Blood Transfusion Services in Kenya

NBTS
March 2012
Naivasha
The need for adequate and reliable supply of blood became apparent immediately after the August 7, 1998 Bomb explosion in Nairobi.

The service was established with the assistance of US Govt
- Financial partners:
  - US government and its international development agencies (USAID), MOH, FHI, Red Cross
- Technical assistance - CDC, KEMRI, MoH, NASCOP

Currently: PEPFAR/AABB, KRC, JICA, CDC, USAID, Blood Link, Hope World Wide
Background of Blood Transfusion Services in Kenya

- 1930s: transfusions were organized around surgical practice.

- 1950s: with increasing demand, BRCS organized BTS.

- 1964: after independence the GOK with KRCS support took over.

- Late 1960s: BTS was run as part of hospital laboratory services with no dedicated budget line, staff, or equipment. Each hospital sourced for their own blood.

- From 1985: with advent of HIV/AIDS, reduced blood collections, increased cost of blood and increased emphasis on blood safety became more critical.
Kenya’s Key Milestones

• In 1994 Kenya recognised the need to set up a national blood service in line with WHO recommendations and WHA resolutions.

• Recommendations were made to establish a regional network of transfusion centres under central coordination.

• In 2001 Kenya’s first ever blood policy guidelines were developed and launched and first Regional blood transfusion centre (RBTC) and national coordinating office were established in Nairobi.

• Progressively 6 regional and 9 satellite centres have been established.

• Blood policy guidelines developed: National standards, Hemovigilance, Appropriate use of blood and blood products, among others.
Organizational structure of NBTS

- PS/ DMS
- National board of directors
- National blood transfusion centre
- Regional Blood transfusion centre
- Satellite centres
- Hospital Centres
Map of KNBTS RBTCs and Satellite Centres
Regional Centres

Nairobi RBTC

Nakuru RBTC
Regional Centres

Kisumu RBTC

Mombasa RBTC
Regional Centres

Embú RBTC

Eldoret RBTC
KNBTS Head Office
MINISTRY OF MEDICAL SERVICES

KNBTS Key Achievements

• Established visible integrated service
• Trained and dedicated personnel
• Infrastructure developed
• Management system in place
• Increased blood collection
• Reduced prevalence of TTIs
• Policy guidelines developed
### Current NBTS (head office, RBTCs & Satellites)
#### Staffing Levels

<table>
<thead>
<tr>
<th>Cadre</th>
<th>Optimum</th>
<th>Inpost</th>
<th>Variance</th>
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<tr>
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<tr>
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<tr>
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<tr>
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NBTS Annual Blood Collection 2003-2009

Year:
- 2003: 40,857
- 2004: 47,661
- 2005: 80,762
- 2006: 113,080
- 2007: 123,787
- 2008: 95,325
- 2009: 124,019

Blood Units:
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## Blood collection Aug 2011 to January 2012

<table>
<thead>
<tr>
<th>RBTC/SATEL ITTE</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
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<td>351</td>
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<td>2045</td>
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<td>158</td>
<td>113</td>
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</table>
KENYA NATIONAL BLOOD TRANSFUSION SERVICE
Donor Age Distribution

- 16 - 20 years: 57.7%
- 21 - 25 years: 27.8%
- 26 - 30 years: 4.7%
- 31 - 40 years: 5.9%
- 41 - 50 years: 3.7%
- 50 years & above: 0.2%
Blood Screening

- 100% of collected blood is screened

- TTIs screened for include HIV, HBV, HCV and syphilis

- Improvement in donor selection and deferrals has lead to decrease in sero-prevalence

- Screening has been centralized to the RBTCs

- Blood testing a logarithm in line with WHO recommendations has been adopted

- Quality assurance systems are in place.
TTI Prevalence in Donated Blood Between Aug 2011 - Jan 2012 in KNBTS
Blood Storage & Release

- Each centre has cold room storage and appropriate blood bank fridges to store up to 5,000 units of blood
- Unsafe units are sorted and incinerated
- Each centre has an incinerator and a standby generator
- Safe units are stored at appropriate temperatures
- Proper blood inventory is kept by type and product
- Blood is released to the user institutions as per their orders subject to availability of stock and based on FIFO policy
Cold Room
Incinerator
Appropriate Use of Blood

- Distribution of blood and blood products to hospitals
- Ensuring blood cold chain up to hospitals
- Blood use guidelines development and distributed
- Linkage to hospital transfusion units through HTCs
- Monitoring blood use, haemovigilance and investigations of adverse transfusion reactions is done through HTCs
Challenges

- **Sustainability**: KNBTS operations are largely supported by PEPFAR. A self sustainability plan is needed.

- **Meeting the country’s blood needs**: KNBTS unable to achieve this due to:
  - inadequate staffing
  - inadequate funding
  - inadequate blood storage facilities at the hospitals.
  - inadequate advocacy and public education.
Challenges

- Lack of legal framework
  WHO Guidelines requires the establishment of a stand alone BTS.

WHO 28th World Health Assembly, Geneva 13-30 May 1975 WHA28.72 *Utilization and Supply of Human and Blood Products* urges member states to:

1. promote the development of national blood services based on voluntary non-remunerated donation of blood

2. enact effective legislation governing the operation of blood services and to take other actions necessary to protect and promote the health of blood donors and of recipients of blood and blood products
THANK YOU