its good, its good. The new monitors are good and things have picked up in that respect, but I think things are changing quite quickly, because we have got new filters, new ventilators and now this. I think there is quite a lot going on which for the old hand isn’t a problem, but for the new staff who are trying to sort of orientate themselves, get used to ITU and CIS and this that and the other, I think it changes quite a lot.
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PMN: How is that going to impact your role, these changes?

Staff Nurse G: Well it is going to make it hard isn't it, because you are going to have to be much more supportive for the junior staff.

PMN: So it will have an impact on your role in such a way that relieves you time, but your time will be spent supporting ..... 

Staff Nurse G: That's right, but that's a good thing because that will improve their patient care and make them feel more comfortable, because some of them don't do they, some of them get quite - I mean one of the staff was in tears the other day because she had had a bad week of very sick patients, and she just couldn't handle it and she obviously hadn't been supported properly, so that would give you time to sort of do that which is what I am here for, its part of my job, so yes, I'm a good mum at work and at home!

PMN: OK, that's a very positive note, so shall we wind up on that?

Staff Nurse G: Is that OK?

PMN: Yes, that's excellent, thank you very much.

Staff Nurse G: Marvellous!
Interview 8

Intervener: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Staff Nurse H
Clinical Grade: E

PMN: Jane, thanks very much for agreeing to help us out with these interviews. Can you just confirm that you have signed the interview consent form.

Staff Nurse H: Yes, I have signed it.

PMN: OK. And obviously if you have got any issues you want to raise before we start? (Pause) OK, thanks very much. I will just tell you a little bit about timing before we get started. These interviews shouldn’t last more than 30 minutes-ish you know the timing obviously will vary. At the end of that we may have a little bit of time to explore any issues that you actually raise during it. Does that sound OK?

Staff Nurse H: Yes.

PMN: All right, thanks very much. Just to get started then, it would be very helpful for us if you could give us a little bit of an idea about your background, tell us a little bit about yourself and your career up to this point to get some idea of your experience.

Staff Nurse H: OK. I qualified in Derby in 1989 and I have staffed on a female surgical ward for round about 18 months to 2 years on days and nights. Then I pestered the manager so much that he eventually relented and I went to I.T.U. for a 5-month contract. There was a bit of a break and I ended up working at a nursing home for a month or two and then I went to Birmingham. I worked at Dudley Road, which is City Hospital Trust now isn’t it? I did I.T.U. there for 2 years and did my E.N.B. 100 in 1992 there. Then I went from there to Walsgrave at Coventry for 18 months.

PMN: Where in fact we worked together.

Staff Nurse H: I worked with yourself and your wife and then I came to Leicester from there. I have been here for 5 years now.

PMN: Really. Time really does fly doesn’t it. So how long have you been on I.T.U. for?

Staff Nurse H: It must be round about 8 years now, 8 ½ years I.T.U. experience.

PMN: And you are working as an E grade at the moment aren’t you? How long have you been an E grade for, just roughly?

Staff Nurse H: Since Coventry, so 5, 6, probably about 6 ½ years now.
PMN: Ok. So you are obviously very confident within the I.T.U. environment.

Staff Nurse H: I like to think so, yes.

PMN: OK. Excellent, thanks. So, you know all about working in I.T.U. and you have spent quite a lot of time in it. Can you tell me a little bit about what makes it so satisfying for you as a nurse working in I.T.U.

Staff Nurse H: I think it is because you know everything that can be done for your patient, you’re doing everything for your patient, plus you are still part of the nursing care, because that’s why I trained to be a nurse, I like looking after people and the hands on care so to speak. I know the paper-work comes with it but .... a patient in I.T.U. you know that you have done absolutely everything you possibly can for that person.

PMN: Right, OK.

Staff Nurse H: It is satisfying.

PMN: You have raised some quite interesting things there if we could just explore just a little bit more. You talk about giving the nursing care, which I understand. What do see as the components of nursing care here?

Staff Nurse H: Well, its basic care for the patient.

PMN: It’s a big umbrella isn’t it?

Staff Nurse H: It is, yes, its actually looking after the patient, making sure that their physical well-being is safe and that we are making them feel better I suppose. If we can’t make them feel better, then its giving them the dignity and the privacy to be poorly, or if necessary to die with dignity. I also see it as looking after the family as well though, especially in Intensive Care, it is a huge part of our remit to look after the family and care for their needs as well and try to support them as much as we can and I think that sometimes you are actually caring for the relatives far more than you are physically for the patient. And then obviously you’ve got all the sort of medical and nursing bits that keep the patient going, sort of looking after all the ventilation side, the drugs, anything that they need doing really.

PMN: OK. So you are saying that there are a lot of skills involved.

Staff Nurse H: An awful lot, yes, not just physical skills, you’ve got sort of social and psychological skills as well.

PMN: OK, all right, excellent. I suppose the other side of the coin would be no working environment is perfect. You have told me what gives you satisfaction from working in this environment, can you identify some causes that give you dissatisfaction working within the I.T.U.?
Staff Nurse H: I think sometimes it is just the general workload isn't it, especially at the moment. We have got more patients than we have got staff, so you are sharing patients with staff who have only been here for three shifts and are having to look after patients, who I am sure are more than capable, but it is not an ideal situation.

PMN: OK.

Staff Nurse H: So you feel as if you are sort of skimping on the care that you are giving your patient. You do the very basics to make sure they are safe, but you don't actually do the whole care for them because you physically haven't got the time. You have got to keep a safe environment for everybody haven't you rather than just your own patient.

PMN: Yes, absolutely, yes.

Staff Nurse H: And then the new staff don't get the support that they need. Especially, I know that the nurse we have got this morning is a very senior nurse and she has worked elsewhere so I am sure she is very good, but you have also got junior staff at times who probably need a little bit more support and you just feel as though you can't give it to them all the time.

PMN: Sure, you feel you can't be in two places at once.

Staff Nurse H: You can't, no you can't can you.

PMN: So I don't know, would you categorise that as workload I think.

Staff Nurse H: I think it's workload isn't it, yes.

PMN: Yes.

Staff Nurse H: Sometimes it works very well. We haven't been like this for a long time I know, but I suppose it is unavoidable at times isn't it.

PMN: OK. So that is one source of dissatisfaction. Is there anything else that you can identify that sometimes makes you a bit unhappy about where you are working?

Staff Nurse H: Unhappy about where I am working — I quite enjoy my work really you know.

PMN: Well that's fine!

Staff Nurse H: There are bits and pieces I suppose but thinking off the top of my head I can't think — I don't think the way we .... our nursing care plans I think are abysmal, the ones we have got at the moment.

PMN: That's interesting.
Staff Nurse H: I would hate to have to stand up in court with one of our nursing care plans. The evaluation bit is fine. I think everybody writes what they should write, but I think the actual care plan we write from is just .... Well you might as well not have it really. You might as well just have a list of numbers.

PMN: Why is that then? Can you just tell me a bit about that.

Staff Nurse H: It's quite an impersonal care plan. It's done on admission and I doubt it is ever evaluated unless whoever wrote it is looking after the patient, so they have probably got the same care plan for about two or three weeks if they are in for a long time. I suppose if it is quiet somebody might sit and look at it and probably re-write it or check it out but it is not really tailored toward looking after a critical care patient. I think the idea is good but I think it needs reviewing. I think if we carried on with the paper work we would have to do it so that it was evaluated or reassessed each morning. You can do a very basic evaluation for that patient that morning.

PMN: Now, do you think that is because it is not very well designed, or is it perhaps because staff don't see it as particularly useful, or because of workload or ..... 

Staff Nurse H: It takes a long time to complete. It is very long winded. It has a lot of bits on there that I would be unhappy filling in .

PMN: Oh yes, like ....

Staff Nurse H: Well, when it comes to sedation, it just leaves you a gap and if you write Morphine in, then it says mg per hour. It is not a prescription chart. You can't write in how many mg per hour you are going to give that patient because we change it so often. So if you put 2 mg per hour, somebody writes 4 and that stays at 2 mg for the entire of that patients stay, its running as a prescription and I really don't agree with that. I never put a limit in, I will always write what they on but I won't put a limit in.

PMN: OK.

Staff Nurse H: It is the same with ventilation parameters, ensure that they are set at. Now if we are writing what the ventilation parameters should be set at, we should be reassessing that every day and we don't. It gets written on admission.

PMN: And of course its very dynamic isn't it.

Staff Nurse H: Yes, it just doesn't ... it is not user friendly. It is not the sort of thing you could sit down every morning and re-evaluation or re-assess for your patient's care because it is just not user friendly. It is far too time consuming.
PMN: Fine. OK, so we have talked about workload and you have identified some real short falls in the care planning. Anything else that causes you dissatisfaction.

Staff Nurse H: Not off the top of my head.

PMN: That's fine. OK thanks. Now, we'll just move on slightly. One of the obvious features about the critical care environment is the amount of technology that's involved in patient care. How do you feel about that? What are your feelings?

Staff Nurse H: Think that is why ITU nurses work in ITU.

PMN: OK, that sounds contentious to me....

Staff Nurse H: I think a lot of nurses in ITU have come from wards where they have been dissatisfied with the amount of care you can give a patient, all the politics that go on with it, and I think we come here because we can look after our patients and by the use of the technology we can actually give them everything we possibly can.

PMN: You sound very positive there about the role of technology.

Staff Nurse H: Well, I think sometimes we have to stop and think what we are doing. Sometimes I think we use too much technology on patients that probably don't want it, or families that don't really want it, but don't like to say "no, we wouldn't like this happening anymore".

PMN: That sounds very interesting. Tell me a little bit more about that.

Staff Nurse H: I just think ..., I don't know, I think it comes from a personal opinion I suppose. We had a very old gentleman admitted last week when I was here. He was 87 years old, he had been sat on the ward, he was already in renal failure, he had already got congestive cardiac failure, he had already got respiratory failure and there was something wrong with his abdomen. Now I don't know what picture the Surgeons painted to the family, but obviously a fairly rosy one because they decided to take him to theatre. Now, at 87 years old if that was my Dad, I would have said "no way". They took him to theatre, couldn't really find anything, washed him out, stuck a load of drains in, and brought him down here and ventilated him, at 87 years old. And I just think that sometimes we have to, I don't know ....

PMN: That just because we can, we don't necessarily need to - we shouldn't necessarily do it.

Staff Nurse H: Why should we, at 87 years old, he'd had a really good innings. He hadn't got particularly good quality of life. He had got dementia, he walked with a frame, and we stick him on a ventilator.

PMN: Yes.
Staff Nurse H: You know, I think its inhumane almost.

PMN: OK.

Staff Nurse H: I think if the technology is there and it is somebody who has got a fairly good quality of life pre-op — I'm not saying we should not admit the elderly, because I don't agree with that — if they have got a good quality of life, then fine — but I think we should have, I don't know, a conscience I suppose.

PMN: Yes, yes. How about the equipment that you use on a daily basis. Quite a lot of that is quite technologically advanced. How do you find using posh ventilators?

Staff Nurse H: I don't find I have a problem with them. I have never really had a problem with the technology side. I suppose, without blowing my own trumpet, I am quite a quick learner, and I pick up things. If I am shown once I am usually fairly adept at using them again.

PMN: Yes.

Staff Nurse H: And I have always been the one at home, if anything ever goes wrong with the video, my mum rings up "can you sort it out", so I don't really seem to have a problem with the technological side. There's nothing I struggle with.

PMN: All right, thanks. So looking at that just a little bit more closely, what do you understand by the term "information technology" or "computerisation" here with relevance to the workplace?

Staff Nurse H: Information technology — I think it has given us a wider range of information hasn't it, more areas to access from, and more information on how we use the machinery and — what did you say after information technology?

PMN: Oh, computerisation, just so that we have it in broad terms.

Staff Nurse H: I think it is just the way things are going isn't it? It's like says on GMTV "oh these computers will never catch on", but they do, I mean its part of the future isn't it. There is nothing you can do to stop it. You have just got to go with it and learn it as it goes along. If you don't keep up with it you are going to be left behind and struggle.

PMN: In your day- to- day work at the bed-side, a lot of the machines you use have got lots of computerisation aspects, like the ventilators and the monitors. Are you aware of that, or ... 

Staff Nurse H: I think you just use them don't you.

PMN: Right.
Staff Nurse H: I think I just use them, I don't really think about what is in them I suppose. The only time you think I suppose, is when you are explaining to new staff and you are talking about the old ventilators and you say old, but they are probably only about 5 or 6 years old and they work on a bag system, whereas now everything is chipped and it all works on just valves and chips and things and I think that's how things are going to go isn't it.

PMN: Do you feel that helps you, or does it work against you, or is it mixed?

Staff Nurse H: I think it makes life easier for the patient because the machinery is a lot easier to work through the computer chips. They are a lot more responsive to the patients needs. The older ventilators must have been absolutely horrendous to breathe through, whereas now the patients only got to sniff and the ventilator responds to it or accepts that there is a patient attached to the other end, so they are a bit more user friendly aren't they I think.

PMN: How about you using them?

Staff Nurse H: I don't have a problem with them. You know, I understand them and I feel I understand them enough to make me a safe user and I can understand how it works in respect with response to the patient I suppose, because at the end of the day it is up to how the patient copes with it really isn't it and if the patient isn't coping, I suppose it is needing to know what you can do to make it easier for the patient. I think that comes with experience doesn't it.

PMN: All right. Thanks very much. I will hand you over to my colleague now who is going to have a go.

ID: You probably will have read the letters that were sent out about the purpose of the joint studies. My part of the study is very much monitoring, or measuring the effectiveness of implementing the Clinical Information System, so my questions will centre round our current system of documentation and the future system and just really to get the gist about how you feel about it. It is really going to help me, to put things right. So, I am going to start asking something that is going to be very, very dear to your heart. How do you feel about the current methods of documentation and charting system?

Staff Nurse H: As I say, I don't like the care plans. I would hate to stand up in a court of law with the care plans. There are so many odd bits of paper kicking around that could be all put into one rather than having bits of paper for this and bits of paper for that. There are loads of different things that you are supposed to fill in for one patient and they don't all get filled in. So it does not aim for continuity of care does it really? It is not individualised at all.

ID: How do you feel about the charting system then?
Staff Nurse H: I think the charting system is wonderful! – because I designed it! It’s got my name on the bottom.

ID: Yes.

Staff Nurse H: I think the chart is improved from what it was. I think most people would agree that the chart has improved from what it was. But, improvements can always be made on everything can’t they. As you work with these things you discover bits that need adding or taking away. I think things can always be improved. But as a paper chart system, I think it is certainly more user friendly than the last one was. It is easier for people to find around.

ID: Which is going to bring me to the next questions. What are the advantages of the charting system now? You designed and improved it from the previous system. What is the advantage in it?

Staff Nurse H: Compared to the last one we had – it’s larger, it’s only got three days on it so you have got more space. The major important observations, the ventilation, the respiratory fluids, are at a glance larger to see rather than they were just sort of tucked in the corner on the last try. Apart from that it’s much the same really. It’s all on one chart. I still think ITU needs everything all on one chart rather than having lots of bits of paper, which is why we kept the prescription chart, although a lot of people are not so hot about having that there. Some people would prefer it separate, but I think if things are separate they get lost. If it is all on one chart at the end of the bed, then it is there for that patient.

ID: You talk about the advantage of charting system and you talk about the disadvantage of the care planning system. Can you think of anything that is advantageous on the paper documentations like your forms, your care planning?

Staff Nurse H: I think it is easy for people to use, isn’t it because it is familiar, nurses have always wanted to write things down, it is inbred in you isn’t it to write things down, chart things, document things. So I think it is familiar which it makes it comfortable doesn’t it. But everybody has to learn new tricks don’t they so ...

ID: So, you know about this Clinical Information System, it has been round about for a while now. How much do you know about it or how much do you understand what it is for?

Staff Nurse H: Well I understand that it is to try and get rid of all the paper documentation and to make it a little bit more legal and safe I suppose for nursing practice and the patient. It will make life easier because there won’t be so many bits of paper to fill in, so we will have more time for the patient and for the care that we are supposed to be giving. That’s what its for, its just to make life easier for everybody I suppose.
ID: Do you see it working with any other system, you know with the CIS?

Staff Nurse H: You should be able to bring up the results of things on to your particular screen shouldn’t you, rather than having to go down to the computer at the desk.

ID: That’s right.

Staff Nurse H: That crashes!

ID: Hope not! I don’t know at this stage whether you have an understanding about what the CIS system might be capable of doing?

Staff Nurse H: I don’t think I know what its full capabilities are no.

ID: No, right, OK. That’s fair enough. What are your expectations on the CIS then, you talk about its going to get rid of paper documentation, you know, is that what you expect or have you got other expectations?

Staff Nurse H: I don’t really know. I was thinking about this the other night. I think initially it will make things safe won’t it, and a bit more legal standing, rather than having scrappy bits of paper that are very subject to personal opinions and views, and I think it will get rid of that a bit. It will make it easier. You won’t have to sit doing paper work at the end of the shift, because you can add bits in through the shift can’t you, as you do something you can document it on the computer. You won’t be so religious on actually writing down your hourly obs every hour because it will be completely recorded anyway, so you would be able to just observe your patient throughout your shift, which is what we do anyway, it’s just that every hour we stop to write it all down.

ID: So you can see there are advantages in some ways.

Staff Nurse H: Oh yes, because all the pumps and the ventilator obs will still be able to go through the monitors won’t they rather than having to stop and write it all down every so often. So you will be able to pick up on a specific incident or something that you need.

ID: Which is good, you have answered my next question. Just one last question from me really. Could you see any disadvantages of the CIS?

Staff Nurse H: I think nurses are inbred, reluctant to change.

PMN: OK, that’s interesting.

Staff Nurse H: I think we are sort of a very, “we’ve done it like that, so we’ll do it like that” sort of system, so I think that will be a difficulty in getting people to actually change. You feel safe with a bit of paper don’t you. I think put it onto computer and it probably just feels a bit more impersonal. It’s not like
something that you have written, and I think people are scared of computers. 
I think people are scared of using the computer system.

ID: That's very interesting isn't it really. We live in a computer age.

**Staff Nurse H:** I know, I think once people get the hang of it that they will 
forget we every used paper won't they I suppose. It's just learning something 
new isn't it. It's new skills to be learnt isn't it, but I think nurses are very sort 
of, don't like change. They like to feel safe.

ID: So apart from its going to completely change from what you are doing, 
and that is a major disadvantage for people to grasp, is there any other fear 
that you have about the CIS system?

**Staff Nurse H:** No, I don't think so. No because it can be designed to work 
around us, rather than us designing ourselves to work around it, can't it. It is 
being designed for our usage to make it user friendly for the Unit and for the 
patients rather than us having to fit into a criteria that it has already got. No I 
don't think so. I'll try anything new.

ID: Do you think that if the CIS system coming will be an advantage for the 
nurse to enhance patient care?

**Staff Nurse H:** I think once everybody gets the hang of it, it is going to be less 
time consuming than the paper work isn't it. And I don't think things will get 
missed because you tend to find you only write your evaluation once per shift, 
if you do a 13 hour shift it is sometimes very difficult to remember what you 
did 13 hours previously and write down, so I think things do get mis- 
documented or not written down purely because of the workload, you've just 
forgotten it. So it will get rid of my scrappy bit of paper won't it that I have for 
my shift. I have a bit of paper and write everything down and then at the end 
of the shift once I have written everything down and crossed it all off I can 
throw it away. So, because you can put it in as you do it on the computer, you 
can just add it in as you do it, so it can't be forgotten.

ID: That's very good. I have got no more questions thank you.

**PMN:** Just a last general question really, just in case there are any points that 
you want to raise or whatever. How do you think that the current use of 
information technology or computerisation or whatever you want to call it 
affects your role as a nurse, the way you work.

**Staff Nurse H:** I think it makes you more aware of keeping yourself up to 
date, because if you do slip behind, you really are going to lose out I think. I 
think you are going to miss out on things if you don't keep yourself up to date, 
and know what's happening, especially with the new ...we have got lots of 
new machinery around and I think it is important that you familiarise yourself 
with all this information and all the technology that we have got coming in, it is 
important that you familiarise yourself with it, so that all of a sudden you're not 
dumped and said "look after this patient" and you think "can't do that, don't
know what that is, don't know how that works", so I think it is important that you personally make sure that you are safe with these things rather than waiting for somebody else to come along and say "are you happy with this, do you know how this works", you should be saying "I don't know how this works, please will somebody show me" to make sure that you are safe to use it.

I think people just sort of blunder in and think they know what they are doing, because we have always done that, and I think sometimes it is not a safe usage. You know, there are certain pieces of equipment we have got now where people are quite blasé about them and I think sometimes you need to have a little bit more knowledge about how they work, just to make you safe. You have got to be a safe practitioner haven't you.

**PMN:**
OK. Any other questions you want to raise.

**Staff Nurse H:** No, I don't think so.

**PMN:** OK that's excellent. I shall switch the machine off.
Interview 9
Interviewer: Peter Norrie (PMN)
Participant: Staff Nurse I
Clinical Grade: D

PMN: Dianne thank you very much for agreeing to do this interview with me. Could you just confirm for the tape that you did actually consent to undertaking the interview?

Staff Nurse I: I do.

PMN: Just to start it off I would be grateful if you would tell me a little bit about yourself and your career just to give me some idea how you have got to where you are at the moment?

Staff Nurse I: Well, I sort of always wanted to be a nurse, from being quite young. I mean, I would occasionally change my mind and want to be a teacher, but I always came back to nursing, so when I finished school I did initially start a BTEC course, and then for various reasons dropped out. But then I did a year pre-nursing course to actually get some experience in hospitals and sort of to get the qualifications required to actually come and do nurse training and started Project 2000 in March 93 and qualified May 96. From there I actually worked on an integrated medicine ward, which was generally geriatric work and although it was a very good ward for sort of staff support and sort of learning the basics from being qualified and getting sort of your IV Assessment and Drug Assessment things done like that, it eventually got to the stage where I wasn't finding it very challenging and could almost go into automatic mode and sort of see people that were actually at a higher grade to me and sort of looking at their skills and their knowledge, I felt that I actually needed to get away from that area to actually develop myself and obviously sort of get back to basics, which was why I moved to ITU in October of 98. And then obviously where I am now, is just starting the ITU course and developing myself by doing the Degree.

PMN: Right, so you have been qualified for about 4 years.

Staff Nurse I: Its 4 years this month.

PMN: Oh right, and you have been in ITU for what about 18 months.

Staff Nurse I: 18 months now, yes.

PMN: OK, thanks. So where would you say you stand in your development as an ITU nurse? Would you say that you are sort of entirely familiar with the clinical area, would you say that you are still consolidating what you do, or?

Staff Nurse I: I have sort of a basic skills in that I can come in, in a day on a shift and I know sort of what needs doing and how to plan myself for the day, but I am sort of trying to get to the stage where I am actually learning to understand why I am doing what I am doing and obviously having sort of the
sort of getting from being like a novice to the expert phase and actually having this sort of intuition to kind of be able to predict what comes next, you know, and obviously kind of putting the pieces together. That’s sort of what I am trying to do at the minute.

PMN: Yes, so do you feel quite comfortable within the Intensive Care setting, or do you feel quite uncomfortable in it?

Staff Nurse I: I find, it depends basically what sort of day I am having. I have some days where I can go and I really feel as if I have done my best and I have achieved something with my patient, and then other days if I have something that’s a bit more complicated, I sort of feel like I’m just qualified again and haven’t got a clue what I’m doing, you know, so it varies from day to day. But I do enjoy the work and you know its just like getting on with it.

PMN: Well I think that’s part of the Intensive Care setting isn’t it, that no matter how long you’ve been there, there is always something that’s going to test you and be challenging. OK, thanks very much. The next point, so we have established that you are quite familiar with working in the Intensive Care environment and you have identified I think probably some of the reasons that you like working there. But can you tell me what gives you satisfaction about your role as a nurse working within the ITU?

Staff Nurse I: I think a lot of it, and why I am actually enjoying it so much at the minute, is because you can’t just focus on one thing, you have to be able to look at the overall picture and how various different things are affecting other things and the fact that you are able to concentrate on sort of mostly one person at a time and you don’t have to worry about the fact that you have got 24 patients and you need to get them all sort of washed and you need to make sure that they are all progressing. You can just concentrate on that one person and give them your best possible care.

PMN: Yes. OK, I can certainly understand that, you know, it’s the one to one care and you are delivering holistic care.

Staff Nurse I: And it does obviously require a certain base knowledge as well and that was the problem with the work I was doing before, I could go into automatic and I didn’t have to think about what I was doing, whereas here I have to think about sort of like what my anatomy and physiology is and obviously what the complications of the patients are and then obviously what the interventions that we are doing are going to affect what is going on inside, and obviously what they are going to develop from that and you know, just this whole picture, rather than just sort of task things, you know, getting them washed, getting the doctors round and things like that.

PMN: OK, thanks, that’s very clear. If we could just think about sort of the Unit environment, are there other things that you can identify that you enjoy about working in the environment, things like perhaps colleagues or the physical environment itself or...?
Appendix 2

Staff Nurse I: I mean it's quite nice like you say to have this one to one and to have the higher staff ratio and obviously the fact that there is somebody there that is always more experienced than you, and you know, there is always somebody that you can go to and ask for support even if it is for something simple that you might have forgotten on the day, a lot of the senior staff, they don't make you feel like you're silly or that you're incompetent for not knowing it, you know, and a lot of them they will actually try and get you to try and think it through for yourselves rather than just sort of thinking that you're being silly and just telling you what it is and then expecting you to be able to take it in and learn from that. They sort of get you to think it through and what have you, which I find quite useful.

PMN: OK, very good. So you have given me two good reasons that give you satisfaction about working in ITU. Can we talk about the flip side of that particular coin. Can you identify some things that give you dissatisfaction about working in the environment?

Staff Nurse I: I think some of the things at the moment are just more my inexperience than the actual environment itself. Stuff like, if I want to look after a different patient, but I know that I can't because I have not got the skills to look after them but then sometimes, there's not, if we are at a particularly busy time, there's not enough senior staff to actually support me, you know, to actually look after that patient and develop my skills and I mean, we have like the competency sort of folder and basic package to work through, and even now sort of 18 months later I have not got it all signed off. I suppose it is a trivial thing to kind of think you have to have a signature to be able to say you can do it, but ......

PMN: Staff Nurse I: What do you think has sort of stopped you getting that completed on time?

Staff Nurse I: I think some of it was obviously because I actually had an F grade assessor, and a lot of it we were quite busy when I first started on the Unit and obviously being an F grade she was actually required to be facilitator, so wasn't able to provide the support and obviously sort of progress with the skills, and then she did actually leave the Unit 3 months into my time here and then obviously nobody was actually allocated to take over and then it wasn't actually until I had an IPR recently that we sort of set a plan of action to obviously get some more of that done and obviously look at the next stage and tying that in with the course and stuff like that. I mean, it is sort of a good idea to have the package to work through, but then you have not always got the resources like you say with the staff to actually carry it through and be able to have done in the time scale that they would like it done.

PMN: OK, thanks, is there anything else perhaps just on a day-to-day basis that you can identify sometimes causes you dissatisfaction or unhappiness?

Staff Nurse I: I can't think really. I think the only thing is obviously with some of the medical staff, but I think that's more of a communication problem.
PMN: What sort of things?

**Staff Nurse I:** When you have sort of the doctors from other areas actually coming on to the Unit, they just wander on, look at the patient, "yes, that's all right" and sort of disappear without actually communicating as to how they feel the patient is progressing and what the next plan of action is and obviously they may tell the patient one thing but not bother letting us know so we end up, as the old story goes, we end up picking the pieces up when they have told them something tragic, or they have told them they can drink, but they have not told us, so the patient goes mad, "why can't I have a cup of tea" - "well nobody told me you can have a cup of tea".

PMN: OK, that's fine, thanks. One of the obvious features about working in the ITU environment is the amount of technology that is involved in patient care. How do you feel about that?

**Staff Nurse I:** It was a bit frightening to begin with, but obviously it is a case of being familiar with it and obviously getting to know how it works, and what the problems are and obviously you know, sort of what to do if there is a problem. I mean, I am not very familiar with computers, but sort of the space labs that we have at the minute with the touch screens, it's a case of I can do what I need to do with them at the minute, but if there is something new, I am sort of a little bit dubious, but I think its more because I am not familiar with it than anything else.

PMN: Do you feel that technology supports the way you look after the patients, it actually assists you, or do you feel sometimes it hinders you in looking after your patients or is it a mix of the two?

**Staff Nurse I:** It's a bit of a mix of the two, I mean, I think that the space labs work quite well and obviously the other sort of infusion devices and things, they work quite well, but something that has been brought in recently, was being able to retrieve the blood samples via the computer at the desk......

PMN: Oh yes, that sounds like a good idea?

**Staff Nurse I:** Yes, it is when it works. I mean, nine times out of ten you can't actually get into the computer screen, it sort of comes up with a different starting message and you can't actually get it into the directory that you need it to be in to get your results back and then obviously it relies on the people at the other end having put the results in for you to gain access to, so you might be able to get results, but it is not the most up to date results and obviously we do have the fax, where they are supposed to fax them through within a couple of hours of them being done, but you know, its kind of obviously if the paper is there at the time and things like that, so obviously the ideas there but, you know, if it doesn't function properly it's a 'pain in the bum' because then you have to spend twice as much time chasing it up anyway.

PMN: OK, anything else?
Staff Nurse I: Not that I can think of at the minute.

PMN: What do you understand by the term ‘information technology’ or ‘computerisation’ as applied to the clinical area, or can you identify aspects of it that you use?

Staff Nurse I: The main things obviously that I know at the minute, is with the development of this Clinical Information System obviously because we have sort of been involved in trying to set it up so that it works as we want it to work. I mean, obviously it is basically trying to ....because we have the space lab computers, its actually sort of making better use of them so that we are not going to actually use the documentation, it will reduce the documentation and obviously made things sort of central so that you can just access it from one point and its all sort of there.

PMN: Do you feel positive about that?

Staff Nurse I: Again, it's a case of, its not something I've used before, so I a little bit nervous about using it, obviously, because I am not very familiar with computers in general, but obviously if it does what it is supposed to do and if it works ...

PMN: They are quite big 'ifs' aren't they?

Staff Nurse I: Yes. You know, I think it is just something obviously as it comes in to play and as it starts working and we find out how it works and see the benefits that its supposed to do for us then .......

PMN: OK. So there is potential there?

Staff Nurse I: Yes.

PMN: OK, thanks. I will put my Irene hat on now and ask Irene's questions for you. What do you feel about the traditional method of the patient data collection, documentation and the way you chart things, that's basically things that you do now?

Staff Nurse I: Like I just said, because it is obviously familiar with, I feel it works well at the minute in that every thing is there right in front of you, but then there is some times where you are finding that you are having to sort of spend a lot of time going back trying to retrieve information and it could be that you are looking through a pile of notes, so many inches thick and you know, it's a case of this old if its not written down, you don't know what's happened, or you can't say whether it has been done or not, whereas it might have been but has just not been written down. It does rely on people actually putting the information on the paper for you to be able to actually go back and read it so .......

PMN: You have probably answered some of the aspects of this next question with that. What do you see as the advantages with the current methods of
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documentation. Can you identify advantages with the current methods of documentation?

**Staff Nurse I:** Obviously like I just said, it is literally in front of you at the end of the bed, so obviously with the ITU charts that we have at the minute, you can look at the sort of trends over the past 3 days. Obviously anything longer than that does take a bit more time to try and retrieve the information. I suppose coming into the disadvantages as well ....

**PMN:** That's my next question.

**Staff Nurse I:** Everybody sort of writes on them differently, so it is a case of what somebody might interpret is different to how somebody else interprets the information or how somebody documents the information differently. I have lost my train of thought there!

**PMN:** OK. We are talking about the advantages of the current methods of documentation and then we are going to talk about the disadvantages. Can you see any other advantages of just what you do at the moment. I mean, you say its there at the bed-side. You have also said that you are quite familiar with it, which is ........

**Staff Nurse I:** Yes. Because the charts, we have the sort of 3 day chart so you can look over the past few days. Obviously there is space for documenting changes to what you are actually doing to your patient, with the ventilation changes or with fluid prescription or drug changes, so you can actually look at where you have made a change and what obviously has happened because of that change, or if there have been any problems over the past 3 days, you can look what was leading up to that problem, whether there is anything that instigated it.

**PMN:** And the disadvantages you mentioned the fact that people use them in different ways, perhaps one nurse might write something ......

**Staff Nurse I:** Yes, I mean the main problem we have with the fluid balance section which is where people are recording drainage output, you know, one person will write, say with the chest drains, somebody will sort of take the zero from one point so of course they do their running totals, somebody else comes along and takes the zero from a different level, so of course it totally alters the fluid balance output and somebody might say they have had this vast amount of loss from this chest drain, but its not, its because its actually been documented wrong. So obviously there are problems with that.

**PMN:** OK. Now, if we could just move on a little bit. You know about this Clinical Information System that is going to come and do marvellous things, what do you know or understand about the Clinical Information System implementation in the ITU?

**Staff Nurse I:** As far as I'm aware, whether it is the correct understanding, like I say, it is making better use of the fact that we have got the space lab
monitors at each bed station and rather than having the sort of paper work at the end of the bed as well, we will actually be able to use the monitor to actually input the information as far as like the fluid balance and things like that, we will actually be able to have like a drug prescription on there. As far as I know, it will actually replace the documentation that we have, so it should reduce the amount of time we are actually writing things down. We should be able to just record them on the computer and it will be easier to retrieve the information and it will all be there and you can obviously access it easier.

PMN: It sounds very good. What are your expectations of the Clinical Information System?

Staff Nurse I: Well I suppose, like I say, the idea is that it will reduce the amount of time that you are actually doing documentation so it should allow you more time to do hands on patient care and it will improve the quality of care that you are actually giving.

PMN: That's right, so hopefully it might save you some time. Any other sort of advantages that you can identify, potential advantages?

Staff Nurse I: Obviously like I was saying, if you are looking through piles of notes, it is more of a central store of information so that you have not got one lot of information in one place another lot of information somewhere else, it is all there readily accessible ......

PMN: So people should know where to go for their information?

Staff Nurse I: As far as I sort of understand, it is actually going to be kind of like a flow chart type system, so you put one bit of information in and then it will maybe ask you a series of questions and it will sort of guide you as to getting the information that you need to get and point you in the right direction, or that might just be a misinterpretation.

PMN: That sounds fantastic. Can you perceive any possible disadvantages with using the CIS?

Staff Nurse I: I think one of the main problems initially will be the fact that a lot of people, although they are used to using the space labs for recording the observations, I think a lot of people will be a bit wary about using them, because it is something new and obviously it is a 'computer' which a lot of people will obviously be quite frightened about using. There is kind of this thing that, you know, it's a bit like you only get out of the computer what you put into it, so obviously you might get one person that uses it really well, but then somebody else who doesn't put the information in, it works back the same with the paperwork, it depends on the people that are using it as to how well it will actually work back for us. And obviously there is always the problem with computers, that they might fail if there is a power cut or you know, problems, viruses in the system.
PMN: A number of people have highlighted that as potential problems. OK. Just the last question now. Thank you for staying awake so far! And it is just a sort of hold all question really, perhaps just to raise any issues that you might want to raise. How do you think the current use of information technology, or computerisation, call it what you want, affects your role as a nurse?

Staff Nurse I: The current use? I think at the moment it is very limiting, like I say, because of the problems we have in particular with the retrieval of the blood sample results. It is a case of its not always readily available, it is not always easy to use and then we do, instead of being able to get the results quickly and then go back and sort out the problems as far as the patient is concerned, you then spend another sort of 10 minutes chasing up what you should have been able to get within a couple of minutes. So I think at the moment it is quite time consuming and obviously takes you away from time that you could be giving care to the patient. But then, like other areas, like the use of the space labs, it is quite easy to use, its quite easy to respond to, to try to you know, sort your patient out and you can actually see what is going on with them and well as obviously looking at your patient, its there and actually supports what you are doing for them and lets you know how they are responding to them.

PMN: So a little bit of a mixed bag, but I mean generally you seem quite positive to me about computers supporting what you do?

Staff Nurse I: I don't have a problem with using them, obviously providing they do support what we're doing and they don't cause problems. The problem of putting all your eggs into one basket, obviously if it does fail you are back at square one, back to doing the old paperwork and writing everything down. So I think it is just a case of actually getting it up and running and then seeing how it goes and seeing what works. Thank you very much.
Interview 10
Interviewer: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Staff Nurse J
Clinical Grade: D

PMN: Hello, good morning. Alison, thank you very much for agreeing to do these interviews with us. Can you just confirm with me that you are happy to do these interviews and that you have signed a consent form.

Staff Nurse J: Yes, I am happy to be interviewed and I have signed a consent form.

PMN: Excellent. Thank you very much. Right, what I would like to start off with, just to get the ball rolling and set a base line for us, would be if you would just tell me a little bit about yourself and your career and how you have got to where you are at the moment.

Staff Nurse J: I qualified in November 1997. I worked on a surgical 4-bedded HDU at the Walsall. I also did a bit of time on the ITU, enjoyed it, but there wasn't much scope there and they had a very limited amount of patients due to the hospital being quite small and it hadn't that many specialities. Then I came here about 6 months ago.

PMN: And as an ITU practitioner, how do you feel your development is, where do you feel you are?

Staff Nurse J: I am certainly learning something different every day and I certainly feel more confident now and competent in what I am doing. I think the main problem I had initially was with ventilation. I hadn't experienced much of it before, which I am certainly more confident with and understand more now. There are still little areas that I still ask about occasionally, but I feel quite confident really.

PMN: OK. Good. All right, so you are obviously quite established now in ITU, even though you are still on a learning curve. Can you tell me about working in ITU? What was it that actually... why do you like it so much? Why does it give you satisfaction as a nurse?

Staff Nurse J: I think it is the one to one care really and because there is a lot of continuity as well, because you mostly go back to the same patient and you get to know the patient and the family. I think it is all to do with one to one nursing.

PMN: OK. I think I know what you mean by one to one nursing, but maybe it means a little bit different for you. Can you just tell me what you mean by that?
Staff Nurse J: One nurse to one patient. You deal with that patient as a total whole and there is usually a lot going on with the patient as well in all different aspects and it can be with different specialities as well.

PMN: OK, so you are working with the patient on a one to one basis. So what sort of different roles do you take on to actually care for that patient? I mean, what do you do just on a daily basis?

Staff Nurse J: Well you act as the patient's advocate, because obviously a lot of the time they are sedated and ventilated. You do everything don't you.

PMN: OK. All right, that's all right. I won't press you too hard on that. So you have given me quite a good idea of why you actually like working on ITU. There must be another side of the coin. What causes you dissatisfaction or makes you less happy about the work you do on the Intensive Care?

Staff Nurse J: I think the only thing that really pops into my head that I can think of initially is I suppose the stress for the beds. And there is not sometimes enough staff and they are always wanting to push the patients in and it sort of, I don't know, I think it is certainly staffing sometimes. When it is very busy you are keeping an eye out for another patient. You do everything for the patient but maybe not to a level that you really want to.

PMN: So that is to do with staff ratios to patients?

Staff Nurse J: Yes, sort of the pressurising everywhere else, for beds really.

PMN: On a day perhaps when that is a real problem for you, how do you find that affects the way you work?

Staff Nurse J: I don't think it affects the way I work because it is 24 hour care and it is continuous, maybe you don't have time to wash a patient in the morning and do all the hygiene care, but that can wait and there are other things that you prioritise and you can always do that later on in the day. As long as you do all your patient's care, I don't see a problem with doing that as long as you make sure that your patient is safe and all the prescribed care is being given. Sometimes you have to prioritise and sometimes help out with other people if they require help, which is what it is about, its about team work.

PMN: OK. All right, thanks. Now, one of the very obvious features about actually working in an ITU or critical care environment is the amount of technology that is involved in the patient care. How would you say that you feel about that?

Staff Nurse J: Initially quite frightened, but once you get to know how to work the machinery, what the problems are, why things are alarming and things like that, I feel quite happy with the machinery now because I understand how it works and that the problems that occur and why things alarming. Initially, yes,
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but now I don’t see a problem because I know how things work and what the problems are.

PMN: OK. I mean, do you feel that the technology actually works for you, or perhaps in some aspects it works against you, or neutral?

Staff Nurse J: Well, the technology at the moment round the bed, it works for you because it is there to assist you managing the patient. Yes, really.

PMN: Is it something that attracted you to the environment?

Staff Nurse J: I think, well, mainly the one to one care, but I think because you get patients from traumas to head injuries to burns, medicine, surgical and obviously I hadn’t done a lot of those before, so I just wanted to widen.

PMN: OK, that’s fine, thanks. Now, my last question before I hand over to Irene. What do you personally understand by the term ‘information technology’ or the term ‘computerisation’ and how it affects or how it would impact on the work environment?

Staff Nurse J: You mean by sort of doing all the care and everything on the computer as well.

PMN: Yes, that could be one ……you see there is now rights or wrongs, its just that people have got different ideas about what information technology is going to do or how it is going to affect the way that you work. I am really just quite interested in what you might see as the way that information technology can perhaps affect the way that you work.

Staff Nurse J: Well, where I used to work they had it and I found it very useful because you used to be able to bring up blood results very quickly, rather than ringing through, so you used to be able to check with the blood bank if there was any blood available rather than ringing and taking 10 minutes. It used to be quite quick like that, and just seeing where the patient had been admitted before and things like that. But I did find sometimes the care plans were a bit, sort of doing your care on a computer, it was very, there were core care plans that you picked from and the people who initially set out the care plans when the patient was admitted used to click on nearly everything and half of them weren’t appropriate, because there wasn’t one specifically for ITU or HDU. And a lot of it was irrelevant and you used to spend half your time going through what someone else had done and taking the inappropriate ones out. But actually doing the evaluation on the computer I found very easy and much quicker. But then again, you had to do it on the computer, then you had to write it again in the folder which I though was a bit stupid really.

PMN: So you were doing stuff both on paper and on the computer sort of in parallel.

Staff Nurse J: Yes.
PMN: OK. Well there are two things that crop up from what you are saying. Let me see if I have got this right: some aspects of the computerisation were very helpful in terms of your time management, it actually saved you time. Is that right?

Staff Nurse J: Yes.

PMN: So getting your results up. That sounds good. But that the care planning could be a bit mechanistic?

Staff Nurse J: Yes.

PMN: Maybe people were just doing it without thinking perhaps? Is that the sort of thing?

Staff Nurse J: Yes. It was easy to get the core areas off the computer but people weren't going through them. They were just sort "yes, that will do" and ......

PMN: OK, well thanks very much Alison. I will hand you over to Irene now who has got some questions for you.

ID: Alison, I have not got many I think, some of it you have probably already answered from what Peter was asking you really. I just want to explain the purpose of this interview really, because, as you know, we are trying to implement a Clinical Information System that is computerised charting. So the purpose of this is really just a base line how people feel about the current documentation and then when the Clinical Information System is implemented, then you have another interview to see how you feel about it, your attitudes towards the computerised system. So really what I want to know from you is how do you feel about the current documentations?

Staff Nurse J: I certainly think the initial assessment you do on a separate piece that is great, that is fine, and the separate waterlow and the separate handling assessment sheet, things like that, that's fine. I am not too keen on the care plan. I don't know why, but I just ....When I have done it before I have either had to write one myself, or from scratch without having anything there. I just think, I don't know. It is OK as a basic one but I don't know ......

ID: Do you feel that it is not user friendly or do you feel that what you perceive as the care the patient should have, you have to fit in the pigeon-hole, like what they say on the care plan?

Staff Nurse J: Yes, you are always adding little bits to it at the side. Its OK as a main care plan but you are always adding bits and sometimes its not .....

ID: How do you feel about the charting now? You spend a lot of time on charting and writing on the chart and that kind of thing?
Staff Nurse J: I don't think you do really. OK it takes 5 minutes to do your obs every hour or whatever and it takes a few minutes just to write things that you have done down at the bottom. I don't think it takes that long really.

ID: Maybe it helps to sum it up like this. What are the advantages now with the system? Can you mention a few advantages of the current documentation?

Staff Nurse J: I find writing an evaluation I find it slow, I think that's just because I am quick at typing basically. I think no matter whether you type it or write it its still going to be the same thing, but personally I find typing quicker than writing. But a lot of people wouldn’t find that.

ID: Let's say you have a few days off, and then you come back, do you find reading the documentation and looking at what it is now it is easy for you to formulate what is going on with this patient for the past few days?

Staff Nurse J: Sometimes, it depends who has been on and whose handwriting is clear and who is not. I find that a problem because I can't read some people's writing whatsoever.

ID: Would you be able to go back to say “ah, two days ago this patient had a major event, a cardiac arrest”? Could you go back and find that?

Staff Nurse J: Yes, but it just a matter of looking through the chart really.

ID: So disadvantages, do you think that all the information is all together in one place, or ..?

Staff Nurse J: It depends....well normally if there is a major event it is on the charts, normally your first chart and if not you would look in the evaluation. Some people write things in, some people don’t and if not you can always look in the medical notes.

ID: Do you think you get more things out of medical notes than nursing notes?

Staff Nurse J: Sometimes, well yes, you do, but sometimes they are not things that we want to know.

PMN: What sort of things would those be?

Staff Nurse J: I don’t know, if a patient has vomited or sometimes, they don’t seem to write those things in the medical notes.

ID: So information gets missed, yes. Obviously you know I am doing a project for implementing this information system. What is your perception about this system? Obviously you have worked in another hospital with it before, what do you perceive the system able to do for us?
Staff Nurse J: I think you talked about it before didn’t you, about collecting blood results, in an automated system.

ID: That is what I would hope it would do so that it has got everything on there rather than having to go to all different places to look for information.

Staff Nurse J: Sometimes you lose bits of paper and at least on a computer it would be there somewhere. So I hope that it would have everything on and you can just look back and have a look.

ID: Do you perceive that it is able to alternate data like the CVP values, blood pressure, heart rate automatically?

Staff Nurse J: Yes.

ID: That is what you perceive the system able to do. OK.

Staff Nurse J: Sort of, able to look back at what things were, because sometimes if someone has been busy somewhere you don't know what has gone on in the last hour, so you can always look back sometimes, where I used to work.

ID: Judging from what you said earlier, it sounds like you perceive that it is an advantage if we implement the system. Could you see any disadvantage at all?

Staff Nurse J: I think maybe some people will find it quite hard to get to grips with it and spend more time trying to find things, or spend more time on the computer than actually with the patient, I know it probably wouldn't happen, but....

ID: That is perceived, you know, could be the problem couldn't it really, trying to get to know the keyboard, to look at the screen rather than on the chart, and that will take time. Do you think ultimately it will save time once people get used it?

Staff Nurse J: Yes. I don't think it takes that long. I had never used a computer before and I found it quite easy to get to grips with once you have a training session or whatever and when you are using it all the time it soon comes anyway. I think it is quicker.

ID: You know you talked earlier on about the use of both systems, like the manual charting and the electronic charting at the same time, what was your biggest fear about that?

Staff Nurse J: If it gets lost on the computer, the computer goes down, you lose it all.

ID: Is that why they had both systems running at the same time?
Staff Nurse J: I don’t know really, I don’t know. I think you just think “oh it will go down and we will lose everything!"

ID: OK, I really haven't got any more to ask you.

PMN: Let me just finish off with quite an open question to see what your ideas are. I would just like to ask you, how do you think the current use of computers or information technology within the Unit actually affects the way you work as a nurse?

Staff Nurse J: I'll have to ask you now how to use the computer, I haven't got a clue. I usually ask somebody if they can have a look on the computer but I haven't got a clue how to use it and I have never been shown. I always sort of ring up Haematology if I need to know any analysis.

PMN: I mean, a lot of the equipment that you use, like the ventilators and the monitoring equipment has got embedded information technology. You can say that they have got computers actually controlling and monitoring them. So do you feel that they are helpful to you? Do you feel that they help your work as a nurse?

Staff Nurse J: I suppose, yes, because they are helping, giving you information about the ...............(background noise on tape)

PMN: OK, all right. Those are all the questions that we want to ask you. I don’t know if there are any questions that you want to ask us or anything further that you want to say?

Staff Nurse J: No I don't think so.

PMN: All right, well thanks very much for your time. Thank you Alison.
Interview 11
Interviewer: Peter Norrie (PMN) Irene Duncan (ID)
Participant: Staff Nurse K
Clinical Grade: D

PMN: Thank you very much for agreeing to do this interview. It is very kind of you.

Staff Nurse K: That's all right.

PMN: Could you just confirm that you have given your consent.

Staff Nurse K: Yes, I have given my consent for this interview.

PMN: And you are happy to proceed?

Staff Nurse K: Yes.

PMN: Excellent. OK. Right, I will start off then and then Irene has got some questions for you.

Staff Nurse K: OK.

PMN: The first one is really just to give us an idea about where you are in your career and what you have been doing so far. So just to start, could you tell us a little bit about yourself and your career and how you ended up here?

Staff Nurse K: I only qualified 5 or 6 weeks ago and my first job is here in ITU. I am quite enjoying it actually so far I am pleased to admit! And I came here, basically I liked ITU in my training and that was the area I wanted to work in and my partner works down here in England, quite near here, and that's why I came to this hospital.

PMN: OK. Where do you feel yourself at in terms of your learning curve within ITU? Do you feel you are at the very beginning, do you feel you are starting to feel confident, or?

Staff Nurse K: I am starting to feel confident with some things, but I like the fact that you can just ask someone if you are not quite sure. I mean there are some things that I am sure of and there are other things I'm not.

PMN: Its always a good idea isn't it.

Staff Nurse K: I'm feeling a bit more confident than where I started.

PMN: Right, fine, thanks. So you have obviously got quite a reasonable idea now about working in the Intensive Care involves. From your experience that you have got so far, what is it that actually gives you satisfaction about working as a nurse in Intensive Care?
Staff Nurse K: I think it is seeing them wean sometimes, seeing them get off the ventilator and go back to the wards, or even just knowing that you have looked after them well during the day and you are going home doing everything that you should have done. And they look comfortable. You feel you have got some satisfaction from that.

PMN: So on a day to day basis, and quite often you work for a patient and you may not be weaning them, or they may be getting worse or whatever, what is it you actually like about that sort of day to day work that you do?

Staff Nurse K: I suppose it is just trying to do a job well. It is just the satisfaction of doing the job well.

PMN: OK. All right, OK. There are two sides to every coin. There must be some aspects of ITU that you don’t feel so happy about or perhaps give you some dissatisfaction. Could you identify some of those?

Staff Nurse K: I suppose the main thing that I have got is the knowledge I don’t have. You know, even silly things like giving oral drugs and you have to fill out this book before you can do it yourself and you have to get it checked and then everybody else is busy, you know, and you saying “just check it with me quickly” you know, so I suppose that’s the main thing, is this knowledge gap I’ve got.

PMN: If I can just pick you up, there are probably two issues in there. One of them is your own knowledge, which obviously no one would expect you to be a hundred per cent confident at the moment, and I suppose the other thing is the way that the other people are working, the fact that they can be very busy. Is that correct?

Staff Nurse K: Yes, it always really seems to be at certain times of the day, very early in the morning when the doctors are coming round and doing whatever, rather than all the time.

PMN: OK. Anything else?

Staff Nurse K: Not so far, no, nothing that springs to mind.

PMN: OK. That’s fine, thanks. Now, one of the very obvious things about working in Intensive Care and Critical Care, is just the amount of technology that’s involved in the patient care. Do you have any strong feelings about that?

Staff Nurse K: I think it’s a good thing really, because you can keep a close eye on your patient really at all times which I think is important, and you have got your alarms and things like that which I think are good to use as well, that alert you to any kind of change in your patients condition.

PMN: You sound very positive about it?
Staff Nurse K: Yes, I do think it is a positive thing.

PMN: I mean, did the technology perhaps attract you in to the clinical area to some extent?

Staff Nurse K: I suppose, maybe its different for other people, but I am only 21 and I have used a lot of technology in my schooling as well, maybe I'm more used to it, you know I see it as part of life, so I am just getting used to it really, I accept it.

PMN: Do you feel it enhances the way you work as a nurse? That it makes life easier for you, or do you feel that in some ways it actually hinders the way that you work?

Staff Nurse K: I think that it does make life easier. Also sometimes it makes life more comfortable for the patients as well. Like, you have got the arterial line, if you have got a good trace, you don't have to take the blood pressure every hour or every half hour, which is very uncomfortable on these mechanical machines you know, they are very tight, and it wakes them up, things like that, so maybe they are getting worried than they would otherwise.

PMN: You have already answered this question to a certain extent, but we will just run through to see if anything else comes up. What do you understand by the term 'information technology' or by the term 'computerisation' as applied to the clinical area?

Staff Nurse K: Well that's a kind of difficult question for me to understand really. I am not quite sure what you are looking for.

PMN: Shall I see if can clarify that for you? Right, within the clinical area, there are a lot of machines that have got embedded chips in them, and are computerised. Are you aware of the computerisation that actually takes place within the Unit.

Staff Nurse K I don't think you are as much as what does actually happen. You know, you take it for granted, so you are not really that much aware of it.

PMN: OK. Do you use a computer yourself at home?

Staff Nurse K: Yes.

PMN: So you are quite familiar with ....

Staff Nurse K: Well, basic computer yes.

PMN: Word processing .....?

Staff Nurse K: Yes.

PMN: All right, that's fine, thanks very much. I will hand you over to Irene.
ID: Thank you for agreeing to come to this interview actually Trudy. I am not quite sure whether you are quite aware that we are going to implement a Clinical Information System in the Summer?

Staff Nurse K: I have not heard about it.

ID: You've not heard about it.

Staff Nurse K: No, not a lot.

ID: Right, OK. What I have been doing part of my time is trying to look at computerised the way we are collecting patient’s clinical data, like the blood pressure, heart rate, you know, that kind of thing. So this project is hopefully to be piloted in the Summer. So from my study I really want a base line of what people feel about it before the system is implemented and then compare it afterwards, so my questions very much centre round about the computer. What I really want to find out from you, being a new starter here, how do you find our documentation, you know, like the manual documentation, you know, the way we chart patient blood pressure, the care planning, how do you feel about it?

Staff Nurse K: Well, I feel the care planning could do with some updating.

ID: Right, OK.

Staff Nurse K: It is different to what I have used before. I feel it is very kind of regimented in the way it is lists rather than ..... and there is not very much room ....

ID: You are trying to fit the patient into that...

Staff Nurse K: You are trying to fit the patient in to it but there is not very much space and choice and things on it.

ID: Do you find it difficult to understand?

Staff Nurse K: Well, the first, the big chart, when I started, I found it was quite hard to write the blood pressure on because the arrows are so close together, you know. Most people don’t think it now, when they’ve got used to it, but I found that was something hard because its crammed into this wee box you know. But other than that I thought the documentation is quite good. It is quite clear, the amount of fluids and stuff that is going in and out and all kind of machine breathing or whatever the patient is doing. Yes, it is quite clear.

ID: Now, just like thinking about it, do you see any advantages of the current system?

Staff Nurse K: I think that it is good that you have got it all on the one page right in front of you.
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ID: Right, so that is very much of an advantage.

Staff Nurse K: And you can look back to the previous day to see, you know, maybe the previous three days even, to see what has kind of happened with the patient, if there is a trend in what is happening, so I think that’s good about it, that it is so compact like that.

ID: Is there anything else you can think of that is an advantage? How about the care planning, is it an advantage there?

Staff Nurse K: I think it is something I am still learning about here and writing the patients notes and things like that, and you use the care plan beside it like there are different numbers, I suppose in that way it is good, you can go to number 1 and you know what it is or number 3 and you know what it is, you know if you are trying to bring something specific, but I always think you should do the days before really..... anyway when you start. So I suppose that’s an advantage, is the numbering system.

ID: Do you find it is an advantage of our current documentation if you have two or three days off, when you come back do you find that all the information is there for you?

Staff Nurse K: Yes, it is.

ID: Right, OK. So you can pick that patient up quite quickly knowing what happened the previous day apart from your verbal hand over.

Staff Nurse K: Yes, it is quite good, because you can see it right in front of you. You can look back and you can see what is happening. You feel you maybe know the patient a bit better.

ID: For the next question I am going to say, what are the disadvantages, the other side of the coin. I think you already mentioned about the care planning. How about the charting, is there any disadvantage?

Staff Nurse K: The only disadvantage, as I said before, is the blood pressure is too small. But other than that, I mean that is not a major disadvantage, you know, it just takes a bit of getting used to.

ID: Have you worked in any Unit that uses a computerised system to get data automatically from patients?

Staff Nurse K: No.

ID: Have you had any perception about the Clinical Information System which is just computerised data charting and collecting all the information, the patients clinical values, like blood pressure, heart rate, CVP, pulmonary
wedge pressure. Have you got any other perception what this system will be able to do?

Staff Nurse K: Well I was looking actually at the monitors just now and it actually gives a history of the patient's blood pressure. So is it a bit like that?

ID: Yes.

Staff Nurse K: But would we still have to fill out the form?

ID: To start with, when we piloting, we have to do it in parallel, to make sure that the system is stable, but when the system is stable then probably not.

Staff Nurse K: I think it is good because it would cut away human error for the blood pressures and things like that, that sometimes I find a bit hard to get right on the chart! And it would cut away some kind of human error. So that's an advantage of it.

ID: Especially on the calculation side.

Staff Nurse K: I don't know, I suppose it might not happen, but I am worried about a disadvantage of it would be that people wouldn't maybe monitor the trends so well as if they were writing it themselves every hour.

ID: Oh, I see what you mean, yes. So that you see that one machine is doing it so you don't look at ......

Staff Nurse K: You maybe don't look at it and wait for an alarm to go off rather than seeing the trend going slowly.

ID: That's interesting, yes.

Staff Nurse K: That's kind of a disadvantage that sprung to mind.

ID: Can you think about any disadvantage, would it affect your role, you know, being the data being collected automatically, would you find any disadvantages in your role, or advantages for that matter.

Staff Nurse K: I suppose the advantage is that sometimes you are busy doing something else, so you haven't got time to write down that hours values, and you are catching up half an hour later, rather than exactly on the time, so it is going to me more accurate that way, and then you've maybe got more time to do things without rushing back to fill in the form for the last ...... I'm late for charting, 5 minutes late, somebody is going to be behind my back!

ID: Right, OK, that is very good. What is your biggest fear when this system is implemented? Have you got any fear or any anxiety about it?

Staff Nurse K: I don't think I have, because I don't know that much about it.
ID: Right, OK.

**Staff Nurse K:** I am going, "what am I going to this interview for, I don't really know anything about it" you know, but I don't think I have got any fears over it.

ID: Well, with any technology, with computers, do you have any fear? Do you have any anxiety about the system?

**Staff Nurse K:** Not really. I feel with most things, you can't really do anything wrong, they are foolproof in a way.

ID: You are not frightened that they get crashed and you have lost all the data and that kind of thing?

**Staff Nurse K:** Normally there is backups, isn't there, there are backup memories and things. Maybe because I'm more educated to computers I haven't got these fears.

ID: Yes, I think it probably is, yes. OK. That's it, I think Peter wanted to just finalise.

PMN: You have raised a lot of really interesting issues there, so thanks very much. Just the last question here perhaps to raise up any issues that are at the back of your mind or if there is anything you want to ask us. I just want to ask you how do you think that the current use of information technology or computerisation within the Unit affects the way you work?

**Staff Nurse K:** Well, you are very aware, I suppose of the technology in all the alarms and things. You go home hearing them sometimes in your head! But it does help you a lot, the technology. It is at a glance, you can see what is going on at a glance. Any second, you can just turn round and look at it and even with your pumps and things like that you can get a lot of information from these things as well.

PMN: So you sound generally quite positive about the way information technology can support you as a nurse.

**Staff Nurse K:** Yes, I don't think it is something to be frightened of.

PMN: That's good.

**Staff Nurse K:** Quite positive, yes.

PMN: OK, well thank you very much.
Interview 12
Interviewer: Peter Norrie (PMN) Jane Lawrie (JL)
Participant: Staff Nurse L
Clinical Grade: D

PMN: Right, Joe, thanks very much for agreeing to come and do these interviews with us. Can I just confirm with you that you actually give your consent for undertaking these interviews?

Staff Nurse L: Yes, I do.

PMN: That's excellent. Just to start the interview off I would like you to tell me a little bit about yourself and your career, perhaps how you got to where you are at the moment.

Staff Nurse L: I am actually from Cornwall, I went through school and then college. I did an advanced GNVQ in Health and Social Care, which I wasn't sure where to go to start off with. I wanted the Paramedic Service to start off with or A & E. The GNVQ in Health and Social Care was quite broad and let me decide in that time and I was able to work experience to see where I wanted to go and from that I decided on nursing. I wanted to get out of Cornwall though, to broaden my perspectives and not get trapped in that little village down there and so came up here to Charles Frear's and did my three years and here I am quite new and fresh.

PMN: So is this your first job since you qualified?

Staff Nurse L: Yes, it is, yes.

PMN: OK. So have how long have you actually been working here in Intensive Care?

Staff Nurse L: I started at the end of January, so three months.

PMN: And where do you feel you are at in your development as an ITU nurse?

Staff Nurse L: I feel its kind of like the base line is just about to be established before I start to build on things, but you never stop learning anything in this area.

PMN: That's true, no matter how long you are working there. So you are starting to build your confidence?

Staff Nurse L: Yes, starting to, but I am also realising some of the limitations that I do have and knowing that I only have a base line to start off with really.
PMN: OK. All right, fine. That’s good, thanks. OK so you have obviously got quite a realistic idea now of what it involves working in Intensive Care. Could you identify some of the things that actually give you satisfaction working as a nurse in Intensive Care?

Staff Nurse L: Achievement as if you are doing something. It is quite productive work in terms of like you can see effects and that. I mean, as the terms of like doing the blood gasses results and serum and AV nodes and ingenuity and spontaneous to act on them. And you are using your own mind on the spot type of thing. I find it rewarding that way because it is stimulating.

PMN: Anything else?

Staff Nurse L: What was the question again!

PMN: What gives you satisfaction about your role as a nurse working in Intensive Care?

Staff Nurse L: Knowing that I will probably be able to do more for that patient than perhaps on a ward setting or different environment and optimising what I can do for that person.

PMN: Yes, that sounds good. I don’t know, just thinking generally about the Intensive Care environment, are there any aspects about working in a specialised Unit that you like?

Staff Nurse L: It’s the support that’s also there. That’s also quite a help, especially being newly qualified, the support is good, and some of the advancements in like the resources that you have to hand, are a lot more advanced and available than they would be elsewhere, which can also be of assistance definitely.

PMN: Yes, OK. The other side of that coin, can you identify some things that you really don’t enjoy, that give you dissatisfaction working in the specialised environment?

Staff Nurse L: I don’t know if I have actually come across any as yet.

PMN: Good.

Staff Nurse L: I really can’t actually point out any. I mean, no, I can’t!

PMN: That’s great! All right, well, I would be the last person to try and look for faults when they don’t exist.

Staff Nurse L: Ask me in a years time or so, I might have a couple more.

PMN: That’s fine. OK. One of the obvious features about the Critical Care environment is the amount of technology that is involved in patient care. How do you feel about that generally?
Staff Nurse L: I actually feel quite comfortable with it at the moment although still aware that there is new stuff coming out and I need to be aware of that, but I find it is beneficial if you understand it and are familiar with it, definitely.

PMN: OK. I mean, do you feel that the technology in the Unit actually supports the way that you work, so that it actually helps you in your patient care, or do you maybe find that it gets in the way of caring for your patient?

Staff Nurse L: It depends on your approach. It can't really hinder really, or I can't see it hindering at all. I can only see it influencing and helping.

PMN: Can you tell me a little bit about perhaps how you see it helping you in the way you look after your patients?

Staff Nurse L: I mean, going back to the gas issue again, I mean that is quite an important one, I mean that’s an advancement in technology, not the latest one, but without that obviously you would take the patient’s appearance, but it wouldn’t give you an overall picture.

PMN: OK, so one aspect it seems to me you are saying is that information technology gives you lots of information about your patient.

Staff Nurse L: Some of it can be more accurate such as arteriole line monitoring would be more accurate, but there again it can give you false readings, so you always need to be aware of that.

PMN: So you need to have expertise as well...

Staff Nurse L: Yes.

PMN: Take it with a pinch of salt sometimes.

Staff Nurse L: Definitely.

PMN: Yes. I mean is that one of the features perhaps that attracted into ....?

Staff Nurse L: I think it was, actually, definitely, and also as I said earlier, with the patient care itself is quite a bit different.

PMN: I agree with you, it is quite a bit different. I still don't feel quite pinned down exactly what it is that you like about the aspects of patient care here?

Staff Nurse L: You have a focus, you are not spread so thinly.

PMN: OK. That I can understand, certainly. So you are focussed on your individual patient

Staff Nurse L: Definitely. Although you are not totally focussed, you are
 aware of your surroundings, and other patients and people around you to provide assistance and that, but you have a main goal and focus.

PMN: OK. And you feel that the technology that's on the Unit can actually help you in that?

Staff Nurse L: Yes, definitely.

PMN: Excellent, OK, nice one. Right, just moving on a little bit then. Can you tell me what you understand by the term "information technology" or "computerisation"?

Staff Nurse L: Computers.

PMN: Go on. Well you are a younger generation to me, perhaps you are more familiar with computers than I am.

Staff Nurse L: Probably not. Information technology, I just see it as information that helps you build on what you have, or circumstances, that aid you, such as computers. There is not a lot I can really say about that.

PMN: I mean, can you identify some of the equipment out there, like the modern vents that you use, have got embedded chips and they essentially have computers within them. Again do you feel that that supports you in the way you look after your patients.

Staff Nurse L: If you have got awareness of it, yes, definitely. I mean you have got the monitors, the obvious ones, and the keys, which is obvious, I mean without those perhaps if you had to leave the patients bedside for example, you could always see it on the screens at the desk if you had to make a phone call or such. So it helps in some ways.

PMN: OK. I am now going to hand over to Jane.

JL: I am just going to ask you a few questions really on our patient data collection at the moment really and our sort of current method of charting and documentation. How do you feel about it, especially coming into the Unit as a new staff nurse?

Staff Nurse L: The new method, is it going to automatically record......

JL: The method that we are using now, our basis charting that we are using now, really, how are your feelings on that? Our paperwork as it is, you know the three-day chart?

Staff Nurse L: It is quite a holistic view, I mean you can just glance at that and get quite an ideal perspective. I mean, I feel as if you were perhaps to glance at the screens that we have now, you can only get there and then, whereas those charts give you like 24 hour pictures. I new these new screens
are going to give as broad as these charts, but you can just review and
analyse and make an assessment sort of, to a certain degree by those charts
and you feel obliged to update them but you can get a bit too fixated with
them I think.

JL: Right, and the documentation that you use, how do you feel about that?

Staff Nurse L: The review and the care plans and that?

JL: Yes.

Staff Nurse L: I don't feel like saying it!

JL: Please do, please do.

Staff Nurse L: The care plans, well, I always believe in the old tradition write
your own, I really do, I don't like the typed ones at all. I mean they can be a
help but if you are in a rush, you're busy, you just tick or sign, that's what I
feel. I think they could be devised a bit better and more specific, but they give
a general outline and for those who do take the time, which they should, and
fill them in correctly, they are helpful.

JL: So if you were looking at some advantages of our present sort of charting
and data collection, but would you think as your main advantage of it to you?

Staff Nurse L: The holistic perspective I would say.

JL: And the disadvantage?

Staff Nurse L: I am having trouble comparing it with anything.

JL: Well, just, even if you are not comparing it with anything, just as user
friendly, as you use it yourself, are there any disadvantages that you find?

Staff Nurse L: Yes, there is no set guidelines as such, as for example at the
top you have your fluid balance and that, and then it says previous day, some
people put the previous date and some people put the previous day from the
previous days total and other people write other things so there is quite a
variant in what people actually do to the charts and what people don't do on
the charts, so it is kind of like - on the bottom some people write in red "all
checks completed", but not everyone does it, so there is variables in it.

JL: All right, OK. I would like to just go on to the new system, the Clinical
Information System. I just want to know what you understanding of it is with
regards to the Unit?

Staff Nurse L: From what I am aware of, patients are going to be monitored
by computer basically, such as they are now, but more advanced in that. Its
all going to be on one chart and that, you are going to have the temperature,
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the BP and that and it is going to do a sort of flow chart is it not? Yes, sort of
thing. And that is all I've seen so far. I have seen Irene playing around on the
screen a little bit, but that was about it really.

JL: Are you aware of any of its capabilities for the Unit and in the sort of
broader sense, how it would link up sort of with other facilities within the
hospital?

Staff Nurse L: Not totally no. No.

JL: No. That's fine. Your expectations of the clinical information system?

Staff Nurse L: Quite open-minded at the moment, because I can see a few
people having dislikes about it because it is a change from the traditional
method to that sort of method, but I think it can be helpful, but it is just getting
used to that and changing.

JL: Are they your personal ....I mean how do you feel, are you looking
forward to sort of....?

Staff Nurse L: I wouldn't perhaps know until I am actually using it, whether I
find it comfortable, but I can see it as a bit of a positive one definitely.

JL: And can you see any advantages of it at this point in time?

Staff Nurse L: As I was earlier, I didn't have time to turn around and write a
few figures down on the paper, so I have missed a section on it because I was
doing other things during that stage, so I couldn't do that, and I suppose with
monitoring on the screen, that would be done for me, although then the
emphasis of me checking and being aware of what's been recorded can be
taken out, so it is kind of a bit of both really. It just depends on the individual,
and how its perhaps introduced and how people's awareness of it is and not
just put there and say "there you go, figure it out".

JL: And do you see any disadvantages of it at the moment?

Staff Nurse L: As I say, you can sit back and .......I can't see that
happening, but every now and again that attitude could occur. But that is the
only thing. On that note!

PMN: Right, well the last question is really just sort of a hold all question Jim,
to sort of summarise and perhaps bring up any points that you might want to
raise or whatever. How do you think that the current use of information
technology or computerisation within the Unit affects your role as a nurse?

Staff Nurse L: I think it is an aid, definitely and I think with this new system it
will perhaps be more or an assistance than an aid.
PMN: How do you define the difference?

Staff Nurse L: An aid is something you can use if you wish to, or you do use. Assistance is more of a guide, more of a helping hand, one more than the aid.

PMN: All right, that is a quite interesting perspective. OK any questions you want to ask us, having gone through all that?

Staff Nurse L: When is it going to begin?

PMN: I think we are looking at June, aren’t we, is that right?

JL: Probably going live, we are looking at sort of September I think. We are training all through May, June and July.

Staff Nurse L: And you did ask me the question, how will it inter-link with the other areas within the hospital. I couldn’t answer that, can you answer it?

JL: We are looking that, you know the patients system that we have in the hospital now where we get all our patient information from, we are hoping that it will link up with that so that we are not duplicating a load of paperwork.

Staff Nurse L: Oh right, so you can access the previous notes through computer and the blood results and everything.

JL: That, hopefully will eventually link in with the labs, the pathology labs.

Staff Nurse L: It will save you walking away and going to that small computer there and trying to figure it out.

JL: And also the blood results that you get back on a daily basis you should be able to access them straight away.

PMN: Staff Nurse L: So you won’t have to wait for the fax or anything. Right.

JL: That’s the idea.

Staff Nurse L: Right.

JL: And hopefully interface with other things within the hospital as and when.

Staff Nurse L: It’s bigger and better than I thought then!

JL: That’s the idea, yes and obviously we have to wait for the hospital to get linked on.

Staff Nurse L: So it will take a while to implement but when ....
JL: Well, no, the passed system that is in the hospital can link up with it now and we are looking hopefully at the end of the year for the pathology labs and things.

Staff Nurse L: It will speed everything up.

JL: Definitely.

PMN: Let's finish on a positive note shall we.
Interview 1

Interviewer: Peter Norrie (PMN)
Participant 'Edwina'

PMN: Thank you for agreeing to do an interview with me - that's excellent. Just for the tape, could you confirm that you are happy to continue?

Edwina: Yes, no problems.

PMN: I suppose the first thing to do really, is if you, imagine going back to Killingbeck - was that about 3 years ago?


PMN: When you were up at Killingbeck you worked with, what I call, computerised information systems (CIS) - you might have called it something different - do you call it PDMS?

Edwina: They were just the computers to us.

PMN: It's actually going back a bit, can you remember quite clearly how you worked?

Edwina: Yes, I can actually. In what way?

PMN: If I just ask you a couple of questions to sort of focus you a little bit. The computerised systems that you used for recording patient data and for displaying patient parameters?

Edwina: Yes, it was generally used, it downloaded information from the monitor and then we manually put in things like urine output and drainage from drains and things like that. We also manually put in - did we do the ventilator obs as well? - I think we did. So we put those things in but it was just the things that were downloaded automatically.

PMN: How about your nursing records?

Edwina: Nursing records were still kept in nursing records.

PMN: Did you feel that that sort of computerised system actually - and I'm using general terms - supported the way that you worked or do you feel that it got in the way of the way you worked - or did you feel that it was helpful for you?

Edwina: Personally, no. Because it wasn't very slick.
PMN: That's quite a good term actually.

Edwina: The problem for me was that we weren't really given proper information technology training beforehand. So for a lot of people it was very new to them. At that time, computers were new to people anyway. Four/five years on people have advanced. It was new to people and it was cumbersome, it wasn't very good. Equipment that crashed a lot and then you were having to resort back to charts. At one time we used charts and the computer - then we just went to the computer. Then if it crashed - then it was "now what"! It was there and you had to do it and at the end of the day you tried to be open about things but there were times when there were sick patients and the computers were easy to crash and I crashed them, because it was getting in the way.

PMN: You mean you crashed them personally?

Edwina: Yes, if you tapped it on the keys about 3 times it would crash it - you were spending so much time trying to put this information in and you had a patient there. And maybe with a far better system it wouldn't be in the way the same but personally the other thing that I found detracted you was the fact that if I came on and there was a patient in the bed here and somebody says to me as the nurse in charge, that they had a problem, I could go over to a chart and I could see what was happening. Whereas with a computer I would have to go into this page and that page and something that should only take me a matter of seconds to get the information that I needed, would take me a minute or longer, to actually get and find it on the screen. Maybe I wasn't used to it - I'll admit that - but that takes me seconds to do - whereas that takes me longer. And it was same for the medical staff as well.

PMN: Are you saying that you weren't used to it but why should you be used to it because the systems are there to actually support your working - you are not there to help the computer work?

Edwina: No, it should be there to make my life easier but it didn't and for me, the information that I could pick up in seconds on a sheet of paper was easy. Whereas I shouldn't have to trawl through pages to get to what I need.

PMN: That's great. You might have covered some of the things I was going to ask you - how did it affect your work?

Edwina: I personally didn't feel it helped - it made it harder - I couldn't see what the benefits were and certainly now with the new computer - monitors that we've got - we can download everything that we need - I can't see in that sense where the benefit was.

PMN: I quite like the first word you used - you thought it wasn't "slick". OK so when you moved up here and went back to manually charting.

Edwina: We had actually gone back to manual charting at Killingbeck
because the person that was doing this - I think they kept the computers on the adult unit going - one of the instigators for it was a Dr Crewe and he retired.

PMN: That's quite interesting in itself - was it his baby?

Edwina: Yes it had always been his baby and he had wanted to get it going - maybe there's a difference between adults and children, I don't know, but the system that they had on the adult unit was where they had got two bodies looking at the filling - from what I can remember - I can't remember if we ever got that system up - ours was just very, very, very basic.

PMN: So when you went back to manual recording how did that strike you?

Edwina: No problem! It actually increased the amount of time that you had to do what you needed to do.

PMN: OK - can you tell me a little bit more about that?

Edwina: Well you didn't think God I have to fill this in now - I'm sure people became faster at filling them in, but at the end of the day, it was still there to be done and if you do have a sick child - it can take two or three people sometimes and it's a cumbersome thing.

PMN: So did you move between adults and kids?

Edwina: I didn't move between them as such - at Killingbeck, we went and helped out when they were busy.

PMN: Thanks - so the next question I was going to ask, is how did you think this change affected your nursing or the care that you gave - you probably have answered that already.

Edwina: Yes, I felt it took away from your nursing care.

PMN: OK - you have actually answered most of the questions that I wanted to ask. Let me just put a couple of little points to you - do you think that it changed the satisfaction that you got from nursing - moving back to manual recording?

Edwina: Yes because for me, it's a safety issue and it's as before, as somebody looking after a patient I want to spend time with the patient and family and doing what I need to do for them and as somebody in charge, if there's a problem I need to know and be able to see that information in seconds and see trends, in seconds which I can't do - it's a safety issue for me. It might sound like I'm being negative - but I'm not - because if somebody came up with another computer system and said would you try it, I would do.

PMN: That was the next point I was going to ask you - has it turned you off
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Edwina: It's not turned me off technology but I think the problem that we had - we didn't have the finances to properly resource with people to do a proper computer system. It hasn't put me off but I think, if you look at big industry, the amount of money they put into computerised systems - ours was like a joke in comparison - and if you are going to do it, you have got to educate staff. You can't just expect - it's management of change - you don't just say - "right this is it - you've got to do it," because people are going to say no, we're not. Now, yes, I would give it another try but I would look at it first before doing it to see how I feel it's improved because I do think it's detrimental and I wouldn't necessarily get rid of the chart and go on to computer straightaway - I would have the chart there - because I would want to be able to go back to that.

PMN: The very last thing that I want to ask you is about - say you had a really up to date computerised system which was well resourced and supported and you were trained - what do you think that it could realistically achieve for you - how do you think it could most support the way you work?

Edwina: Ideally they would give you more time to look after your patient because you are not writing down the mundane things like ventilator settings etc and blood gasses should be, maybe, transferred straight from the blood gas analyser into your computer and things.

PMN: Say you had a really good "slick" system that was reliable and did all of this recording - you've identified that it could save time for you - do you see that as the sort of central issue? I certainly think that it's a very important issue, but I'm just interested in your thoughts personally.

Edwina: The other advantages I see from something like that is that you've got some information that you can download onto a disk and you've got masses of information for research and retrospective research. One of the other problems in a sense, which is a small problem because you can do something about it on the charts at the moment, is that if you do something - maybe the child gets a tachycardia - maybe some people don't record it - what it went up to. So you've got 2pm it was this, 3pm it was that, but they have had some ...... in between and you think what did it go up to - nobody knows now. Whereas on a computerised system it would be a constant - so you have got a lot of information for research there - maybe like the effects of ... using insulin and all those sorts of things. So that's what I would see but saying that, I can do that now with the Hewlett Packard monitors that we've got. I can download if I wanted.

PMN: Of course they are very sophisticated.

Edwina: Yes, they are computers within themselves. So I can do that. It could aid some form of research but at the end of the day, not that I'm being negative and not that I'm resistant to change, because I would try things. I would find it very difficult to move away from a chart and I'm not somebody
whose stuck in the mud, and won't change. It's just that why change something just for the sake of it. Why change something to go on to computers when actually it might not be the right place for them. And for me it would be nice to go to an area where they do and see how they do use them and how beneficial they find them. And whether they care whether outcome to the care at the end of the day is better because that's what it's all about. There's no point ploughing 100s and 1000s (of pounds) into it and the care doesn't improve. They should be some outcome from it.

PMN: Absolutely, I couldn't agree with you more. And you said that if this system works well - and it could save time for you - it's almost a stupid question - if it saves time for you, what are you going to do with the time that you save?

Edwina: You have more time to spend with the patients - being a child intensive care - you have the relatives there far more - you have more time to talk to them.

PMN: OK - and that's important?

Edwina: For me personally - that's a massive part of our role really.

PMN: You have certainly answered all of the questions that I was wanting to go through - is there anything else that you want to raise?

Edwina: Looking at what they could do - I should think that they could assist in some form of audits of care but there again, I don't know. I hope this hasn't come across as negative.

PMN: No, not at all - quite the opposite in fact. The fact that you have had experience of this and they didn't really serve you.

Edwina: But that once again, and I reiterate - is maybe the quality and the way in which it was actually implemented to start with and the support that you got whilst it was there which maybe wasn't the best.
Interview 2
Interviewer: Peter Norrie
Participant 'Linda'

PMN: So Linda, I'm going to ask you some questions but really they are just intended as prompts - I'm very interested in your particular emphasis on things - that said, there are no 'rights' or 'wrongs'. As a focus, if we go back to when you worked at Killingbeck using the computerised system there, if I could ask you general questions. Did you feel that the computerised system supported your work as a nurse?

Linda: It's a very difficult one. In terms of myself personally and the work at the 'bed end' - yes, I was quite positive with it. However, having co-ordinated the unit, there were some members of staff who were very anti and negative. I would say in which case they felt it was an encumberment, it was difficult, awkward and obviously from that point of view, not only was I co-ordinating the team but then I was supporting them with something I consider was straightforward. So it was actually individual's attitudes perhaps towards the system.

PMN: OK - well, if we take them separately then as you raise both them. Firstly, take you as a bedside nurse. How do you feel that that computerised system supported you?

Linda: One of the main things is that it gave me time - I felt I had more time - rather than actually writing down the data itself - you had more time to be actually analysing what was going on, being more involved in patient care, being more supportive to parents and the families and having time to discuss them. So you didn't feel pressurised, so I actually feel it gave more time to the bedside nurse who, I would say, if she was competent and happy with the system, I felt quite happy with it myself.

PMN: So if I can just recap, as a bedside nurse you felt that the system could actually save you some time and if it saves you time, what would you do with that time?

Linda: I would use that time for involvement with the family, childcare, discussions.

PMN: Quality?

Linda: Yes to a certain extent talking to mum and dad, that takes a huge amount of time and a lot of the time that is the area in Paediatric ICU that fails unfortunately because you tend not to get to talk to them because you are busy doing something else whereas you can get to sit down and listen what they have to say and then talk back to them. I do feel it's a big help from that point of view.

PMN: OK - but then the other side of it was a managerial aspect as a senior nurse responsible for supporting workers - can you tell me a bit about that?
Linda: From the co-ordinator perspective it was very much who was at the end of the bed in terms of personalities and attitudes, beliefs, values whatever and there was a number of staff who were quite negative towards the system, they didn't like it. I would put that down, it's my own assumption, to be a lack of understanding with the system and despite going through the system, it was also a fear of information technology I would say. Perhaps not being *au fait* with it and then when we actually got to talk to them about what experiences they had had in the past, they have not really had anything at all. They had difficulties with controlling the mouse, I had to do a lot of time with them about fundamentals.

PMN: Computer skills?

Linda: Yes, and consequently as a result of that they were afraid of the system and didn't like it.

PMN: Right, so, I think you have probably answered this but how did it affect your work?

Linda: Again, its two perspectives - if everybody was happy with the system things were fine and I would say that things ran smoothly. The other thing that was quite interesting was that some of the medics were a bit unsure but once you spent time going through it with them then they got their head around it. But if you had a shift pattern where there was a number of people who weren't happy with the system - it made the workload increase.

PMN: If I just move on a little bit - you were working with the computerised system and then went back to using the manual system, charting. How did you feel about that? How did you feel about the way it changed the way you worked?

Linda: Personally?

PMN: Did you notice things perhaps?

Linda: In the sense that those people who were unhappy with the system were now happy! I just came to accept that that was going to happen and then the impetus around or the rationale was that we were going to change back was because we were moving down here and a lot of the place was folding up, closing up, packing up and people just thought that this was part of the move. Then after a while when we had moved down here people were interested in the system when was it going to start again.

PMN: And the answer was?

Linda: I don't know!

PMN: A sort of related question, that system is quite old now really - it was about five years ago? - do you feel that if it had been updated and invested
in, do you feel that with the advances in information technology, it could have developed further?

**Linda:** I always felt with the whole system, because obviously I invested quite a bit of time in it because in the early stages I was looking at coordinating and making a system that was user friendly for the nursing staff. Being somebody who myself at the early stages was not particularly brilliant with computers anyway, so I thought if I could manage then most people could and I do feel though, throughout the whole of the project that it was only a half-hearted attempt at investment in it. To a certain extent the management were not fully, totally convinced or engrossed, or enthused by the whole system and I think that unless you have a complete commitment from all forces it's highly likely, with the investment, they always wanted to do it on a shoestring and I always felt that it wasn't going to have the same ...

**PMN:** You mentioned that some of the staff were unhappy with it, do you think that if time and energy had been put into it, in some ways it could have been developed, it would have been easier to use? How would that have happened?

**Linda:** I think again it was very much only one programmer involved and he had lots of other commitments as well. He was part of IST - and they were always really busy - so it was like a hobby for him and a separate thing and consequently it just didn't have the input that it warranted. If it was going to be a success perhaps it should have had more than one person involved in it from a computer programmer. Not being a programmer, I would have thought that it needed more input. The fundings we had were raised from 2/3 charities and putting out funding saying would you be interested in funding x y and z. I do think if there had been more of a management commitment to it throughout the whole sphere, nursing, management and IST, then it might have worked. I think it was too much to expect one person to do it along with his own workload.

**PMN:** To me it sounds like to was on a shoestring. Can we go back to your role as a bedside nurse which I will focus on now. When you moved from the computerised system to the manual charting system. Did you feel that that change affected your nursing or nursing care?

**Linda:** I think, the biggest one being was the fact to being back to writing things down, observations again.

**PMN:** Why was that not a good thing?

**Linda:** Again, I thought the time it was taking I could have used doing more appropriate things.

**PMN:** Time management issues?

**Linda:** Yes, I did find it very helpful. It was also quite interesting because even though you are constantly observing, sometimes it picked up things
that you hadn’t noticed.

PMN: Such as?

Linda: Perhaps the odd dip in blood pressure. Plus it was also interesting, looking back, that you could see the trends dropping - because it was a more in-depth picture rather than just having one set of obs or if a crisis situation occurs it tends to be because everybody is busy with the actual issue of resuscitation that there is not much to actually document.

PMN: So you got a lot more information. What could you do with that information?

Linda: It was handy for handover, you could use it to demonstrate to other nurses about actions, a teaching aid. It could impress upon them how the patient could haemodynamically not be too bad say two hours before.

PMN: Having worked with that system again five years ago, done on a shoestring, how could it have been improved to make people enjoy using it more.

Linda: Throw it away and start again! I would imagine now, you only have to look at the things you can produce in terms of its appearance, yes, it was five years ago and it reflected …. Because I remember it even in the days of ….. as a very junior nurse, and I thought that our new version was quite impressive in terms of its appearance and graphics and information it gave you and the way it was presented, but I would think now, you think it very old hat and it would probably have to be completely revamped in terms of its visual … but that’s how its moved on and what there expectations are. People’s expectations are increasingly higher in terms of the computer.

PMN: You’ve gone through some of the main points that I wanted to raise with you, so thank you very much for that. Just some little points from previous sets of interviews that I did. Do you feel that using the computerised system then moving to a manual system again, could you identify any sort of satisfaction or decrease that you had with your nursing.

Linda: The transition back from computer to paper - I just felt that I was going back to where I was. It was something that I could do anyway and that I was familiar with having worked in the area for many years, so it was just a question of going back to what we had previously done. I did feel it was a bit of a retrograde step.

PMN: Having gone through the trauma of having the system, using it and then the system being discontinued, has that affected the way that you feel generally about using technology at the bedside?

Linda: No, I would always be keen to welcome anything else that could help and assist nursing. I think there is an actual remit for it, it’s just having somebody who is willing to be bold enough to say, yes, we are going to go
for it and invest some time in it and being aware that that investment of time and money would be big issues around, getting over the issues like change, change management, meeting some of those resisters that it encompasses. I just don’t feel that we had that sort of set up before. Personally I would more than welcome something again. It was quite nice to see things coming through and especially, virtually all the equipment can be easily connected and downloaded. There’s not much that can’t these days - apart from the actual urine .... Although I’m quite sure someone could devise a way to do that now!

PMN: So you sound still fairly positive now. So say we had invested in one of these systems and it was up and running now, in terms of your nursing, what do you think the computerised system could realistically do for you? I'm not just thinking in terms of yes, it could integrate, ventilate etc.

Linda: I think it could be an audit tool as well. There were lots of times that we looked at it and we thought we could use it for auditing information. Especially under the remit with committal to Governments etc. you could sit there and say why do RASDs, especially if everyone was on it. You could then say the average ventilatory time for transpositions undergone in switch procedure is so many days etc. What are we like up against Bristol etc. Then you could say what practices are we doing that makes us better than Birmingham or what are they doing that makes them better than us in terms of this information. You could get some benchmarking done. A lot of information that people could tap into looking at quality care, issues of auditing, care management. You could also have more right standards about expectations. From that perhaps develop more in-depth integrated care pathways etc. I think there is the opportunity to expand.

PMN: Sounds quite exciting. Again, if I put you in the role of the bedside nurse, and we have an up to date CIS - how do you think that would affect the way you work?

Linda: Again, it’s back to the big issue - you are there at the bedside doing the care, it’s a good time. It’s very much a big time helper - in terms of the quality of the information produced from it - everything’s there from a medical/legal perspective. Some of these scrawly charts that you look at and you can’t read.

PMN: Yes, I suppose it could be there to hang you as well!

Linda: Yes, that’s the flip side of it!

PMN: You can’t really argue for inaccuracy of recording being a positive thing, can you?

Linda: That’s it.

PMN: I’ve asked all the questions that I wanted to, are there any issues that you feel I haven’t touched upon? Again I’m just interested in someone whose worked with an automated system and then goes back to the manual system.
Linda: For me at the time when we went back to the manual system, to a certain extent the initial thing was one less thing to be concerned about. We had come down here, we had new ventilators, new equipment, all the staff were very uptight about the move. It was a very traumatic experience for a lot of people who didn't particularly manage very well. I think they all found comfort, and therefore from a co-ordinator view, as long as the staff were happy with something, it was something that they knew. They were frightened, when we first moved down here, there was problems with connections, networking, so they were scared if something else went wrong for them. It had a lot of hiccups with the new equipment and I think that that was the security.

PMN: Anything else?

Linda: It was just a pity that nothing came after a while after we had settled down.

PMN: It's probably reached the stage where, as you said, now you would actually start off from scratch.

Linda: Yes, it would have to be.
Appendix 3

Interview 3
Interviewer PMN
Participant ‘Claire’

PMN: You could just confirm for the tape that you are happy to take part in this interview?

Claire: Yes quite happy to take part.

PMN: Thank you very much. I’ve really just got some quite open-ended questions to ask you - obviously there are no rights or wrongs - I’m just interested in your ideas. You are part of a small group that has actually used a computerised system to record patient data back in the days of Killingbeck. Then we came back up here - you went back to manual charting. If you go back - did you feel that the computerised system actually supported the way that you worked as a nurse?

Claire: Yes. In more ways than one. Firstly, computerised system gave accurate data in the sense of fluid totals, they were correct. Obviously that was reliant on me putting the data in correctly. But you were talking about me putting small numbers in and then looking at total fluid balances, the numbers would be correct. There was less likelihood of some mathematical error in adding up. Secondly, it was phenomenal, the amount of time I then had to spend with the patients. I wasn’t spending hours looking at bits of papers I was spending hours caring for a patient. So I actually had more time to spend at the bedside caring for the patient.

PMN: Are you saying that the system actually saved you time?

Claire: Yes.

PMN: So for time management - it saved you time and what could you do with that time?

Claire: The time was utilised spent with the patient. I could spend longer giving care - everything from daily activities of living to recognising and spending longer in assessment and making sure I had the right answer when I was assessing my patients.

PMN: Time is a real pressing issue isn’t it? In critical care.

Claire: Yes

PMN: How did you feel it actually affected your work.

Claire: Time management was the biggest issue - the time that I gave to the patient was of greater quality because there was more time to spend. That was even more compounded, when patients are ventilated and asleep, you are giving cares, but then when they are awake, I had more time to spend talking to them and reassuring them. I could spend time explaining things to
them that little bit more easily.

**PMN:** How important do you feel that is?

**Claire:** It's the most primary thing in any critical care environment - the patient is reassured.

**PMN:** So the system saved you time and that really made a difference to the quality of nursing care that you delivered?

**Claire:** Yes, but I was a junior sister at that point, so I had got quite a lot of critical care experience at that stage, so I was quite comfortable with what I was doing, wasn't challenged in the sense of time management and all it did was give me extra time management. So I suspect for junior nurses it would give them even more time to spend recognising and analysing what they actually do in caring for patients.

**PMN:** I know it's going back a bit now, but if you could cast your mind back to when you were actually using the system - did you find it user-friendly?

**Claire:** Very elementary computer skills as far as I was concerned.

**PMN:** You really sound quite positive about it.

**Claire:** I wouldn't say that at that stage I was the most motivated person to work with computers. I wouldn't have said that computer skills was my poignant (sic) skill and I came out of it thinking you don't need it. You need basic elementary computer skills.

**PMN:** So you were using a computerised system one week then you moved up here and you were back to manual. How did that change/strike you?

**Claire:** There was a definite difference. There was less time to spend with the patient, it required me to spend time - things like getting the data correct - it required me to spend a lot of time monitoring patients and watching monitors to watch when changes occurred. The advantage of having this system is that it recognised - it recorded what was actually happening. So I could then review back in moments that were spare. The mathematical data was correct and it was much easier for me to see where I had input wrongly by looking at the 24 hour chart, the result, I could see if I had input wrongly and where - and if I hadn't then I knew that the mathematical adding up at the end was right.

**PMN:** Any negative points?

**Claire:** For me there was no negatives because I really enjoyed it. My only concern being as I said, what would happen in the event that we had lots of other things happening with a very sick, very ill patient. What I noticed from watching others when it was first set up, was how frightened people were of computers and are easily things could go wrong when they inputted wrongly
or pressed the wrong button. Right from one end of the spectrum, people were terrified of even pushing a button to the other end, where they were completely comfortable in pushing buttons willy nilly and causing the computer system to crash. That was the worst part that I saw - particularly where people were just punching buttons thinking they had it right instead of just stopping for a second and making sure that they had it right. So I would say that the most important thing is making sure that people have got an elementary computer skill.

PMN: Realistically, was reliability an issue? Did the computers crash?

Claire: Not that I can remember. And as I said, I had no skills, I was taught the basic skill to utilise the system and just by taking a few seconds and making sure I had inputted right I was comfortable with it, and the computer didn't crash in that period that I was aware of.

PMN: Some points that I've picked up from other people before I came here today - when looking at the satisfaction you got when working as a nurse in critical care- did you feel that the computerised system gave you satisfaction with your work, can you identify in what ways?

Claire: Having the time to spend what I considered important and that was time to care for the patients. I could spend in and around the bed space with the patient, caring for them on a day to day level right through to even teaching other members of staff, to explain what was going on. When I was recording data and running round, something would have to give - either the patient quality care or teaching nurses etc. Something would get left aside or get done very minimally. So it gave me more satisfaction.

PMN: You sound very positive about the role of technology generally, is that correct?

Claire: Yes. If it's something that allows me time to care for the patients and allows me to do my job in a manner that I would wish it to, then of course I'm for it.

PMN: Would you put any qualifiers on that. I agree that technology holds out lots of promise. Do you think there's anything that we need to be wary about?

Claire: Obviously it can't be at the expense of patient's needs and individuality. It's very easy to hammer them down a path and say they will all fit into this box. Nobody fits into a box. Everybody has some individualism and everybody is going to need something extra or something different. My concern is what would happen to nursing staff and doctors in the event that every patient was on a computerised system, if they recognise the fact that nursing staff are able to spend more time with patients, so you need less nursing staff in effect to give that care, are they talking about reducing the number of nursing staff? That's a difficult issue because maybe in truth that might be true but there are always situations in a critical care environment
where you need the number of nurses and doctors who are there. OK sometimes they might have less to do but at other times they need to be there.

PMN: I certainly take your point there. Having gone from computerised to conventional charting - how did you feel about using conventional charting? A number of people have said that they actually quite like conventional charting - how do you feel?

Claire: Maybe it's the length of time that I worked in ICU and maybe it's a reflection of that, but I found it at times tedious. At times restricting because conventional charting doesn't reflect minute by minute what's happening to the patient - only what I see is happening and putting it down on the chart. Anything can happen or change minute by minute. There isn't room to chart that, so you chart the overall view of what's happened. The overall blood pressure rather than suggesting that minute by minute it went up and down. Conventional charting in many ways I found restricting. The only nice thing about it goes back to looking at care planning and being able to describe and relate. Rather than put a patient in a box and saying yes they have been fine all day or no they have had problems, being able to write that out and express that from the patient's viewpoint, I think there always needs to be some manoeuvring room for that - to be able to say on an hour to hour level, the patient was extremely anxious and cried a lot. There needs to be some manoeuvring to say those things because that makes them individuals.

PMN: That system that you used would be obsolete now, so if you got a computerised system that really did everything for you like it recording the vent. obs. Etc - so the best system that you could imagine - how do you think that would affect the way that you worked?

Claire: I don't think it would affect the way that I worked in the sense of what I see my role as being - still being caring, being the important issue of nursing the patients - I would spend less time doing the documentation side of that - that's how it would change.

PMN: It's the same message coming through?

Claire: Yes, it depends on how you fundamentally see you role in any environment. Fundamentally I see the role as caring for patients and medical role the same - and if we are spending less time documenting things, if we have some support system for that, that saves our time then we can spend more time giving quality to patients.

PMN: That's very clear. Are there any points that I haven't touched which perhaps springs to mind?

Claire: The only thing, as I said, was the issue about elementary computer skills and people being able to utilise them and the issue of how this system would be seen, whether it's a short cut to cutting down on nurses and medical staff, or whether it's a system that supports nursing and medical
staff - those are the two issues.
Interview 4
Interviewer PMN
Participant ‘Simon’

PMN: For the benefit of the tape, could you just confirm that you are agreeable for the interview to go ahead?

Simon: Of course I am.

PMN: As you know, what I'm interested in, is the way that computerised systems can support nurses working in critical care. Now if we talk about the system at Killingbeck, which is going back 4/5 years. I know you were involved in setting that up, so perhaps quite a good way to start would be for you to tell me a little bit about what you did in setting up the system.

Simon: The initial system that we used was fairly basic initially, just a way of logging the blood pressure and central venial pressure, was to gradually mushroom from that and expand and expand. It started well before I actually started there. Four or five years ago we tackled it with a vengeance and decided it was the way forward and to push things forward. We used the opportunity that we had of a basic system, to build on that and bring it up to be appropriate to use with modern technology, because the technology that we had when the original version was made some ten years ago, the amount of information you could keep was limited because of the power of that. With the greater technology we were able to add more and more on until we virtually, well we did, replace the bedside chart completely.

PMN: What was your actual role in that?

Simon: It was the development of how the data and what data should be recorded and then how it should be presented.

PMN: So you were like an in between were you?

Simon: Yes. We recognised the difficulty in that the actual programme was being written by a computer programmer, obviously with no medical experience or knowledge whatsoever. The way that it had happened before then was the consultant anaesthetist involved just gave his version and then it was presented to the nurses saying this is what you want. Obviously it didn't go down well, so they needed a nursing input because they were the end user to decide that yes, we were going to start off with basic things but how it was going to be stored. And how it was then going to be presented and displayed.

PMN: How necessary do you feel that your role was?

Simon: Very necessary - it would have been impossible without it - I don't think I'm blowing my own trumpet - but it would not have happened without somebody there to say what was wanted and how they wanted it from a nursing point of view. That would have just been a bit of a mishmash to say
the least. Yes they could copy what we had on the charts but it's a case of well, why would the medical side decide that, when it's the nursing side that decides the charts and what they look like and what they put on them and who will be using the charts. It is a nursing chart not a medical one so therefore nursing must be involved from the outset which is where he learnt. because he tried supplementing something before without even consulting us and it didn't work because he just did it totally from a medical angle with no nursing input whatsoever. So this way it was presented that way and the nurses had an interest and were able to give their input into its design and were therefore interested to see it function.

**PMN:** When a system is up and running - more of interest from the view of a bedside nurse than a managerial role- how did you feel that the computerised system actually supported the way that you worked. How do you feel that it made a difference for you.

**Simon:** Obviously the first difference that you were aware of virtually immediately is the time saving aspect and you find yourself looking after your first few patients without a nursing chart, lost for things to do, twiddling your thumbs and because you haven't got that prop at the end of the bed, the nursing chart that you can be looking at or doing sums on, if it's not there you have just got to concentrate on your patient and look after them. So it's a combination of saving time and a combination of being able to give more time to the patient and concentrate on what is going on with the patient rather than staring at your charts and wondering who has got the calculator you can borrow to do the adding up!

**PMN:** Do you see the changes that are made, you described them in terms of time management really.

**Simon:** Time management initially. Accuracy of the data as well because they do tend to notice, putting a nurse between a monitor and a chart acts as a filter.

**PMN:** Is that a good thing or a bad thing?

**Simon:** Both. When you are trying to get a true impression of what has actually happened, it can be difficult but you also trust the nurse to eliminate any artefact which is one thing that a computerised system cannot do. Not so much nowadays, I think that's technology again, but we used to have a problem with monitoring quite often an arterial line would be over-shooting or under reading. If you put a filter, as in a nurse there, you can decipher that in between, whereas the computer will just take down what the monitor tells it to. So there are benefits in having a nurse there but then again, as you say, a nurse may do something and the pressure may shoot up albeit temporarily but that will be logged and then when the patient is bleeding a little bit, half an hour later, and people want to know why.

**PMN:** When you moved from using computerised system back to using a manual system, how did that strike you, what sort of issues did that generate
for you?

Simon: It's difficult because I was so involved.

PMN: I will take that into account.

Simon: Not happy to go back to it but it's difficult to answer fully in that we stopped doing it because we did that right up to the point where we moved down here virtually so we knew that we would have to go back to the charts until we got down here and sorted out. So it was an inevitable - but when you do go back to the charts you then doubly realise the benefits. You are taking a step backwards and you realise that you have to do all this again.

PMN: So you saw it as quite a clear retrograde step?

Simon: Oh yes.

PMN: And what kind of structure did you see as the problem or the negative things?

Simon: Inaccuracies is the wrong word but you are going from something that's to me 'clean' is the right expression - clean and accurate - back to an old pen and paper type system where you are looking at things and trying to decipher scribbles whether they are positive or negative, or is that a 2 or is it a 4 and then checking people's sum afterwards, and you think is this really right. It questions your beliefs again.

PMN: In what way.

Simon: Well your beliefs in - it checks your trust in the nurse at the end of the bed in that you are looking at these things and you've done this work and discovered a lot of inaccuracies that are missed so when you have eliminated them you go back and you restart again and because you weren't aware of them before I looked at these types of things - you were worried about them.

PMN: So having been used to a higher accuracy data you really noticed the shifting down a gear?

Simon: Yes, I'm not saying that the data was less accurate but you didn't trust it as much. So you went through and checked it because I've discovered that adding up fluid balances can be up to a litre or a litre and a half either way out just through inaccuracies in additions and subtractions.

PMN: So that changing down a gear then ...

Simon: That slows you down.

PMN: Yes. So how do you feel that going back to the manual system, how did it affect your nursing and care that you delivered?
Appendix 3

Simon: Until you got used to it again you were back slogging away with pen and paper so again it's time - but spending more time, because you had less faith in it, checking the chart and the accuracy of it, less time caring for the patients.

PMN: Those are probably the main questions I wanted to ask you, but let me just bring up a couple of brief issues from a previous set of interviews that I did. Working within this environment, do you feel that moving back to a manual system affected the sort of job satisfaction that you get?

Simon: In a way it's difficult because when we came down here I didn't look after that many patients - and today, when I am, it's a rarity and so from that points of view, on a one-to-one basis with a patient - yes and that's why I'm talking about inaccuracies on the charts because I'm in charge all the time.

PMN: So that's your responsibility?

Simon: Yes, so instead of keeping one chart I have half a dozen to go round and decipher and that's where I pick up a lot of these problems.

PMN: So that in fact is quite a significant thing in your role then?

Simon: Oh yes.

PMN: So you had quite a technological advanced system but you don't now use that system, has that turned you against using technology at all?

Simon: Quite the opposite! From trying and using it and to actually do it at first is worrying and you panic because something like that, all eyes are on you and so you have got to be right. You have got to have the confidence to make that step and do it which was great, but going back to your question - doing it and getting that sense of satisfaction, realising the benefits and then taking the retrograde step going back, I would want to go forward again, we want to get back to where we were and we have tried for a few years, but we have not been able to get back to that point.

PMN: Five years on now, if you had a computerised system, and there are some quite advanced ones now, say you had a computerised system that worked, a real cutting edge one now, it would record all your patient observations, urine output, drainage and fluid admin. How do you think that would change the role of nurses, or do you think it would change the way that they worked?

Simon: I think it would change the role of the nurse in that their priorities would be slightly different. It can go out now and look at the patients and you will see the nurse sitting or standing at the end of the bed with the chart. If they haven't got that there, what would they be doing? The nature of people, I find is, especially in an environment like that, is that you can sit in your chair with a pen in your hand with your chart - but if your charts not
there - I'm not saying that nurses on ICU are particularly lazy - I don't think that at all! - but given the opportunity and give them a chart and a pen, they will sit there and do things - but take it away and they will look at the monitor - look at the patients - they'll do eye care and mouth care, turned rolls, whatever and without having to stop and look at the monitor to check this and that.

**PMN:** So you make it sound that you would be more interactive with the patient.

**Simon:** More interactive and in a way, less structured because everything with a chart, to me, is done in blocks of hours. Whereas they would be free to do what the patient needed, care wise, whenever the patient needed it, and not have barriers of not having to stop what they doing every hour and do a set of obs and sums etc.

**PMN:** Could you see any disadvantages with using even the most up-to-date computerised system?

**Simon:** Concerns would be again reliability. I find it amazing moving into a brand new purpose built place like this where not just computerised systems but a hell of a lot of problems we have had which, like the power cuts in theatres and things which are quite terrifying when somebody is on bypass and all the back up systems fail and you are thinking in a modern age, this can't be right! So some thing as delicate a system, I don't know how you could other than by using it and building confidence in it, be at the outset not be absolutely terrified about reliability - it's such an awesome thing.

**PMN:** It's always going to be an issue isn't it?

**Simon:** Our one way round that in the past was saying "well, you've always your pen and paper - so don't worry about reliability the minute you have any problems but any lack of problems with it, they are going to be looked at by a lot of people under a magnifying glass.

**PMN:** Especially in this sort of very litigious age that we have.

**Simon:** That's another point for it was the litigious aspects of it and that you have 100% data that's more frequently recorded and can't be doctored with. But yes, it swings the other way as well that you have to have that guarantee. I think as the systems get more and more popular and more of them, the price will come down.
### Table 21: Likert scale data. 'Our charting system works well'

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### Table 22: Likert scale data. 'I cannot find information from the charts easily'

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### Table 23: Likert scale data. 'It allows me to easily keep track of all my patient results'

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### Table 24: Likert scale data. 'Our charting of patient data is unreliable'

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### Table 25: Likert scale data. 'The care planning is difficult to use'

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### Table 26: Likert scale data. 'Our charting system is poor at finding the information I want about my patient'

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Table 27: Likert scale data. 'The charting system provides a good record of the patient'

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Table 28: Likert scale data. 'If things happen to my patient I will not be alerted by the charting system'

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Table 29: Likert scale data. 'The charting system helps in communication within the nursing team'

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Table 30: Likert scale data. 'The charting system compromises patient confidentiality'

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Table 32: Likert scale data. 'The care planning is not an efficient use of my time'  

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Table 33: Likert scale data. 'I feel that the charting does not help me to review my patients progress'

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Table 34: Likert scale data. 'The care planning helps me look after my patient'

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Table 35: Likert scale data. 'The care planning documentation is repetitious'

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Table 36: Likert scale data. 'I don't think we keep track of our patients progress well'

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Table 37: Likert scale data. 'The charting system doesn't make me feel in control of the situation'.

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Table 38: Likert scale data. 'The charting system alerts me to what is happening with my patient'.

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Table 39: Likert scale data. 'I did not need much training to be able to use the charting system'

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Table 40: Likert scale data. 'The system in use for charting adds to my workload'

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Table 41: Likert scale data. 'The current charting system helps me to deliver quality care'

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Table 42: Likert scale data. 'The charting system is always legible'

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<th>%</th>
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<th>Cumulative %</th>
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### Table 43: Likert scale data. 'The charting system is always accurate'

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<th>%</th>
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|          | Agree             | 22 | 57.9 | 61.1  | 72.2       |
|          | Disagree          | 10 | 26.3 | 27.8  | 100.0      |
|          | Total             | 36 | 94.7 | 100.0 |            |
|          | Missing           | 2  | 5.3  |       |            |

|          | Agree             | 15 | 40.7 | 45.4  | 90.9       |
|          | Disagree          | 20 | 50.0 | 50.0  | 92.5       |
|          | Total             | 35 | 100.0| 100.0 |            |
|          | Missing           | 1  | 3.6  |       |            |

### Table 54: Likert scale data. Clinical Grades of respondents

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<th>N</th>
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<td>Total</td>
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<td>100.0</td>
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|          | D grade        | 9  | 39.1 | 40.9  | 40.9       |
|          | E grade        | 8  | 34.8 | 36.4  | 77.3       |
|          | F grade        | 3  | 13.0 | 13.6  | 90.9       |
|          | G grade        | 1  | 4.3  | 4.5   | 95.5       |
|          | H grade        | 1  | 4.3  | 4.5   | 100.0      |
|          | Total          | 22 | 95.7 | 100.0 |            |
|          | Missing        | 1  | 4.3  |       |            |

|          | D grade        | 9  | 37.5 | 40.5  | 40.5       |
|          | E grade        | 8  | 27.5 | 29.7  | 70.3       |
|          | F grade        | 3  | 17.5 | 18.9  | 89.2       |
|          | G grade        | 1  | 7.5  | 8.1   | 97.3       |
|          | H grade        | 1  | 2.5  | 2.7   | 100.0      |
|          | Total          | 22 | 92.5 | 100.0 |            |
|          | Missing        | 1  | 7.5  |       |            |
### Table 55: Likert scale data. Number of years experience of respondents

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<th>%</th>
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Transcript of the answers to the open ended questions in Measure 3

Key: Questionnaires 1: 38 John Radcliffe Hospital
     Questionnaires 39: 60 Glenfield Hospital
     Questionnaires 63: 100 Leicester General Hospital.

Site: John Radcliffe Hospital. Questionnaire number: 1
Strengths of recording/ charting system:
Quick and accurate, easy to monitor changes. As recording observations is quick, leaves more time to focus on the practical aspects of patient care.

Weaknesses of recording/ charting system:
I am unsure about whether patient confidentiality is compromised anymore than with paper documentation.
No care planning involved on CareVue so quite repetitive and time consuming having to carry out written care plan.
Took me a while to carry out written care plan. Took me a while to get to grips with computerised drug charts, still not sure if I like it as much as written drug charts.

Other comments:
(none noted).

Site: John Radcliffe Hospital. Questionnaire number: 2
Strengths of recording/ charting system:
Legible.

Weaknesses of recording/ charting system:
System crash.

Other comments:
Discharge summary- my typing skills are too slow so it would be quicker to write it. It must be difficult to read/interpret printed charts (charts that go to the ward etc) for people not used to CareVue.
Site: John Radcliffe Hospital. Questionnaire number: 4
Strengths of recording/charting system:
Quicker system for recording information.
Clearer to identify recordings more accurately i.e. blood pressure than with hand written graphs.
Transfer of information from other areas e.g. lab results.
Able to obtain data on discharged patients- handy if readmitted.

Weaknesses of recording/charting system:
Data sometimes accepted without clearly reading i.e. if CVP turned off- data can be accepted at that recording therefore inaccurate.
People don't use free text sections well enough as a way of recording i.e significant events, medical progress notes.

Other comments:
Lots of paperwork when patients discharged to ward- not always organised and filed appropriately by ICU nursing staff, therefore ward staff don't use info/paperwork well.

Site: John Radcliffe Hospital. Questionnaire number: 5
Strengths of recording/charting system:
Less time consuming, therefore allows more time for patient care
Access to all information.

Weaknesses of recording/charting system:
Still needs care plans added to CareVue.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 8
Strengths of recording/charting system:
It's clear legible, as long as people record thing accurately it is very reliable and quick method of recording and looking back at data is easy.
You can record something for every minute if you want to you can't on paper.

Weaknesses of recording/charting system:
You rely on the computer to calculate drug dosages (although you shouldn't) and fluid balances. We don't use it to its full potential I don't think, we could use the care plan on there.

Other comments:
Lets not lose the CareVue. I personally find it quicker and easier to use than pen and paper to record observations and neater.
Site: John Radcliffe Hospital.  Questionnaire number: 9
Strengths of recording/ charting system:
Easy retrieval of documents especially lab results in comparison on a day to
day time basis
Easy to recognise abnormal findings or attempt deviations/ changes etc. It can be
highlighted for browsers to see.
Can retrieve patient history easily, especially consolidating all files from
admission to discharge, previous medications taken: very important in
discharge.

Weaknesses of recording/ charting system:
I think for me is incomplete charting sometimes.

Other comments:
(none noted)

Site: John Radcliffe Hospital.  Questionnaire number: 12
Strengths of recording/ charting system:
Does hasten the recording process.

Weaknesses of recording/ charting system:
Care planning is separate written documentation and is repetitious.

Other comments:
(none noted)

Site: John Radcliffe Hospital.  Questionnaire number: 13
Strengths of recording/ charting system:
All charts available readily therefore documenting changes and care are easily
done.

Weaknesses of recording/ charting system:
If you do not chart documentation and accept defaults erroneous results can be stored- this should be pointed out to nurses so they take care when reading observations.

Other comments:
(none noted)
Appendix 5

Site: John Radcliffe Hospital. Questionnaire number: 14
Strengths of recording/ charting system:
Saves time.
Easy to access information quickly.
Easy to use.

Weaknesses of recording/ charting system:
Need to have information straight off ventilator/ blood gas machine (used to happen).
If patient is very sick cannot see a trend easily i.e. 15 minute observations which you would be able to visualise on an obs chart.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 15
Strengths of recording/ charting system:
The charting system enables me to write most of my observations as soon as possible and as accurate as possible because of its easy access.

Weaknesses of recording/ charting system:
(none noted).

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 16
Strengths of recording/ charting system:
Utilising every row appropriate for the patient.
Ensuring patient data is completed.

Weaknesses of recording/ charting system:
Regularly updating the significant events I am weak on.
Also weak on adding remarks.

Other comments:
I enjoy using CareVue I think it is fantastic and very user friendly much better than pen and paper.
Appendix 5

Site: John Radcliffe Hospital. Questionnaire number: 17
Strengths of recording/charting system:
Saves time.
Easy to view two sets of data same time.

Weaknesses of recording/charting system:
When printed difficult to read charts.
Doesn't highlight changes.
Only as good as person inputting data.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 19
Strengths of recording/charting system:
The charting system is as good as the user.
It is clear and concise, easy to follow and easy to use.

Weaknesses of recording/charting system:
It doesn't have instant markers for events happening to patient e.g. drop in blood pressure, bradycardia etc.

Other comments:
Care planning would be good!

Site: John Radcliffe Hospital. Questionnaire number: 21
Strengths of recording/charting system:
All the information in one place.
Easy to find information when required.

Weaknesses of recording/charting system:
Depends on user regarding accuracy or incorrect readings.

Other comments:
Care planning is done by hand, it would be useful if this could be done on CareVue which is being looked into at present.
Site: John Radcliffe Hospital. Questionnaire number: 22
Strengths of recording/ charting system:
Clarity.
Ease of documentation.
Ability to tailor the system to the unit needs.

Weaknesses of recording/ charting system:
Can't allow for user error.
Bizarre charting can occur but it is due to operator error.
Default setting can be accepted without the operator really looking at what is being charted.
Drug sheet not as user friendly as it could be.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 23
Strengths of recording/ charting system:
Speed of charting
Long term record
Legible

Weaknesses of recording/ charting system:
Many people press accept default without checking first.
New ITU nurses do not clinically assess the patient to ensure correct charting.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 24
Strengths of recording/ charting system:
Continuous recording of events so can continue care and know it has all the observations, just got to accept.

Weaknesses of recording/ charting system:
Can be overconfident and not pay attention to detail etc.
In the beginning focus more on CareVue than on patient until get the hang of it.

Other comments:
Takes a while to get used to it and then you love it!
Site: John Radcliffe Hospital.  Questionnaire number: 25
Strengths of recording/ charting system:
Easily view what happened for the past few days, the exact time it happened. Laboratory results are legible. Easily accessible, you don't have to look for the notes because it can be easily seen on CareVue.

Weaknesses of recording/ charting system:
I can't really think of any weaknesses of using CareVue but maybe if it does have that the strengths are much more seen because it's really helpful in access with patient care.

Other comments:
(none noted)

Site: John Radcliffe Hospital.  Questionnaire number: 26
Strengths of recording/ charting system:
CareVue makes charting faster to read which is useful as my writing is terrible.
It allows to chart at any time i.e. if the patient deteriorates suddenly five minutes after you recorded your hourly observations you can chart for that time and frequently within the hour.
It remembers the observations from the hour and therefore you can chart retrospectively if you have been busy.

Weaknesses of recording/ charting system:
Accept defaults is always a tempting option and sometimes leads to charting errors i.e. changes not recorded as it defaults to the last hours observation or ridiculous blood pressure readings etc.
When printed out to take to the ward obs charts are very difficult to follow.

Other comments:
CareVue is great! Wish we could get rid of paper care plans and use CareVue for everything.
Could use spell check though as I can't spell to save myself!
Appendix 5

Site: John Radcliffe Hospital. Questionnaire number: 27
Strengths of recording/charting system:
CareVue is magic!
It allows me more time to care for my patient.
I can see at a glance all patient details.

Weaknesses of recording/charting system:
We do not yet have care plans on computer.
Every patient can be viewed from one computer - this may compromise confidentiality.
Stored data identifies individuals due to passwords
Default charting previous stored data
What if it breaks down?

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 29
Strengths of recording/charting system:
Really like CareVue (hate the thought of charts).

Weaknesses of recording/charting system:
Care planning still a problem. Would be better if we use CareVue for care plans instead of separate paperwork.
CareVue is great for ease of use and quickness.
Not always clear when looking at trends.
Print outs can be hard for ward staff to decipher.
Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 30
Strengths of recording/charting system:
Very clear readable documentation.
Easy access for information.
Ability to review patients data away from bedside ensuring overview when in charge.

Weaknesses of recording/charting system:
Staff need appropriate training to ensure reliable recording of data (not just accepting information).

Other comments:
Definitely miss CareVue when working in other area.
Site: John Radcliffe Hospital. Questionnaire number: 31
Strengths of recording/ charting system:
Clear, relatively concise.
Logical pattern.
User friendly.
Saves space.

Weaknesses of recording/ charting system:
Only as good as the person charting.
Accepting default values can result in inaccurate charting.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 32
Strengths of recording/ charting system:
Information clearly presented.
Accurate if checked using defaults.
Ability to record as frequently as one minute intervals.
Ability to record retrospectively.
We collate more information now on the patient than we used to on paper.
Charts increase accuracy.
Great for research projects to use for data collection.
Interfacing between ventilator and monitors.

Weaknesses of recording/ charting system:
Nurses often default to accept observations without checking them all first.
Care planning is not on the system.
Would like the system to be faster- very slow when records being sorted etc.
Often problems with labs sending results to CareVue.
Would like to have a full 24 hours of data on screen.
Other comments:
It is as reliable as the nurse entering/ accepting the data.
Site: John Radcliffe Hospital. Questionnaire number: 33

Strengths of recording/ charting system:
Add up automatically.
Labs come straight through.
Gases come straight through.
Tidy!
Makes it easier to record ongoing information such as how long lines have been in place.

Weaknesses of recording/ charting system:
Labs often don't come through on the weekend.
If there is a large ward round not everyone can see.
Only one person can use it at a time e.g. if physio is using it nurse will have to wait.
I have seen observations defaulted and recorded as being correct where people just don't check properly.

Other comments:
The wards find it more difficult to interpret the charts.
If someone does not have a password they do not record information e.g. weekend physio.
Yes I think it does help care for patients I wouldn't want to go back to paper charts.

Site: John Radcliffe Hospital. Questionnaire number: 34

Strengths of recording/ charting system:
Always legible.
Easy to add different individual aspects of care for each patient.

Weaknesses of recording/ charting system:
Difficult for ward nurses to decipher when patient discharged- and for us sometimes.
Prescriptions not always documented accurately. Too easy to accept routine prescriptions.

Other comments:
We do not currently use care planning- we still hand write daily plan of care.
Appendix 5

Site: John Radcliffe Hospital. Questionnaire number: 36
Strengths of recording/charting system:
I find this system excellent at recording and charting all observations. You can record any observation at any time. Would find it very hard to switch back to the old system.

Weaknesses of recording/charting system:
Why not get a system of short and long term care plans on CareVue? It is an excellent computer system surely there must be a way round writing care plans daily.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 37
Strengths of recording/charting system:
Minute by minute charting/sampling. Flexible time periods.

Weaknesses of recording/charting system:
Only as accurate as the person doing the charting.

Other comments:
(none noted)

Site: John Radcliffe Hospital. Questionnaire number: 38
Strengths of recording/charting system:
I feel that CareVue helps me make the best of my time and is particularly beneficial when my patient is 'going off'. I know that the fall in blood pressure etc. will automatically be recorded and I can spend time nursing my patient, knowing I will have an accurate chain of events in observation form when things calm down.

Weaknesses of recording/charting system:
I find the printouts of the observations/labs etc. quite confusing- which must make the ward nurses extremely confused who aren't familiar with the system. I have found myself on many occasions spending longer on the wards explaining where to find information on the chart than actually handing over the patient. I think that it is also a shame that we don't type our care plans straight into the CareVue keeping the information in one place.

Other comments:
I find CareVue invaluable not only in the convenience in charting my patient progress but also is brilliant if working alongside a junior nurse. It maintains accurate charting in calculating drugs, fluid balance minimising human error and freeing my time to do things that really matter!
Appendix 5

Site: Glenfield Hospital.  Questionnaire number: 39
Strengths of recording/ charting system:
Information is readily available for nursing and medical staff.
Is easily understandable.
Allows for trends to be seen with results and observations.

Weaknesses of recording/ charting system:
No long term care plan (would save nursing time and resources better if long term patients had a care plan for a few days at a time instead of a new one everyday).

Other comments:
(none noted)

Site: Glenfield Hospital.  Questionnaire number: 40
Strengths of recording/ charting system:
Patient trend visible at a glance.
All information in one place.

Weaknesses of recording/ charting system:
Documentation and quality of documentation depends on nurses.

Other comments:
Overall very good system but always room for improvement and use of new technology.

Site: Glenfield Hospital.  Questionnaire number: 41
Strengths of recording/ charting system:
The observations chart is useful to observe trends and piece together patient's condition at times of significant events e.g. what ventilation they had and what positions patient lying in etc.

Weaknesses of recording/ charting system:
Observations chart is useful but we have too many separate pieces of paper with other useful information that all need to be looked at individually which is time consuming and more things to get lost.

Other comments:
(none noted)
Appendix 5

Site: Glenfield Hospital. Questionnaire number: 42
Strengths of recording/ charting system:
Easy to use.
Information i.e. observations readily available and spaced out well.
Self explanatory and good teaching tool- easy for new staff to use.

Weaknesses of recording/ charting system:
There do seem to be a lot of different sheets of paper to record certain sets of information i.e. results chart, care plan SOPRA etc.
Daily care plans quite thick i.e. approximately ten pages- difficult to file but are still comprehensive.

Other comments:
Care plans currently under review and will be changed.

Site: Glenfield Hospital. Questionnaire number: 44
Strengths of recording/ charting system:
(none noted)

Weaknesses of recording/ charting system:
(none noted)

Other comments:
Instead of the twenty four hours finish at noon, I think it should complete at 0600. When the ward round come on in the morning we know twenty four hour (indecipherable) .. clearly.

Site: Glenfield Hospital. Questionnaire number: 46
Strengths of recording/ charting system:
Like the charts.
Well laid out not too fussy.
Straight forward.

Weaknesses of recording/ charting system:
Doctors do not write a care plan for the day on the chart and parameters.
Care plans are time consuming and repeat a lot of paperwork.

Other comments:
(none noted).
Appendix 5

Site: Glenfield Hospital. Questionnaire number: 48
**Strengths of recording/charting system:**
Observation chart easy to follow.
Comments column gives quick reference to what has happened to patient.

**Weaknesses of recording/charting system:**
Care plans too lengthy- should be used for more than one day particularly with long stay patients.

**Other comments:**
(none noted)

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Site: Glenfield Hospital. Questionnaire number: 49
**Strengths of recording/charting system:**
Able to go to any patients bedside and gain an overall picture of what is happening clinically.

**Weaknesses of recording/charting system:**
Tend to chart numerical data and then transfer this into narrative information within the care plan- this ultimately wastes time.

**Other comments:**
If busy, can have a problem with charting information 'on the hour'- this leads to inaccuracy.

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Site: Glenfield Hospital. Questionnaire number: 50
**Strengths of recording/charting system:**
The observations charts are clear and accessible and visible at all times at the end of the bed.
The care plans are revised daily and updated.

**Weaknesses of recording/charting system:**
Peoples handwriting can be difficult to read.
Documentation can be repetitious.
Long term patients end up with lots of notes on file.
Patients name and number have to be put on every sheet.

**Other comments:**
(none noted)
Site: Glenfield Hospital. Questionnaire number: 51

**Strengths of recording/charting system:**
Visually accessible to other disciplines.

**Weaknesses of recording/charting system:**
Visually accessible to relatives.
Confidentiality.
Time consuming.
Cardiovascular, respiratory and fluid balance chart aren't in line therefore you can't see a full reflection/effect of event on all signs and results.

**Other comments:**
(none noted)

Site: Glenfield Hospital. Questionnaire number: 52

**Strengths of recording/charting system:**
(none noted)

**Weaknesses of recording/charting system:**
Tendency to chart hourly which does not show adverse recordings between the hours.
Difficult to follow trends.

**Other comments:**
(none noted)

Site: Glenfield Hospital. Questionnaire number: 53

**Strengths of recording/charting system:**
Charting helps us to record all that happened to my patient and deliver care system by system.
It also helps me to document everything for privacy and legal purposes and to keep track of his/her progress.

**Weaknesses of recording/charting system:**
Sometimes recording/charting system is repetitious and some writing is not legible.

**Other comments:**
(none noted)
Site: Glenfield Hospital. Questionnaire number: 54
Strengths of recording/charting system:
(none noted)

Weaknesses of recording/charting system:
(none noted)

Other comments:
I am a junior member of staff with limited experience in ITU.

Site: Glenfield Hospital. Questionnaire number: 57
Strengths of recording/charting system:
There is room for improvement.
Good communication.
Patient confidentiality.

Weaknesses of recording/charting system:
Repetitive.
Time consuming.

Other comments:
(none noted)

Site: Glenfield Hospital. Questionnaire number: 59
Strengths of recording/charting system:
Charts are generally clear and easy to follow.
Gases that correspond with respiratory observations are a good feature.

Weaknesses of recording/charting system:
Not every member of staff uses the chart effectively i.e. writing information in the nursing comments column. This can be very useful especially if the patient is long term as there are often pages of nursing notes to go through to find information.

Other comments:
(none noted)
Site: Glenfield Hospital. Questionnaire number: 60
Strengths of recording/charting system:
Easy to read once used to it.
Clearly charts drug doses given through IVs.

Weaknesses of recording/charting system:
Allows accurate documentation of fluid balance.
Effects of changes in ventilation can easily be compared with arterial blood gases.
 Allows cares and other events to be documented.

Other comments:
(none noted)

Site: Glenfield Hospital. Questionnaire number: 60
Strengths of recording/charting system:
No need to be computer literate to use it.
Only need to chart relevant information e.g. not when arterial line is 'positional'
and giving false BP readings, therefore up to the discretion of staff.

Weaknesses of recording/charting system:
Inconsistencies due to different levels of experience of staff can occur.
Too much paperwork can make some charts go missing, especially if unfamiliar with the system.
Education of new/junior staff necessary.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 63
Strengths of recording/charting system:
I try to adapt the chart to record as much information as possible e.g. when the physiotherapist attend, where the mean arterial pressure should sit and any other prompts for myself or others taking over the care.

Weaknesses of recording/charting system:
Everybody has a slightly different approach to recording. Communication may break down if I fail to include a prompt on a chart or write it elsewhere.

Other comments:
The current system involves the use of many pieces of paper. This creates a laborious paper exercise and more importantly increase the chance of oversight.
Appendix 5

Site: Leicester General Hospital. Questionnaire number: 64
Strengths of recording/ charting system:
(none noted)

Weaknesses of recording/ charting system:
If mistakes are made it can sometimes result in an ineligible chart (sic).

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 65
Strengths of recording/ charting system:
(none noted)

Weaknesses of recording/ charting system:
(none noted)

Other comments:
I have never really worked with a charting system that I liked better than our current one although my experience is limited to two local hospitals. It may be lack of familiarity that made me like their charts less. I do find our current care plans to be a rather pathetic attempt and are repetitive and overly basic. Much room for improvement.

Site: Leicester General Hospital. Questionnaire number: 67
Strengths of recording/ charting system:
All information in one place- easy to locate in nurses absence. Writing things down prompts you to notice if things change or parameter falls outside normal values.

Weaknesses of recording/ charting system:
Open to error. Depends on person filling it in as to how comprehensive it is. Time consuming- sometimes the same information recorded several times.

Other comments:
(none noted)
Appendix 5

Site: Leicester General Hospital. Questionnaire number: 68
Strengths of recording/ charting system:
Very clear and easy to find information.

Weaknesses of recording/ charting system:
Very standardised. Nowhere to put extra information.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 69
Strengths of recording/ charting system:
Clear; follows logically, not cluttered with too much information. Arterial blood gases and blood results on separate sheets allows picture to build up.

Weaknesses of recording/ charting system:
Pressure areas, mouth and eye care missing.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 70
Strengths of recording/ charting system:
Straightforward and easy to use.

Weaknesses of recording/ charting system:
(none noted)

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 71
Strengths of recording/ charting system:
In ITU recording and charting system is very systematic and accurate. Always been completed as much as possible.

Weaknesses of recording/ charting system:
(none noted)

Other comments:
(none noted)
Appendix 5

Site: Leicester General Hospital.  Questionnaire number: 72
Strengths of recording/ charting system:
Observation charts make changes in patients condition easily visible.

Weaknesses of recording/ charting system:
Since changing our admissions forms and changing to SOPRA forms we currently do not have an easy record of line insertion dates and site.

Other comments:
(none noted)

Site: Leicester General Hospital.  Questionnaire number: 74
Strengths of recording/ charting system:
Able to see trends over the twenty four hour periods. Observations are easily accessible and obvious to all.

Weaknesses of recording/ charting system:
Arterial blood gases are on two separate sheets.

Other comments:
(none noted)

Site: Leicester General Hospital.  Questionnaire number: 77
Strengths of recording/ charting system:
Big chart easy to read.

Weaknesses of recording/ charting system:
Confidentiality.

Other comments:
(none noted)

Site: Leicester General Hospital.  Questionnaire number: 78
Strengths of recording/ charting system:
Observation chart/ fluid chart good, gives space for alterations in patient condition. Allows for accurate fluid balance.

Weaknesses of recording/ charting system:
Care plan very poor. No consistency for completion. Need improvement as very important aspect of patient care are not being covered very thoroughly.

Other comments:
I would welcome computerised systems.
Appendix 5

Site: Leicester General Hospital. Questionnaire number: 79
Strengths of recording/charting system:
(none noted)

Weaknesses of recording/charting system:
(none noted)

Other comments:
Care planning system is not used as it should be. Not enough effort put into effective usage as a tool for monitoring patient progress/changes etc.

Site: Leicester General Hospital. Questionnaire number: 80
Strengths of recording/charting system:
Able to get a quick 'at a glance' picture of what is/has been happening with the patient.

Weaknesses of recording/charting system:
Can be muddled.
Visitors can also view the chart—compromises confidentiality.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 81
Strengths of recording/charting system:
(none noted)

Weaknesses of recording/charting system:
Insensible losses never taken into account.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 82
Strengths of recording/charting system:
Clear, easily read with obvious indications when patient condition is deteriorating or improving.
All necessary information on one chart.

Weaknesses of recording/charting system:
Can be illegible when untidy writing used.
Microbiology sheet separate and often forgotten when samples sent therefore not recorded.

Other comments:
(none noted)
Site: Leicester General Hospital. Questionnaire number: 83

Strengths of recording/charting system:
Easy to find information and makes it easier to summarise what is going on for multidisciplinary team.
Sometimes sedation score not recorded.

Weaknesses of recording/charting system:
Large and cumbersome at times.

Other comments:
:none noted:

Site: Leicester General Hospital. Questionnaire number: 89

Strengths of recording/charting system:
Global view of observations and blood results.

Weaknesses of recording/charting system:
Slight inaccuracies in recording of observations.
Don't always reflect fluctuations in observations between hourly observations
Possible errors in calculations i.e. fluid balance.

Other comments:
:none noted:

Site: Leicester General Hospital. Questionnaire number: 91

Strengths of recording/charting system:
A clear visual representation in logical order.
Drug infusions and boluses are in logical order.
Any changes in cardiovascular system can be correlated with any infusion or drug change, the same applies to ventilation.

Weaknesses of recording/charting system:
No room for blood results i.e. clotting, full blood count, urea and electrolytes etc.
No space for nursing signatures.
No space for care plan.
Do not fold up so they can go in the patient's notes.

Other comments:
Easily visible to visitors- question of breaching of privacy.
Site: Leicester General Hospital.  Questionnaire number: 93
Strengths of recording/ charting system:
All information on same chart. Easy to see.

Weaknesses of recording/ charting system:
Best I have used.

Other comments:
I like all information i.e. cardiovascular, ventilation, drugs, fluid balances on same chart. Arterial blood gases and blood results should not be together.

Site: Leicester General Hospital.  Questionnaire number: 96
Strengths of recording/ charting system:
I like our big observations chart and fluid balance system. I like the blood results flow chart. The care plans are nice and short but accurate if filled in correctly.

Weaknesses of recording/ charting system:
They are on view for all to see.

Other comments:
We are undergoing changes to make all documents within UHL the same.

Site: Leicester General Hospital.  Questionnaire number: 97
Strengths of recording/ charting system:
You can see at a glance the trend- can act immediately upon the findings.

Weaknesses of recording/ charting system:
You can find fluid balance not added up at either end of shift or during the shift. Forget to write infusions in progress.

Other comments:
(none noted)
Site: Leicester General Hospital. Questionnaire number: 98

Strengths of recording/charting system:
Allows for flexibility in observations, can record adverse events. You can write prompts on the chart for later in the day.
You can easily review the days events and see how interventions relate to each other i.e. fluid bolus effect on blood pressure, central venous pressure, urine output etc.

Weaknesses of recording/charting system:
Not always filled in thoroughly!
Only as good as the person using it!
If care plans are not read by the following shifts then they are of no value, only useful to those who do.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 100

Strengths of recording/charting system:
(none noted)

Weaknesses of recording/charting system:
It is only as useful as you make it.
Very dependant on appropriate and effective filling in by all members of staff.

Other comments:
(none noted)

Site: Leicester General Hospital. Questionnaire number: 100

Strengths of recording/charting system:
It (?) on every chart differences in red-legible and aware of it (sic).

Weaknesses of recording/charting system:
Lack of confidentiality.
Relies on people being fully aware and filling in all details.

Other comments:
(none noted)