

## NHS BLOOD AND TRANSPLANT

### National Organ Donation Committee

#### Adjustment of Neurological Death Testing Rate

#### INTRODUCTION

This document summarises work proposed by the Organ Donation Statistics Group on a potential adjustment to the calculation of the neurological death (ND) testing rate.

Currently, the ND testing rate is calculated as the number of patients for whom ND tests were performed out of the number of patients for whom ND is suspected, ie the denominator is the number of patients who satisfy all four of the following conditions:

1. apnoea,
2. coma from known aetiology and unresponsive,
3. mechanically ventilated and
4. fixed pupils.

Feedback at regional collaboratives suggests the current messages delivered around the ND testing rate is undermining confidence in the Potential Donor Audit and distracting from where true improvements could be made.

**Two specific issues have been highlighted:**

1. **The broad denominator is leading to lower neurological death testing rates because it includes cases where it was *never* possible to diagnose death using neurological death tests.**
2. **There is a strong clinical opinion that a 100% testing rate, using the above four conditions as the denominator, would not be clinically safe and therefore should not be the ultimate goal.**

The proposal below only deals with the first of the two highlighted issues.

#### PROPOSAL

There are three objective reasons that can be recorded on the Potential Donor Audit (PDA) form which would indicate it was *never* possible to perform ND tests, these are: “cardiac arrest despite resuscitation”, “brainstem reflexes returned”, and “neonates – less than 2 months post term”.

**It is proposed that cases where these three objective reasons were given as the reason for not performing ND tests, could be removed from the calculation of the ND testing rate as ND tests were not appropriate in these circumstances.**

With this change in the calculation of the rate, a change in the current 80% target could also be considered; a brain stem death testing target between 80% and 90%

would appear to be appropriate and achievable as the testing rate would be closer to the true proportion of those possible to test.

**Table 1** shows this new calculation compared with the current calculation for 1 April 2010 to 31 August 2014, by financial year.

In 2013/14, there were 982 patients in whom ND was suspected and 25 of these patients were not tested for reasons “cardiac arrest despite resuscitation”, “brainstem reflexes returned”, or “neonates – less than 2 months post term”. This leaves 957 patients in whom it is proposed ND tests could actually be performed. The current method for calculating the ND testing rate gave a rate of 81.2% and the proposed adjusted method gives a rate of 83.3%.

<b>Table 1      Current and proposed calculations of the Neurological Death testing rate</b>					
<b>Financial year</b>	<b>Neurological death was suspected</b>	<b>Neurological death suspected excluding specific reasons for not testing<sup>1</sup></b>	<b>Patients that were neurological death tested</b>	<b>Neurological death testing rate (%)</b>	<b>Neurological death testing rate (adjusted)<sup>2</sup> (%)</b>
2010/11	843	820	610	72.4	74.4
2011/12	849	830	637	75.0	76.7
2012/13	842	826	664	78.9	80.4
2013/14	982	957	797	81.2	83.3
2014/15 <sup>3</sup>	397	390	319	80.4	81.8

<sup>1</sup> Reasons “cardiac arrest despite resuscitation”, “brainstem reflexes returned”, and “neonates – less than 2 months post term”  
<sup>2</sup>  $B/(A - C)$ , where: A = Criteria for neurological testing met; B = Neurological tests to confirm death performed; C = Reasons for not being able to test “cardiac arrest despite resuscitation”, “brainstem reflexes returned”, and “neonates – less than 2 months post term”  
<sup>3</sup> 1 April to 31 August 2014

## RECOMMENDATION

It is recommended by Organ Donation Statistics Group to change the calculation of the neurological death testing rate to obtain a testing rate closer to the true proportion of those possible to test.

## ACTION

Members are asked if they are in agreement with this recommendation.