Glasgow and West of Scotland
BLOOD TRANSFUSION SERVICE

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JW/HD.

30 July, 1975.

Dr. W. d'A. Maycock,
Director,
The Lister Institute
of Preventive Medicine,
(University of London),
ELSTREE,
Herts. WD6 3AX.

Dear Bill,

Plasma Production Programme

I thank you for your letter of 23 July. I have given some thought to this subject of the volume of plasma to be removed from a single donation. You raised the subject when we met recently in London and we are now looking at various practical aspects of the problem.

When I first embarked on large scale production of cryoprecipitate I was greedy and tried to remove as large a volume of plasma as possible in order to obtain the maximum yield of factor VIII from each donation. The resulting red cell concentrates were acceptable for the transfusion of patients with severe anaemia but were not acceptable for more general use of red cells which I was trying to encourage. I therefore had to compromise.

When freshly donated blood is processed our standard practice is to remove 200g of plasma. We make allowances for the weight of the satellite pack so that the 200g refers to the weight of citrated plasma. This means that the actual volume of plasma removed will be of the order of 190-195 ml which is really not much different from your own recommendation about removing 180 ml.

We use CPD as the anticoagulant and our aim is to collect 450 ml of donor blood. This we can achieve reasonably well in our static donor centre where we use automatic scales but at our mobile sessions we still depend on spring balances. I did attempt to introduce the automatic balances at mobile sessions but you well know that one requires sturdy equipment at mobile sessions. I am about to try the use of the Salter balance which Fred Stratton introduced in Manchester and I am hoping that these will be more reliable and more accurate than our spring balances. Certainly the Salter balance should be much more readable than the spring balance.

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We are therefore using the small volume of CPD namely 63 ml for the collection of 450 ml of donor blood. As I have indicated however I am concerned about the variability in the weight of blood collected at mobile sessions and I am trying to improve the situation. From my experience however I have found that clinicians in general accept for clinical use the donations from which 200g plasma have been removed. I would therefore have thought that there should be no serious objection to your proposal to remove 180 ml of plasma.

As more and more regions in England move from glass bottles to plastic packs, I would not be surprised if many topics come up for discussion. For example we are now having to employ technicians in the evening and at weekends to assist in the processing of donations. I am concerned about the loss of valuable components from our practice of removing only 200g of plasma. Very often when preparing platelet concentrates or cryoprecipitate we push over the maximum volume into the satellite pack initially and having removed the platelets and/or the cryoprecipitate some plasma is returned to the red cells. This means that we can send approximately 200g per donation of plasma to the PFC at Liberton. One snag about this system is that for ease and for safety, it requires triple packs rather than double packs.

Our return rate of unused whole blood from hospitals remains high, around the 25-30% mark, although our performance in this respect now is better than it was a few years ago. The return rate with red cells is low but I do not claim that this means that most of the red cells are transfused. I suspect that some hospitals deliberately do not return unused red cells. I think we will have to look closely at the possibility of recovering the plasma from unused red cells. I know that John Watt has been looking at this aspect and he seems to think that it would be worthwhile recovering this plasma.

With kindest regards,
Yours sincerely,

GRO-C

Regional Director.

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