3. Haemovigilance - Training

2005 – 2009

- Training on **G**uidelines for the **A**ppropriate **C**linical **U**se of **B**lood and Blood Products (**GACUB**) +/- 600
  - 177 doctors
  - 359 nurses
  - 58 others (lab technologists, drivers, porters, data clerks etc)

2010 -

- **Training on Better and Safer Transfusions (BeST) 2010:** a revised national training program +/- 850
  - 201 doctors
  - 522 nurses
  - 114 others (including 13 pharmacists)

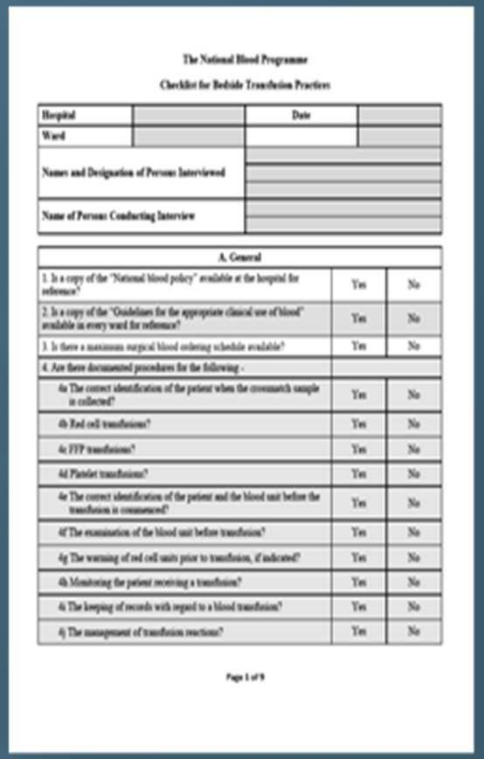
2012 -

Training on Internal and External Audits / Haemovigilance Study and Adverse Reactions (BeST) +/- 600

- 142 Doctors (including medical students)
- 387 Nurses
- 67 others (lab technologists, pharmacists etc)

All training done with the cooperation of MoHSS/WHO/CDC

4. + 7. Hospital Audits



The National Blood Programme

Checklist for Bedside Transfusion Practices

Hospital		Date	
Ward			
Names and Designation of Persons Interviewed			
Name of Person Conducting Interview			

A. General		
1. Is a copy of the "National blood policy" available at the hospital for reference?	Yes	No
2. Is a copy of the "Guidelines for the appropriate clinical use of blood" available in every ward for reference?	Yes	No
3. Is there a maximum surgical blood ordering schedule available?	Yes	No
4. Are there documented procedures for the following -		
4a The correct identification of the patient when the crossmatch sample is collected?	Yes	No
4b Red cell transfusions?	Yes	No
4c FFP transfusions?	Yes	No
4d Platelet transfusions?	Yes	No
4e The correct identification of the patient and the blood unit before the transfusion is commenced?	Yes	No
4f The examination of the blood unit before transfusion?	Yes	No
4g The warming of red cell units prior to transfusion, if indicated?	Yes	No
4h Monitoring the patient receiving a transfusion?	Yes	No
4i The keeping of records with regard to a blood transfusion?	Yes	No
4j The management of transfusion reactions?	Yes	No

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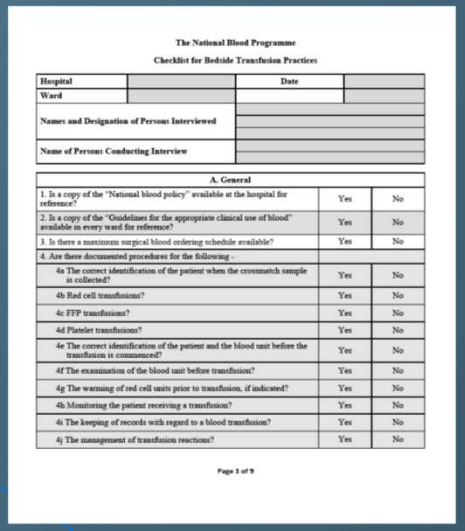
Joint outreach programme of MoHSS and NAMBTS

- 2010:
  - External audits and training in 46 hospitals
  - Collaboration and funding –WHO
- 2012:
  - Internal audits in 31 hospitals
  - External audits and training in 20 hospitals
  - Collaboration and funding - CDC

- Normal auditing procedures were followed

BeST Programme Audits

MoHSS/NAMBTS
WHO/CDC
Hospitals notified of
future audits
(internal/external)



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Pre-audit meeting

Audit of hospital wards
-Questionnaire
- Summary Report

Post audit meeting
- Non-conformances
- Corrective measures and time frame

Training of HCWs according to non-conformances

2nd External audit - Improvements

- Blood *Policy and guidelines*
- Hospital Transfusion Committee (*HTC*s or agenda point in Therapeutic Committee meeting)
- Standard MoHSS *informed consent*
- NAMBTS *blood requisition forms*
- *Equipment* for blood transfusion process
- *Patient identification*
- *Processes* pre- and during administration of blood
- *Knowledge* about monitoring times and parameters

2nd External audit - Non-conformances

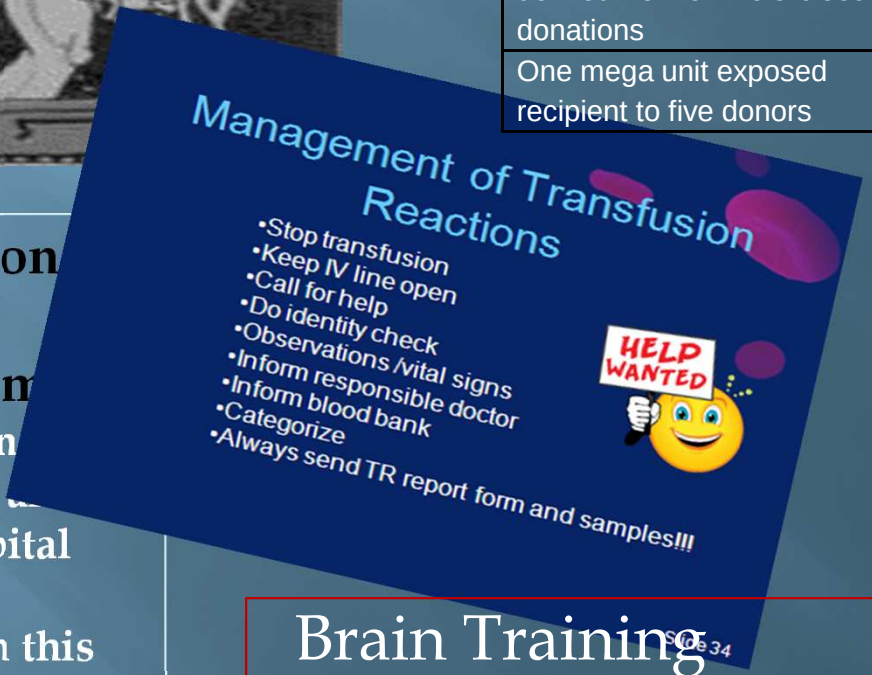
- Maximum Surgical Blood Ordering Schedule (*MSBOS*)
- The MoHSS *nursing procedures on blood transfusion* (draft version)
- *Uniform formats* for writing patient names and DOB
- *Indications for transfusion* recorded by doctor
- Wearing of patient *ID wristbands*
- Standard NAMBTS requisition forms not used for *emergency blood requests*
- Handling and Administration procedures for *Platelets and FFP*
- Insufficient *monitoring and recording*
- *Cold chain* maintenance (not storage but transport inside hospitals)

5. HTC implementation program

- Meetings with stakeholders (*Liaison Committee*)
- Start *Communication* - hospital managers
- *Blood transfusion contact person* in each hospital
- A Hospital Transfusion Committee *knowledge survey*
- Numerous *information letters*
- "*The Blood Letter*" - A quarterly NAMBTS newsletter
- *Analysis* of any communication/correspondence by the members of the HTCs.
- A *NAMBTS Blood Requisition Form survey*: Quantitative data - 5 indicators –May and Oct 2011
- Verification of the establishment of HTCs by obtaining *minutes of previous HTC meetings*.

The Blood Letter

Pooled platelet concentrate	Apheresis platelet concentrate
Was consistently supplied to you until March 2010. Thereafter only if demand could not be met.	Started in June 2007, currently the only platelet product supplied to you by NAMBTS
Was manufactured by pooling together the platelets derived from 5 whole blood donations	Is derived from one donor by means of an apheresis machine
One mega unit exposed recipient to five donors	One mega unit exposes patient to one donor



The Hospital Transfusion Committee (HTC) Implementation Program

Launched in April 2011, this n programme aims to establish HTC in every Namibian hospital transfusing blood and blood products to patients. Through this programme NAMBTS is embarking on a journey of better and closer communication …..

NOTE

The opening of a 24 hour blood bank in Windhoek on Monday 30 April 2012!!

Brain Training

Signs and symptoms of Transfusion Reactions (TRs):

Do you know which type of Transfusion Reaction each would be classified under? We will discuss them in the next newsletter!

EVALUATION OF THE NAMIBIAN HV SYSTEM

Evaluation methods

- Internal and external hospital audits in 2010 and 2012
- Chart abstraction study
- Haemovigilance knowledge survey

Facts

6. Haemovigilance study

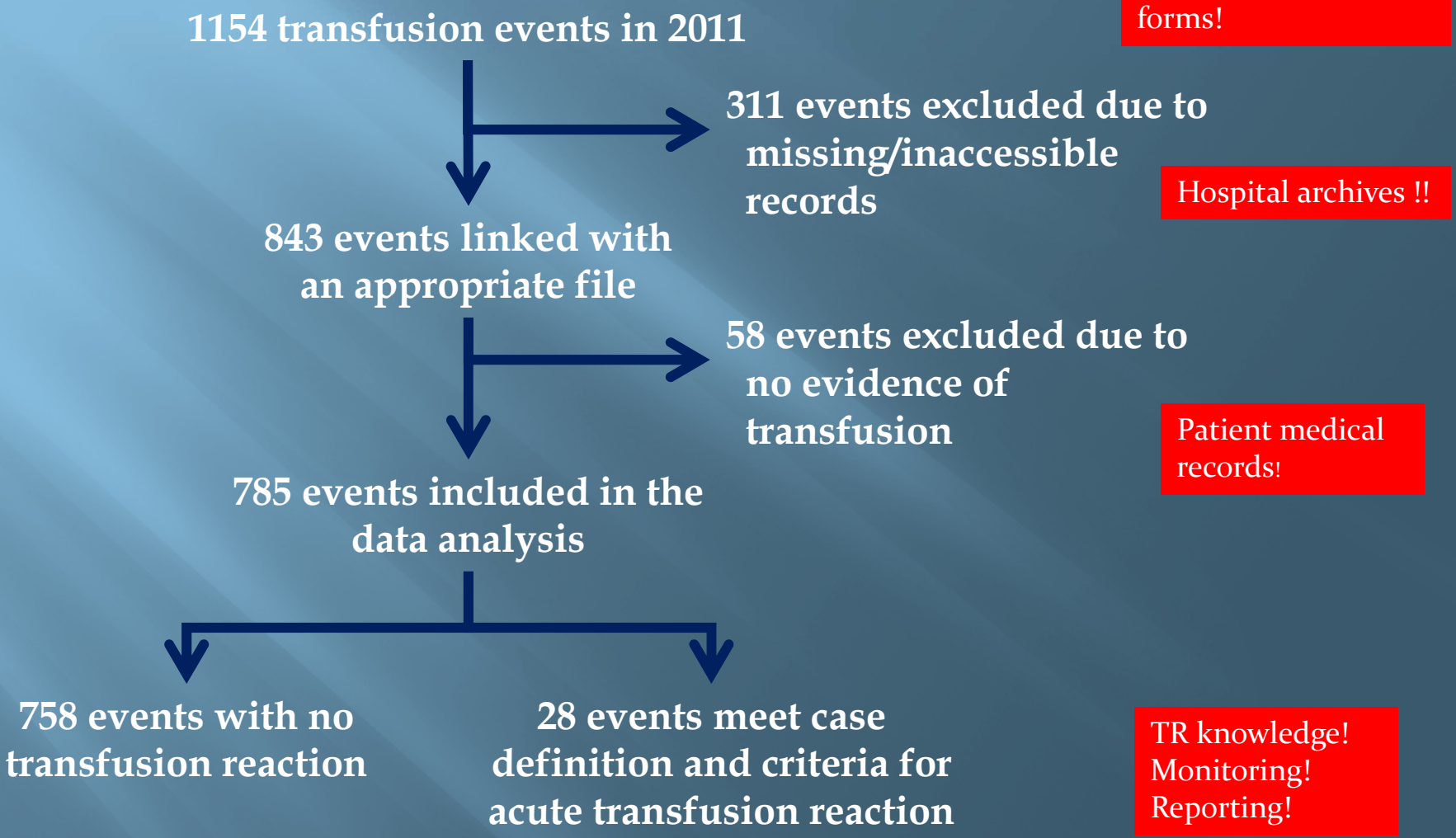
- Globally 1-3 % of all transfusions result in a Transfusion Reaction (TR)

- In 2011
- Only 20 recipient reactions were reported out of approximately 20,000 units transfused nationally
- This is only 0.1% of all transfused units
- A very low rate of reactions
- NAMBTS strongly suspected widespread under-reporting or under-recognition of transfusion reactions

6.a Haemovigilance - chart abstraction study 2011 (NAMBTS/CDC)

- Study objectives :
  - Estimate true prevalence of acute TRs
  - Compare true prevalence to reported prevalence of acute TRs
  - Determine specific diagnosis and severity grade of each acute transfusion reaction
- Focused specifically on ***acute*** reactions
- Study period 1 year (Jan - Dec 2011)
- Data collected from 6 major hospitals in Windhoek

Chart Abstraction Flow Diagram



NAMBTS requisition forms!

Hospital archives !!

Patient medical records!

TR knowledge!
Monitoring!
Reporting!

Data Analysis for 2011

OFFICIALLY REPORTED TRS

- 8 acute transfusion reactions
  - 4 mild
  - 2 moderate/severe
  - 1 fatal
  - 1 without severity score
- Total of 3,721 transfusion events

- **Reported proportion: 0.2%**

CHART ABSTRACTION REPORTED TRS

- 28 acute transfusion reactions
  - 20 mild (1 previously reported)
  - 4 moderate/severe
  - 2 life threatening
  - 2 fatal
- Total of 785 transfusion events

- **Adjusted proportion: 3.2% (95% CI 2.2–4.2)**

6.b Haemovigilance knowledge survey

Questionnaire
- 46 hospitals (33 responded i.e. 70%)
- HCWs (105 physicians, 197 nurses, 9 other)
- anonymous, all regions represented

- Years of Experience
- Training (GACUB or BeST)
- Awareness of Haemovigilance system
- Knowledge of acute TRs
- Reporting practice
- Reasons for not reporting

	YES	NO
Received training on clinical management of acute transfusion reactions	42%	58%
Knew NAMBTS had a reporting system for acute transfusion reactions	74%	26%
Believe are able to recognize acute transfusion reaction	96%	4%
Correctly recognized all signs and symptoms of an acute transfusion reaction	5%	95%
Have had patient who suffered acute transfusion reaction	33%	67%
Have reported acute transfusion reaction to NAMBTS	12%	88%

FUTURE OF HAEMOVIGILANCE IN NAMIBIA

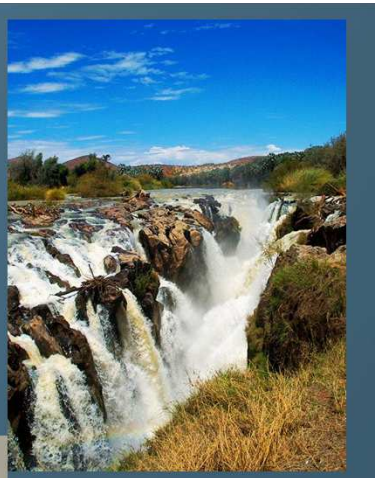
Conclusion - Challenges

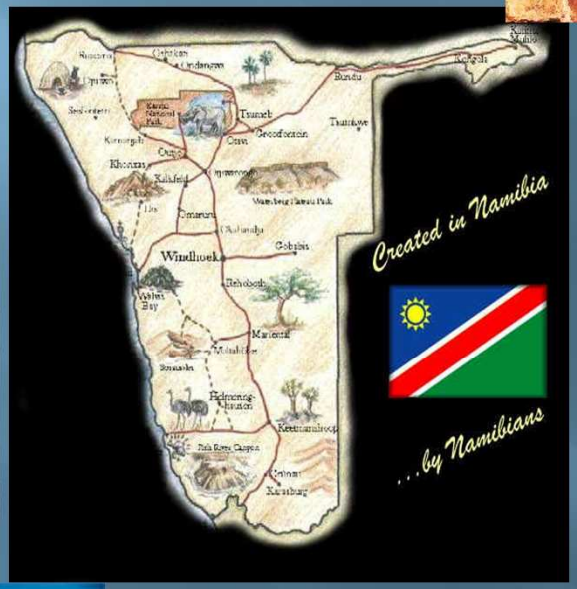
- **Infrastructure-related challenges** (limited IT structures, challenges related to specimen transport, no transfusion medicine specialists)
- **A lack of transfusion reaction-related knowledge among HCWs**
  - Insufficient patient monitoring, transfusion reaction recognition and reporting
- **Frequent staff turnover and movement of HCWs within and between facilities**
  - Difficulties for HCWs to attend training activities
- **Donor triggered look-back system** to be implemented
- Probably still **underreporting of recipient reactions**
- **Funding**

Conclusion – Recommendations

- **Documentation and official forms**
  - Uniform formats for writing patient names and date of birth (DOB)
  - NAMBTS blood requisition forms
  - MoHSS monitoring and recording forms
- **Policies, guidelines and procedures**
  - Maximum Surgical Blood Ordering Schedule (MSBOS)
  - MoHSS draft Standard Nursing Procedures on Blood Transfusion
  - Patient ID wristbands
- **Cold chain maintenance**
  - Transport boxes
  - Blood fridge (monitoring, storage of X-matched/un X-matched RCCs)
  - Storage and thawing of FFP by blood banks
- **Hospital Transfusion Committees** (strengthen)
- **Training of HCWs on blood transfusion practices**
- **Hospital audits** (internal/external, repeat regularly)

Thank you for your attention

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