JRCALC
JOINT ROYAL COLLEGES AMBULANCE LIAISON COMMITTEE

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Dear Colleague

Audit for NSF

We are making progress with audit. I am writing on behalf of the JRCALC/ASA steering committee to let you know about recent developments, to tell you of our plans for the future, and to ask if you foresee any problems over the process we have been charged to deliver by the Department of Health in connection with the NSF for Coronary Heart Disease.

1. We have now received funding for audit from the Department of Health for the current financial year. This has been sufficient to cover the costs of Stuart Nicholls, to modify the SEACAG database that we are now using, and to continue with development work in relation to the database and liaison with the Myocardial Infarction National Audit Project (MINAP).

2. The SEACAG database has now been installed in all but eight trusts, and these are expected to agree instalment dates in the near future.

3. *Annex1* shows the revised planned progression of audit. The first phase has been running for since the first pre-hospital administration of thrombolysis many months ago. This has been done manually which is time consuming, but it can now continue electronically using the database.

4. Please note that the second (and very important) phase involves the audit of all patients who *could* be considered for pre-hospital

thrombolysis whether or not they receive it. These are identified by patients with a recent history compatible with infarction and pathological ST segment elevation. This is shortly to be piloted by the original SEACAG trusts, but we hope that most trusts will be able to join the audit by March 2002. This will enable us to meet our mandate to start major data collection in this financial year. Some trusts do not have data boxes for ST elevation, but this will of course become an absolute necessity as participation progresses in the ambulance contribution to speeding thrombolysis.

5. Some Trusts are not yet fully equipped with 12-lead electrocardiographs. Until such time as they are we will accept data from 3-lead tracings, recognising that this is acceptable as an interim measure although 50% of eligible cases will be missed.

6. We will be setting up a number of Regional Focus Groups early in the new year to help familiarise all directly involved with the database on how liaison with the ASA link to MINAP can best be achieved. We believe this will be helpful to Trusts.

7. Please note that NO further development of audit is planned (except on a pilot basis for Trusts wishing to participate) until phase 2 is running successfully in all parts of the country. Our commitment is to achieve this during 2002.

8. *Annex 2* is a reminder of the strategies available to Trusts in speeding thrombolysis even if the drugs are not yet to be administered before hospital admission. Readers will note the additional facilities available for the Simoons algorithm (the well-proven software confirmation of eligibility on ECG grounds for thrombolysis that may render unnecessary the potentially time-wasting transmission of ECGs where paramedics alone are not yet judged fully competent in case selection). *Annex 3* is a reminder of the scripted questions for eligibility (available in two versions - the second can be provided on request). The ECG criteria in the Simoons algorithm is slightly different but acceptable to the joint thrombolysis committee.

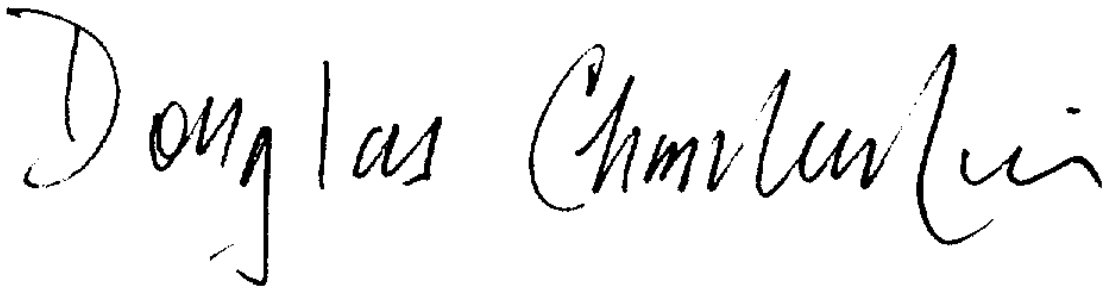
9. As more drugs are used by Trusts under Patient Group Directions, JRCALC intends to facilitate the sharing of templates for applications to be made - thus saving unnecessary duplication of work. Information will be posted on the Web, but notification of important additions will be sent by e-mail.

10. We hope to provide regular newsletters for Trusts, to show the progress that is being made nationally and to highlight how any difficulties can be overcome.

Please do let me know if you have questions or comments in relation to this letter.

With kind regards

Yours sincerely



Douglas Chamberlain
Chairman, JRCALC
Encl: Annex 1,2,3

Annex 1

Stage 1: (Patients thrombolysied in the pre hospital setting, already implemented) Ambulance Trusts are asked to provide the JRCALC/ASA audit office with information on all patients who have been treated with thrombolysis, opiates, or penicillin (for meningoccocal septicaemia).

Stage 2: Further pilot testing of the database by SEACAG and Regional Focus groups

Stage 3: (Continuous ACS data collection & audit to be implemented from March 2002) Trusts will be asked to provide to the JRCALC/ASA audit office continuous data on all (100%) patients with presumed cardiac pain and a potentially qualifying ECG for whom pre-hospital thrombolysis *could* be considered, whether or not it was administered, together with the reason if it was not given (eg not yet Trust policy).

A potentially qualifying ECG is one with pathological ST elevation (see indications in Annex 3). The indications and contraindications on which judgements will be made form part of the database.

Stage 4: (During stage 3 Stuart Nicholls will be working with Trusts to develop the pre hospital cardiac arrest audit. This will be implemented at a later date to be decided after consultation with Trusts). Trusts will be asked to provide information on all cases of cardiac arrest for whom resuscitation was attempted.

Stage 5: (To be implemented at a date to be decided - not before the end of 2002 and certainly only after full consultation with Trusts). Trusts will be asked to provide data on all patients with chest pain thought to be cardiac in origin. We recognise that this stage may present appreciable logistical difficulties because of the numbers involved.

Annex 2

1. Simple recognition of eligibility for thrombolysis by ambulance paramedics (based on clinical features and 12-lead electrocardiogram) with transmission of this information to the Accident & Emergency Department or the CCU in order to reduce delay to hospital administration.

2. Transmission of clinical information and the electrocardiogram to an A/E department or a CCU in order to reduce delay to hospital administration.

3. Transmission of clinical information and electrocardiogram to a physician within the A/E department or CCU who might then authorise the pre-hospital administration of a thrombolytic drug on a named patient basis (the physician taking responsibility for the decision on the basis of the information he has received).

4. The involvement in rural areas of primary care physicians, following the GREAT model, with thrombolytic agents being held either by primary care physicians or within the ambulances.

5. Decisions and administration by trained paramedics without outside intervention, based on the available clinical information and interpretation of a diagnostic 12-lead electrocardiogram. Note that the revised Simoons algorithm is available as software in the Physiocontrol Lifepak12 and Zoll xxx electrocardiographs. The algorithm that confirms eligibility automatically on the ECG print-out has been used successfully in Rotterdam over many years and can be used to support independent decisions by paramedics.

Annex 3

Scripted questions for paramedic-initiated pre-hospital thrombolysis

Primary Assessment

1. Can you confirm that the patient is conscious, coherent, and able to understand that clot dissolving drugs will be used?
2. Can you confirm that the patient is aged 75 or less?
3. Can you confirm that the patient has had symptoms characteristic of a coronary heart attack (i.e. pain in a typical distribution of 30 minutes duration or more)?
4. Can you confirm that the symptoms started less than 3 hours ago?
5. Can you confirm that the pain built up over seconds and minutes rather than starting totally abruptly?
6. Can you confirm that breathing does not influence the severity of the pain?
7. Can you confirm that the heart rate is between 50-140?
8. Can you confirm that the systolic blood pressure is more than 80 mmHg and less than 160 mmHg?
9. Can you confirm that the electrocardiogram shows abnormal ST segment elevation of 2 mm or more in at least 2 standard leads or in at least 2 adjacent precordial leads, not including V1. (ST elevation can sometimes be normal in V1 and V2).
10. Can you confirm that the QRS width is 0.14 mm or less, and that bundle branch block absent from the tracing?
11. Can you confirm that there is NO atrioventricular block greater than 1st degree?
    (If necessary after treatment with IV atropine).

Secondary Assessment (Contraindications)

12. Can you confirm that the patient is not likely to be pregnant, nor has delivered within the last two weeks?
13. Can you confirm that the patient has not had a peptic ulcer within the last 6 months?

14. Can you confirm that the patient has not had a stroke of any sort within the last 12 months and no permanent disability from a previous stroke?
15. Can you confirm the patient has no diagnosed bleeding tendency, has had no recent blood loss (except for normal menstruation), and is not taking warfarin (anticoagulant) therapy?
16. Can you confirm the patient has not had any surgical operation, tooth extractions, significant trauma, or head injury within the last 4 weeks?
17. Can you confirm that the patient has not been treated recently for any other serious head or brain condition? (This is intended to exclude patients with cerebral tumours).
18. Can you confirm that streptokinase has not been given previously? (If the patient has had thrombolytic treatment and does not know which agent was used, you should assume that it was streptokinase).
19. Can you confirm that the patient has not had chest compression for resuscitation for a period of longer than 5 minutes?
20. Can you confirm that the patient is not being treated for liver failure, renal failure, or any other severe systemic illness?

The patient will be told that they are to receive treatment with a clot dissolving drug, but the present intention is <u>not</u> to list serious complications because the anxiety would increase the risk to the patient.

We expect that these criteria will be brought more into line with conventional hospital criteria after experience has been gained in the pre-hospital setting.

A different format for the above criteria, suggested by Dr Helen Booth, has already been distributed to Trusts and is available on request.