NOT FOR PUBLICATION
IN CONFIDENCE

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COST-BENEFIT OF HEPATITIS C SCREENING OF BLOOD DONORS IN THE UK

1. In spite of the acknowledged difficulties with the Chiron test for hepatitis C, and in particular the lack of confirmatory tests, the committee at previous meetings has cautiously supported the introduction of routine testing in the UK, provided the test itself satisfies the FDA and pilot studies in the UK show testing to be practicable. The cost would be substantial. Full examination of the cost-benefit would be needed to persuade senior NHS management that such testing was appropriate and worthwhile.

2. There are too many unknowns to permit a proper cost-benefit analysis. The annex attempts to list the relevant headings and provides guesses for some of the possible answers. Advice is sought from the committee on (1) any factors/headings which have been omitted or which are incorrect, (2) what figures or values can be attributed to each item and (3) what other sources of advice or information might enable more accurate estimates to be provided.

ANNEX

OUTLINE COST-BENEFIT ANALYSIS OF ROUTINE HEP C TESTING OF UK BLOOD DONORS

Hepatitis C is one form of nonA nonB hepatitis. Screening of blood donations would serve to reduce transfusion associated nonA nonB hepatitis and its complications.

BENEFIT

(1) Prevention of transfusion-associated symptomatic nonAnonB infection to be calculated. (The latest figures that we have are for 1985 when there were 670 reported cases of transfusion related hepatitis B).

Method A	Cases prevented per year
- acute nonA nonB hepatitis	x
- chronic hepatitis: chronic active	x
- cirrhosis	x

[x = current annual UK incidence of transfusion associated new cases times the proportion that might be prevented by hep C screening ?= 60-80%]

Method B

(a) estimate number of recipients infected by one or more hep C positive units/year [no. of units transfused x hepatitis C prevalence as it would be detected currently (?0.7%) x proportion of these hep C positive units which are infectious in practice 60%? x proportion of recipients who are not already infected or immune ?% - number of recipients. Any weighting in relation to plasma and/or cellular products only?]

(b) estimate proportion developing acute hepatitis ?1%

(c) estimate proportion which will develop chronic hepatitis, taking into account natural life expectancy of transfusion recipients ?10%

for both Method A and B

From annual number of cases of hepatitis prevented:

(i) direct costs of health care f? per case*

(ii) indirect costs [need to know age/sex/occupational grouping of these cases: mortality rate] £? per case*

(iii) intangible costs, eg pain, grief ?QALYs

* savings from fewer chronic hepatitis cases to be discounted to take account of several years delay

(2) Prevention of non-transfusion associated symptomatic nonA nonB infection

Further reduction in cases from reduced pool of infection in the community = ? cases with costs estimated as above

(3) Reduce risk of subsequent litigation

Could be substantial if other nations institute screening (cf HIV testing): although we would argue such governmental decisions are not judiciable

(4) Enable BPL/PFC to sell fractionated products overseas if hep C screening becomes a requirement overseas, and surplus product is available

KNOWN COSTS

		Total E & W £
(1) Direct screening costs		
materials initial test	£2.40 per test + VAT	6.35m
materials, confirmatory test	£25 per test x 10,000	250K
additional staff for testing	£20,000/RTC	320K
counselling of positive donors		300K
(2) Indirect screening costs		
replacement of lost donors		500K

ADDITIONAL COSTS

To (1) and (2) above would have to be added the following unquantifiable costs:

- potential litigation from "stigmatised" donors?
- paper work, computing and records connected with screening
- additional equipment and office space
- overheads; heating lighting etc.
- diversion of skilled staff from other duties

- training of new staff

- consequent delays in availability of blood components

Note: the effect of the loss of hepatitis C immune donors from the plasma pool is not known. It could prove detrimental (loss of antibody useful for mopping up virus) or beneficial (since most of the infective units will be being discarded as a result).