

SIMULATING A NATIONAL LIVER TRANSPLANT ALLOCATION SCHEME

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In the UK, the number of patients requiring liver transplantation is greater than the number of livers donated. It is vital to ensure that the limited numbers of livers donated are used optimally. An allocation protocol must be in place to ensure that patients are treated equally and that livers are allocated in a fair and unbiased way, based on patient need, whilst achieving the optimal match between donor and recipient.

Presently, a Centre Liver Allocation Scheme (CLAS) is used whereby livers are offered to centres and the centre then makes the allocation to a particular patient. This study considered whether a National Liver Allocation Scheme (NLAS), in which livers are offered directly to patients, is more desirable. A NAS was simulated, using donor and patient data from the National Transplant Database held by UK Transplant, to investigate transplant and waiting time activity under this arrangement. These results were compared with the current CLAS activity.

The NAS simulation was optimised in three different ways; (i) priority given to patients expected to survive longest given the donor characteristics; (ii) priority given to patients expected to die soonest without transplant, and (iii) a score based on a combination of (i) and (ii).