The current hospital transfusion practices and procedures in Uganda
Kajja, Isaac

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2010

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Copyright
Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.
Chapter 2

Informed Consent in Blood Transfusion: Knowledge and Administrative Issues in Uganda Hospitals

Isaac Kajja, Gabriel S. Bimenya, Cees Th. Smit Sibinga
Accepted: Transf and Apheresis Science, 2011
ABSTRACT

Blood as a transplant is not free of risks. Clinicians and patients ought to know the proceedings of a transfusion informed consent. A mixed methodology to explore patients' and clinicians' knowledge of, opinions on administration and strategies to improve transfusion informed consent process was conducted. The clinicians' level of knowledge was limited to provision of information about, and the right to consent to a transfusion. They disagreed on administrative issues but had acceptable opinions on improving the process. Patients perceived this process as a way of assurance of blood safety. This process is important and should not be omitted.

Keywords: informed consent, clinicians, transfusion
INTRODUCTION

Seeking for informed consent is a process. It comprises provision of information on the expected benefits and potential risks of accepting or refusing hemotherapy; offers an opportunity to the patient or care-taker to ask questions, provides information on appropriate transfusion alternatives, calls for advising the patient without coercion and documentation of the proceedings of the discussion. Therefore, patients and persons responsible for minors and the unconscious, need to be informed of the reasons for an impending transfusion so that they can consent to it. True informed consent is possible in planned transfusions but not in emergency situations. This gives time to the patient to internalize the provided information and thereafter make a sound decision.

Communication between the clinician and the patient is the basis of good consent process. This calls for sound knowledge of the entire process by the clinician and will be reflected in how much patients remember of the information conveyed during the process of obtaining informed consent for transfusion, or even that the event occurred. The other factors that affect proper dispensation of the informed consent process are linguistic factors, cultural barriers, the atmosphere in which the process takes place and confidentiality of the outcomes of the discussions. Besides, it is good clinical practice for blood prescribing health facilities to regulate the administrative aspects of the informed consent process by including: a written policy, the timing of the informed consent process, who may seek for the consent, who may give consent, how often it should be sought and how it should be documented. If addressed, these factors would eventually effect the clinicians’ compliance to this demanding bedside exercise.

There are a number of unresolved issues in the administration of the informed consent process. The report of the Canadian Expert Working Group on guidelines for red cell and plasma use, shows disagreement on the disclosure of transfusion alternatives during the consent process. The difference between transfusion risks that should be disclosed and the risks that some schools of thought would consider minimal or theoretical is not always obvious. Thus, Holland and Schmidt compromise at disclosure of any transfusion complication that occurs with a frequency of one percent or more. Another disturbing issue is the right to refuse a transfusion. This right applies also when refusal of a transfusion will result in harm to the patient or even death.

Obtaining an informed consent for a transfusion in addition to a general treatment consent secured on admission is another unresolved issue in the process: some people assert that splitting the consent processes generates a large volume of information that is difficult to manage; others argue that a combined consent only proves a clinician-patient contact, but is not representative of a true blood transfusion informed consent.

The Republic of Uganda National Blood Transfusion Policy clearly state that patients shall be informed of the known risks and benefits of blood transfusion and/or alternative therapies and have the right to accept or refuse the procedure. However, this is not adhered to by clinicians due to lack of standard operating procedures to guide the informed consent process in hospitals. So blood is administered irrespective of whether a patient has consented or not.

In the period January-March 2007, an observational study focusing on bedside transfusion practices, was carried out in the department of Orthopaedics at Mulago Hospital, a 1500 bed national referral and teaching hospital in Uganda. It was found that the informed
The consent process is one of the steps neglected by clinicians in the clinical transfusion chain. In order to ascertain the clinical state of the consent process, firstly, the level of knowledge of the clinicians on the informed consent in blood transfusion was explored. Secondly, clinicians’ opinions on administrative issues and improvement strategies of the process were studied. Thirdly, patients’ experiences and expectations of information before a transfusion were collected and studied.

**METHODS**

In this study we used mixed research methods in sequence: May- August 2008 we carried out qualitative studies; November 2008 - January 2009 quantitative methods followed to broaden our understanding and generalizability of the results to the clinician population in Uganda; the crowning was the interviews among twenty adult blood recipients.

**Qualitative study designs and settings**

Focus group discussions (FGDs) were used for collection of information on clinicians’ ways of handling and improving the informed consent process in clinical use of blood. We also conducted interviews among twenty randomly selected adult blood recipients to explore their expectations and experiences regarding the informed consent.

The study was conducted in three hospitals of different health services delivery levels, each with the necessary clinical and laboratory personnel to handle transfusions. They included Mulago Hospital, Uganda’s 1500 beds National Referral and Teaching Hospital, Kawolo Hospital, a 100 beds district hospital 35 kilometers east of Mulago and Mukono Health centre IV a 50 bed hospital 20 kilometers east of Mulago. These hospitals are found on the major highway connecting land-locked Uganda to the sea port of Mombasa and handle many accident and emergency patients. These hospitals were chosen to ensure that clinicians included in the group discussions had day to day hands on clinical transfusion procedures. The study was approved by the Uganda National Council of Science and Technology, a body that oversees all ethical and legal issues pertaining to scientific research in Uganda.

**Participants**

Participants in the FGDs, (n=8 per group), were laboratory technicians, junior nurses (enrolled and registered) and junior doctors (interns and medical officers). These were purposively sampled because of their roles in transfusion procedures.

Twenty adult (aged 18 and above years) patients were interviewed on their perceptions of key issues in the informed consent. These included 12 males and 8 females admitted in the orthopedic ward of Mulago Hospital, medical and female wards of Kawolo Hospital and Mukono Health Center IV. They all had anemia as one of their symptoms. They were enrolled on the criteria that they had received a unit of whole blood as part of their treatment in the previous 48 hours of their hospital stay.
Qualitative data collection

The clinicians who satisfied the selection criteria signed an informed consent to participate in the study. Groups of 8 selected participants were engaged in 40-50 minute discussions at their work places. These discussions were facilitated by two trained research assistants in the presence of the principal investigator. Before discussions, the participants reviewed the statement of the problem being researched. The discussions were then guided by a set of questions on the topics of study. These had been piloted among two groups each comprising of six residents in the Departments of Orthopedics and Pediatrics- Mulago Hospital. The guide questions for interviews were piloted for effectiveness to elicit responses among three blood recipients in the Department of Orthopedics Mulago Hospital. These were open ended questions. The respondents were randomly selected from Mulago hospital, Kawolo hospital and Mukono Health center IV. We sought an oral informed consent from the patients who satisfied the inclusion criteria before conducting face-to-face interviews.

The proceedings of the discussions and interviews were recorded using a digital voice recorder. Immediately after each session there was a debriefing among the research team to ensure clarity of the recordings, documentation of any new ideas and plan for the following discussion. Recordings were transcribed verbatim. In both situations, we continued with data collection until the saturation stage when no new information was forth coming.

Data Analysis

The transcripts were entered into computer files. Data analysis involved reading and rereading of transcripts. This was followed by identification of meaning units comprising of phrases with similar meanings which were then coded. Systematic comparison of codes and categories across text was performed following procedures described by Pope and others\textsuperscript{[12]}. Emerging themes were then analyzed manually using the master sheet analysis technique\textsuperscript{[13]}.

Quantitative study design and setting

In order to further our understanding of the themes that emerged from the analysis of the focus group discussions, we conducted a descriptive cross-sectional survey using a questionnaire to find out the extent of knowledge on informed consent, opinions on administrative issues of the consent process and strategies to improve clinician compliance to informed consent in blood transfusion. Knowledge was assessed using five domains:

1. providing information on the expected benefits and potential risks of accepting or refusing hemotherapy;
2. offering an opportunity to the patient or care-taker to ask questions and to provide answers;
3. providing information on appropriate transfusion alternatives;
4. advising the patient without coercion;
5. documentation of consent or refusal of a transfusion.

For purposes of this study, the responses were arbitrarily scored as follows:

- responses in 0-1 domain were assigned a score 0, representing unacceptable knowledge; responses in 2-3 of the domains were assigned a score of 1, representing an average level of knowledge;
- responses in 4-5 of the domains were assigned a score of 2, equivalent to an acceptable level of knowledge.
The questionnaire consisted of open-ended questions to ensure freedom and spontaneity of expression of opinions and sections of close-ended questions to elicit specific responses. To ensure clinical relevance, the questionnaire was piloted on eight orthopaedic surgeons and two postgraduate orthopedic residents.

The questionnaires were delivered by hand to senior clinicians (senior consultants, consultants, registrars, senior residents and senior nursing officers) in their work places in five regional referral hospitals in Uganda. These included Jinja and Mbale hospitals in the Eastern region; Mbarara in the Southwestern region; Gulu Hospital in the Northern region and Mulago hospital in the Central region. These hospitals have clinicians of similar expertise and operate with equal facilities. They were conveniently sampled due to their proximity to a regional blood bank, with assured availability of blood in the hospital. The clinicians were selected on the criteria of being involved in day-to-day transfusion activities.

Data analysis

Data from the survey were entered into a database and statistical analyses performed with the help of computer software STATA version 9.2. (StataCorp. Texas, USA) Significance was defined as p <0.05. A two-sided Fisher’s exact test was performed to find associations of the clinicians’ knowledge and the hospital where they work to the various outcomes of interest.

RESULTS

Six FGDs were held, four in Mulago Hospital departments of (orthopedics, pediatrics, obstetrics and oncology) and two in Kawolo Hospital (pediatrics and obstetrics departments). Each group composed of eight participants.

Clinicians’ knowledge of the informed consent process

Participants identified only two key elements in the informed consent process. First was provision of information by the clinician to the patient on the use, known risks and beneficial outcomes of an imminent transfusion. Secondly, the right of the patient to accept or refuse a transfusion. This is evident from the following quotation:

An informed consent means that you talk to the patients educate them on the reason for the transfusion, its will benefits and risks."

Out of the 90 questionnaires sent to senior clinicians, 65 (72.2%) were returned for analysis. Most of the clinicians, 35 (53.8%), had an average knowledge of the informed consent process which centered on two or three of the studied domains, only 4 (6.2%) clinicians had an acceptable level of knowledge. (Table 1).

There was no statistically significant variation in the level of knowledge (p=0.34) among clinicians of different hospitals.

The junior clinicians identified protection of the health worker prescribing a transfusion against any future medico-legal issues resulting from such a procedure as the major role of an informed consent.

The senior clinicians identified two major roles of an informed consent process in Transfusion Medicine. Of the 65 respondents 33 (50.8%) felt that the informed consent process
gives an opportunity to the clinician to educate the patient about the blood transfusion processes and procedures, while 11 (16.9%) clinicians thought that the consent process is purely for future medico-legal protection of the health worker engaged in the prescription of blood. Eleven (16.9%) senior clinicians did not know the role of an informed consent process in blood transfusion (Table 1).

The perception of the role of the informed consent did not have an association with the core knowledge of the consent process per se (p=0.244).

From the conducted (FGDs), it was apparent that the informed consent process is a step that is irregularly performed or neglected in most of the blood- using hospitals. This is evidenced by the following quotation:

“It is not a practice in my unit to seek for consent for a blood transfusion.”

This inconsistence of the consent process for blood was reflected in the responses of senior clinicians, where only 8 (12.3%) felt that the compliance to the informed consent process was adequate. Twenty two (33.8%) and eight (12.3%) respectively assessed the compliance as probably inadequate or certainly inadequate, while 5 (7.7%) did not know how to assess this health provider quality. The clinicians’ level of knowledge did not determine the assessment of the health worker compliance to the consent process (p=0.8).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Responses out of 65 clinicians n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
</tr>
<tr>
<td>Unacceptable</td>
<td>26 (40.0)</td>
</tr>
<tr>
<td>Average</td>
<td>35 (53.8)</td>
</tr>
<tr>
<td>Acceptable</td>
<td>4 (6.2)</td>
</tr>
<tr>
<td>Roles</td>
<td></td>
</tr>
<tr>
<td>Opportunity to provide transfusion knowledge to patient</td>
<td>33 (50.8)</td>
</tr>
<tr>
<td>Medico-legal</td>
<td>11 (16.9)</td>
</tr>
<tr>
<td>Opportunity to provide transfusion knowledge and medico-legal</td>
<td>10 (15.4)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>11 (16.9)</td>
</tr>
<tr>
<td>Compliance</td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>8 (12.3)</td>
</tr>
<tr>
<td>Fairly adequate</td>
<td>22 (33.8)</td>
</tr>
<tr>
<td>Not adequate</td>
<td>22 (33.8)</td>
</tr>
<tr>
<td>Certainly not adequate</td>
<td>5 (7.7)</td>
</tr>
<tr>
<td>Don’t know</td>
<td>8 (12.3)</td>
</tr>
</tbody>
</table>

**Opinions on administrative issues of the informed consent**

When the junior clinicians were asked about their opinions on who should seek for the informed consent, two common themes emerged. Most of the participants felt that the doctor on duty should seek for the consent since he or she makes the diagnosis and takes the decision to transfuse. Other participants felt that the nurse should seek for the consent since she is always available on the ward and duly responsible for monitoring the transfusion itself.
The 65 responding senior clinicians had open perspectives on who should seek for transfusion consent: each clinician gave more that one alternative. Forty six (70.8%) felt that the duty of seeking for the consent lies with the intern doctors. Only 10 (15.5%) and 6 (9.2%) clinicians respectively, felt that medical student or student nurses should take this responsibility. On the other hand 5 (7.7%) of the clinicians did not indicate any person duly responsible for seeking an informed consent for a transfusion (Table 2).

The junior clinicians did not agree on a particular time of the hospital stay when an informed consent for blood should be sought. Some felt that it should be sought at the time of admission to the hospital while others were of the opinion that the clinician should seek for the consent as and when there is need for a blood transfusion. There was inconsistence in the responses among the senior clinicians as regards timing of the consent process. Forty four (67.7%) felt that a consent for a transfusion should be sought as the need arises for blood, while eighteen (27.7 %) thought that there should be one fully- embracing consent for all treatments and procedures sought at the time of admission to hospital.

Regarding the informed-consent documentation, the response pattern was Y-crossed; on one hand all participants agreed that the proceedings should be recorded for any future medico-legal questions but on the other hand, there was a dichotomy on where this information should be recorded. Many participants felt that a separate form should be designed for the blood transfusion informed-consent procedure, while others thought that this information should be recorded in the patient’s clinical file like any other notes. The above difference in opinions among junior clinicians was also noted from the senior clinicians’ responses. Forty six (70.8%) recommended the process to be documented on a pre-designed form, while 19 (29.2%) preferred documentation in the patient’s clinical notes.

Table 2. Opinions on administrative aspects of the informed consent

<table>
<thead>
<tr>
<th>Responsible clinician*</th>
<th>n (%)</th>
<th>Timing#</th>
<th>Documentation€</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intern doctor</td>
<td>46 (70.8)</td>
<td>on hospital</td>
<td>on a pre-designed</td>
<td></td>
</tr>
<tr>
<td>Junior doctor</td>
<td>37 (56.9)</td>
<td>entry</td>
<td>18 (27.7)</td>
<td>informed consent form</td>
</tr>
<tr>
<td>Senior nurse</td>
<td>32 (49.2)</td>
<td>when blood is needed</td>
<td>46 (70.8)</td>
<td></td>
</tr>
<tr>
<td>Senior doctor</td>
<td>25 (38.5)</td>
<td>do not know</td>
<td>19 (29.2)</td>
<td></td>
</tr>
<tr>
<td>Junior nurse</td>
<td>21 (32.3)</td>
<td>in the patient</td>
<td>3 (4.6)</td>
<td>clinical notes</td>
</tr>
<tr>
<td>Medical assistant</td>
<td>19 (29.2)</td>
<td>not done</td>
<td>19 (29.2)</td>
<td></td>
</tr>
<tr>
<td>Medical student</td>
<td>10 (15.5)</td>
<td>not known</td>
<td>3 (4.6)</td>
<td></td>
</tr>
<tr>
<td>Student nurse</td>
<td>6 (9.2)</td>
<td>not done</td>
<td>19 (29.2)</td>
<td></td>
</tr>
<tr>
<td>Not done</td>
<td>5 (7.7)</td>
<td>not done</td>
<td>19 (29.2)</td>
<td></td>
</tr>
</tbody>
</table>

* = opinion on who should seeks for informed consent from the patient each clinician gave more than one alternative.
# = the clinicians' opinions on time an informed consent should be sought.
€ = the opinions on where informed consent proceedings should be documented
n(%) = number and percentage of clinicians giving a particular opinion.
Strategies to improve the informed consent process

All junior clinicians agreed that there should be a national policy and hospital guidelines addressing the informed consent and emphasized the need for training of pre-service and in-service health workers on components and importance of the transfusion informed-consent process.

The senior clinicians had a broader perspective on the strategies that can be put in place to improve the hospital transfusion-consent process. The main focus was on training of the health worker which was opined by 39 (60.0%) out of the 65 responses (Table 3). Other suggestions included: provision of a separate informed consent form; instituting a hospital transfusion policy; emphasizing supportive supervision of clinicians, sensitization of the public on matters of the informed consent and ensuring recurrent clinical audits of transfusion practices.

Table 3 Strategies to improve clinician compliance to the informed consent process

<table>
<thead>
<tr>
<th>Strategy</th>
<th>responses from the 65 clinicians n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>39 (60.0)</td>
</tr>
<tr>
<td>Provide separate informed consent form to clinicians</td>
<td>15 (23.1)</td>
</tr>
<tr>
<td>Institute a hospital policy on informed consent</td>
<td>12 (18.5)</td>
</tr>
<tr>
<td>Improve support supervision of clinicians</td>
<td>7 (10.8)</td>
</tr>
<tr>
<td>Increase staffing</td>
<td>7 (10.8)</td>
</tr>
<tr>
<td>Sensitization of public on the right to an informed consent</td>
<td>7 (10.8)</td>
</tr>
<tr>
<td>No idea</td>
<td>5 (7.7)</td>
</tr>
<tr>
<td>Avail informed consent guidelines in clinical areas</td>
<td>4 (6.2)</td>
</tr>
<tr>
<td>Clinical audits</td>
<td>3 (4.6)</td>
</tr>
</tbody>
</table>

Patients’ experiences and expectations.

Not all interviewed patients were asked for consent for their transfusions. However, they were cognizant of their right to some information before a transfusion is accepted.

“I did not discuss anything with the doctors, they told me I had little blood, three hours later the nurse gave me a pint of blood.”

“…..but sir, it is important to tell us something before we receive this blood because this blood comes from another person, we are not sure of that person’s health.”

The main concern of the interviewed patients was reassurance on blood safety. They expected the clinicians to inform them about the quality of the blood they were yet to receive. They also expected the clinicians to provide information regarding the benefits and risks of accepting or refusing a transfusion

“I want to be sure that the blood I am going to receive is free of HIV or malaria.”

“Um…the doctor should reassure me that the blood is safe”

“…By the way, why don’t you inform us about the effects of refusing or accepting this blood?”

Regarding the administrative issues of the informed consent, most patients were of the opinion that the informed consent should be sought as and when blood was confirmed needed and that the proceedings of the informed consent discussion are documented in the patient file.

The patients expect the doctors who reach the diagnosis and take decision to transfuse to be duly responsible for seeking and documentation of the informed consent.
“You doctors are too busy; you should discuss the information concerning blood when you are sure that I need blood. I would advise that you write the outcome of this discussion somewhere in my hospital file because I can turn around and say that you did not give me blood or you gave me bad blood”

DISCUSSION

The study demonstrates a number of loopholes in the perceptions and practices of the transfusion informed consent process in Ugandan hospitals. It is apparent that the knowledge and practices of clinicians as regards the informed consent in Transfusion Medicine in Uganda falls short of the standards and recommendations published by World Health Organization (WHO) and practiced in other centers [14, 15]. The responses miss out issues like provision of information about transfusion alternatives, giving an opportunity to the patient to ask questions and ensuring that the clinician addresses the whole process with a non-coercive approach. Lack of full knowledge of the informed consent process is not unique to Transfusion Medicine. Elizabeth and Warner [16] working in psychiatry, established that although doctors were commonly involved in assessing capacity issues and were responsible for many interventions requiring consent, their knowledge of these aspects was deficient. Even some consultant psychiatrist, whom they asked to give expert opinions on these matters, were found wanting. The above gaps in knowledge are due to lack of a detailed formal training on the various consent processes in medical and surgical interventions at medical and paramedical schools. It is also due to lack of continuous professional development in transfusion practices for clinicians.

The patients’ level of knowledge is lacking despite the fact that they are aware of their right to information regarding the safety of the blood they are yet to receive. Normally, they do not demand for this information. This is because they present late for treatments that require hemotherapy and feel that taking off time for the informed consent process before blood is given may aggravate the disease process. Thus, one patient said: “I think I should be given that information after I have got my unit of blood. This is because I can die due to delays of the informed consent process.” They also appreciate that their clinicians are overwhelmed by patient loads therefore take the doctors’ decisions as appropriate and final.

The clinicians and patients suggest internationally acceptable administrative issues of the informed consent to be introduced. They suggest that any trained health worker can seek consent from the patient or from his or her legal representative. The shortage of clinical staff in hospitals in low human development index (L-HDI) countries explains, though does not really justify the emerging contentions among clinicians on who should seek for the informed consents. Many health facilities are manned by a handful of doctors and nurses caring for a large patient load, hence the assertion that any available clinician can take the consent from the patient. However, in well staffed institutions the senior clinician providing treatment is responsible for making sure the patient understands all the benefits and risks of various treatment modalities, including blood transfusion, before the patient signs consents [7, 17, 18]. The specialist may delegate some of these tasks to junior clinicians.

The varying opinions on the timing of an informed consent for transfusion have merits and demerits. Consent obtained on admission may not materialize into a transfusion during hospital stay. Delayed consent may endanger a patient in urgent need of blood and whose
condition deteriorates during hospital stay precluding him or her from giving consent for a transfusion. In elective situations the process of informing patients and obtaining consent takes place well in advance to allow them reflect on what they have learnt and request more clarification, if needed. In emergency situations, especially life threatening conditions like on-going traumatic hemorrhage, a blood transfusion cannot wait for the detailed process of obtaining informed consent. Cultural factors influence dispensation of a consent process. Different cultures regard certain topics differently thus, in some, a decision to undertake any treatment for a patient is the responsibility of his/her family. There also cultural differences in how much or what kind of information a patient wants to know. For example, in some cultures patients may not be routinely informed about risks of undertaking a blood transfusion. In many Japanese and Eastern Europe cultures, physician paternalism overrides patient autonomy in a number of medical interventions. The opposite is true for the western world. It is imperative therefore, that cultural diversities pertaining to consent processes in medical interventions are thoroughly explored in a given country so that dispensation of the informed consent process retains patient confidence.

Emphasis on documentation of proceedings of the informed consent process for protecting the attending clinician from any future legal or un-ethical claims. This mirrors the findings of Iglesia and others in their work among health care personnel in which they found that 81.2% of the 277 respondents to an opinion survey considered the information provided during the informed consent process as an instrument of legal protection of the health worker against the demands and expectations of the patients. The consent process acts as a tool to minimize chances of legal action resulting from a complication of hemotherapy by providing prior information regarding the possible eventualities and getting the patient’s agreement before proceeding further. This process must be documented. The documentation serves to provide evidence that the consent process actually occurred and provides the details as to the precise information that was imparted to the patient. Additionally, each informed consent form should have a place for the date and a signature of both the patient and the person who obtained the consent. In enabling situations, like preparing for an elective transfusion, a third party should participate in the consent process and sign off the consent form. Different hospitals use different approaches to document the consent process, depending on the prevailing standard operating procedures. Melissa and others developed a separate informed consent form. However, given the Ugandan situation of limited supply of hospital stationery and low staffing for management of inventories, it would be appropriate to document this information in the clinical notes instead of using a separate form.

Clinicians expressed desire for a National Clinical Transfusion Policy under which guidelines and standard operating procedures for the informed consent process would be developed. This is a welcome idea because it harmonizes the practice and ensures easy design, implementation and evaluation of transfusion audits. Often, Ugandan clinicians have been found to have acquired their transfusion knowledge passively from senior staff during day to day clinical activities like ward rounds. They do not get formal medical school training in the appropriate steps of clinical use of blood. Thus, many of them felt that pre-service and in-service training in clinically related transfusion aspects is a cornerstone in improving the informed consent practices. This echoes recommendations from other settings. Such trainings should be supported by an effective strategy for regular formative feedback and accurate summative evaluation to help...
Clinicians achieve a high level competence. Because the senior clinicians themselves have a key role to pass on informed consent principles from one cohort of students or junior clinicians to the next, it is imperative that they be equipped not only with the knowledge and skills to obtain the informed consent but also with the knowledge and skills to be effective mentors and evaluators of the junior clinicians and students.

It is apparent that in order to meet the patients’ expectations, clinicians in Uganda need training in the transfusion informed consent process. This will guard against eventual transfusion related litigations. This study also gives an opportunity to all stakeholders to institute and regulate the proceedings of a pre-transfusion informed consent as an integral part of the hospital policy.

**Conflict of interest**
The authors certify that they have no affiliation with or financial involvement in any organization or entity with a direct financial interest in the subject matter or materials discussed in this manuscript. The authors have full control of the data gathered and presented and agree to allow the journal to review theses if requested.
REFERENCES