



Blood Transfusion and Thalassaemia in Cyprus



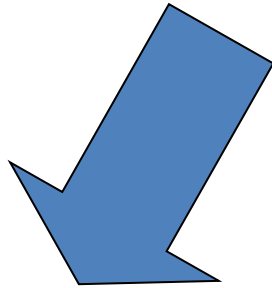
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Ministry of Health

Consultation Meeting on Prevention &
Clinical Management of Thalassaemia,
25-26 April 2018

Mission of the Blood Services

Maximise the benefits of a safe blood transfusion for the patient

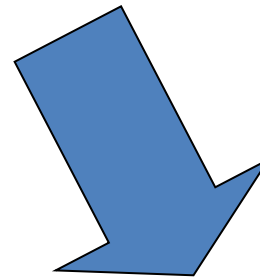
Maximisation of benefits of blood transfusion



**Adequacy of
blood supply**

&

**Donor
selection &
testing**



**Patient
Testing**

&

**Timely
transfusion**

Blood Transfusion Policies

- ❖ Donor selection
- ❖ Donor testing
- ❖ Blood processing
- ❖ Blood product distribution
- ❖ Transportation
- ❖ Storage
- ❖ Patient identification
- ❖ Patient testing
- ❖ Timely issue
- ❖ Transfusion
- ❖ Patient observation
- ❖ Haemovigilance

***Safety of Blood
Transfusion is a
Multifactorial Process***

Human resources

- ✓ Having dedicated staff at all times
- ✓ Training of new staff
- ✓ Retraining of existing staff
- ✓ Role assignment

Equipment and methods

Introduction of full automation and IT

- Validation of equipment and methods
 - Typing of blood donations
 - Testing of blood donations
 - Testing for patients (forward bl. gr. & reverse typing, extensive antigen phenotyping, auto and allo-ab screening and identification)
- Historical data (donors, patients)
- Transfusion reaction investigations

To validate the Safety in our Services

Implementation of a quality assurance program

1. ISO 9001
2. ISO 15189:2012
3. Inspections from Experts from the Council of Europe

Blood Supply Adequacy

Constant Assessment of needs

- Chronically transfused (~1/3 blood supply used for thalassaemia)
- Surgical needs
- Neonatal Transfusions
- Unforeseen events

Safety of the Blood Supply

- Voluntary and non-remunerated donor
- Donor Health Questionnaire
- Follow outbreaks for donor deferrals
- Mandatory screening tests
 - Hep B, Hep C, HIV 1 & 2, Syphilis
 - Additional Testing: Molecular Techniques
 - Selective screening – Malaria, CMV etc



Blood Donor

Target the young

✓ Schools

✓ Army

✓ Universities



Life time Blood Donors

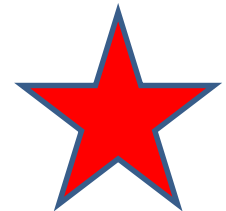
**Cultivation of Blood donor
group culture**

Organisation of Blood Collections

- At the Blood Stations
- At workplaces
- At schools
- At army camps
- In villages
- In local communities



Role of local contact points



Blood Donor Appreciation

- Donor Day celebrations
- Honorary Certificates
- “Thank you” messages



Blood processing – red cells

Plasma & Leucocyte depletion

Additive Solution - SAGM

Vol = 280 ± 60 ml

WBC < 1×10^6 /unit

Hct > 40%

42 day shelf life



Quality Control of Red cell units

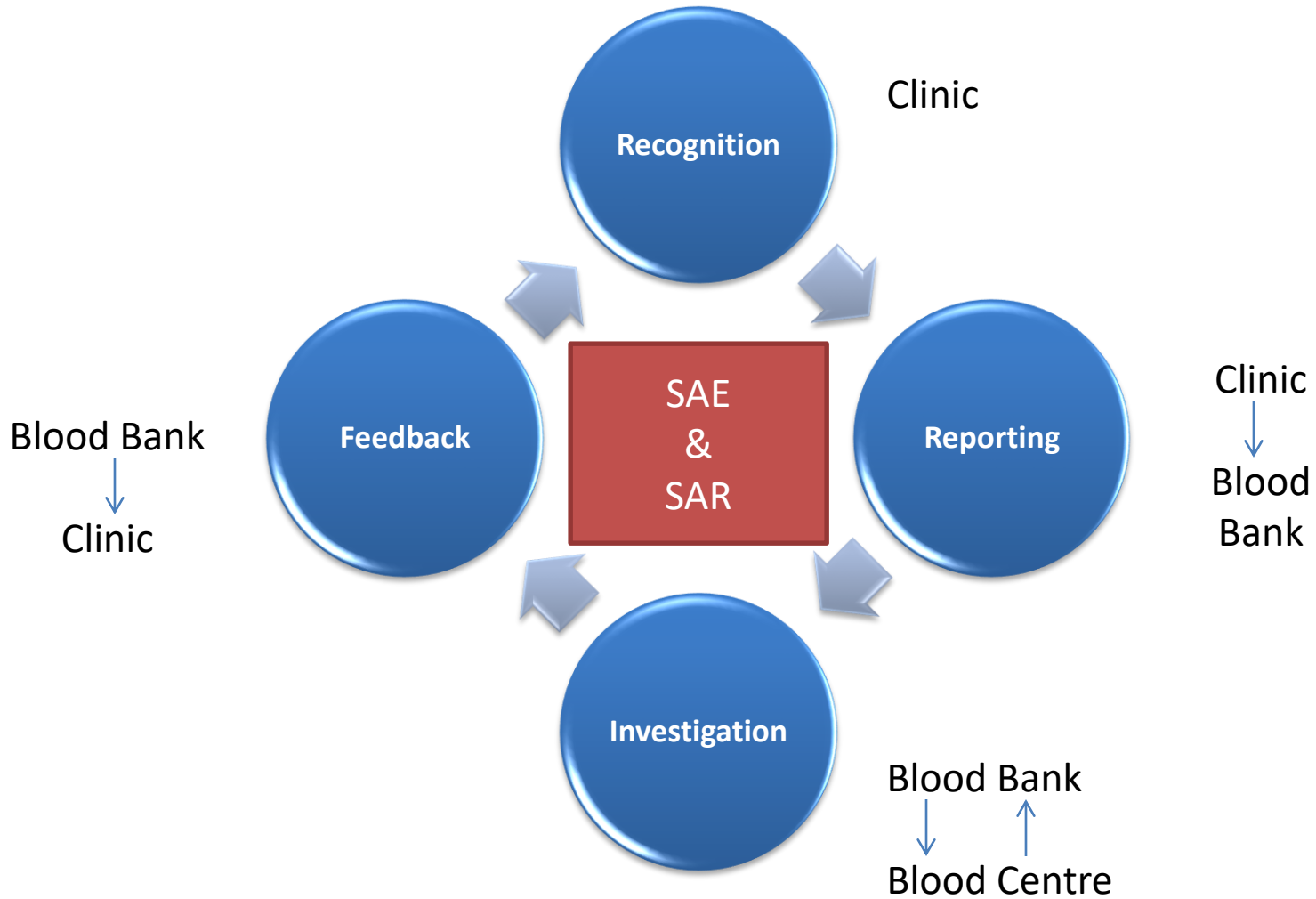
- Residual WBC count by flow cytometry
- Hb content
- Volume
- % haemolysis at end of shelf life

Characteristics of RCC Units Issued for Thalassaemia Patients

- ≤ 10 days old
- Rhesus Phenotype and Kell matched
- Other antigen matched for patients with red cell alloantibodies
- Volume per unit -mean 342.7ml
- Hb content -mean 70.8g, median 71.5g
- Hct level -mean 62.5%, median 61.1%
- WBC content per unit $< 0.03 \times 10^6$



Haemovigilance



Thank you