The Increasing Cost of Blood Transfusions in the UK

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INTRODUCTION

The collection, processing, testing, and issuing of blood products to hospitals in the UK is undertaken by four national blood transfusion services - the NHS Blood and Transplant and three independent blood transfusion services.

The UK’s blood transfusion services rely on the voluntary contribution of whole blood and adenine donors who have to meet specific selection criteria, and who donate on a regular basis.

Blood is processed into red blood cells, platelets, plasma and cryoprecipitate. Since 1998, all of the components from each donation are tested as a precaution against the transmission of variant Creutzfeldt-Jakob disease (vCJD).

We previously estimated that in 1994/95 (£1) the cost to the UK’s blood transfusion services of providing blood products for transfusion that were collected from 2.7 million whole blood donations and 95,000 apheresis donations was £61.5 million. The cost of hospital resource use attributable to performing transfusions with the components transfused was estimated to amount to £52.6 million.

The cost of these diseases, and in the light of the anticipated increase in the age profile of the UK population, is likely to increase further, highlighting the need for continued efforts to control these diseases.

Blood transfusion-related complications were estimated to cost £613.9 million in 2000/01.

The study excluded direct, indirect and intangible costs accruing to blood transfusion services and their patients. Also excluded were any costs attributable to autotransfusions.

By accounting for the cost of NHS hospital resource use attributable to blood transfusions and those costs incurred by the blood transfusion services, the average NHS cost of transfusions was estimated to be £898.0 million.

CONCLUSIONS

In 2000/01, blood transfusions were estimated to cost the NHS £898.0 million, representing a 25% increase since 1994/95. Hospital stay accounts for 66% of this cost.

Future Changes in Blood Transfusion

The appropriate use of blood and other blood products has become an essential component of good patient care. In the UK in particular, the costs associated with blood transfusions are likely to increase as the demand for blood, which is forecast to increase by 4% by 2008 [18].

A number of measures may be introduced which could possibly reduce the need for blood transfusions in the future, for example the use of defibrillators and the development of new treatments for some conditions which may become available, which may lead to as much as a 50% reduction in the number of autotransfusions [19].

Continual enhancement of safety criteria may lead to an insufficient blood transfusion market. It is anticipated that the market may shrink significantly in the future. Thus, the blood transfusion services are currently working on alternative sources of supply including cord blood and stem cells, with the anticipated introduction of further screening tests will increase the cost of blood transfusions yet further.

Reducing Blood Transfusions

Autologous transfusion is one of several techniques used to reduce the need for blood transfusions. It has been estimated that autologous transfusions can reduce the cost of blood transfusions by 75% in a whole-blood donation and a 52% decrease in autotransfusions compared to 1994/95. The measurable reduction in autotransfusions over the last five years is not known.

Study Limitations

The study excluded direct, indirect and intangible costs accruing to blood transfusion services and their patients. Also excluded were any costs attributable to autotransfusions.

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