Delivering care to women and children In low income countries

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diseases relief by excellent and advanced means

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DREAM PMTCT pillars

- Triple ART to all pregnant women
- Laboratory monitoring on a routine basis
  - Haemoglobin, Biochemistry, CD4 count, Viral Load
  - EID provided to all HIV exposed children
- Peer-to-peer education
- Food supplementation
- Software for patients' management

- More than 100,000 HIV-free newborns from 2002, in several sub-Saharan African countries

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Newborns' HIV status (2009 – 2015) Malawi – DREAM program

	N	%
Negative	2,326	
Positive	66	1.3*
Stand by	2,706	
TOTAL	5,098	

- **The 24 months vertical transmission rate is 2.8%** among the children who ended the PMTCT program (i.e breastfeeding is stopped)

«Stand by» are the newborns younger than 24 months: for them a final HIV status cannot be stated, even if they are negative, until breastfeeding is not stopped

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1,148 HIV+ pregnant woman who gave birth to 1,198 newborns between 2009 and 2015

Outcomes

24 months HIV vertical transmission rate	2.8%
Infant mortality rate	74‰
24 months HIV free survival	87%
Maternal Mortality Rate	1.3%
Abortion/stillbirth	6.0%
Prematurity rate	32%

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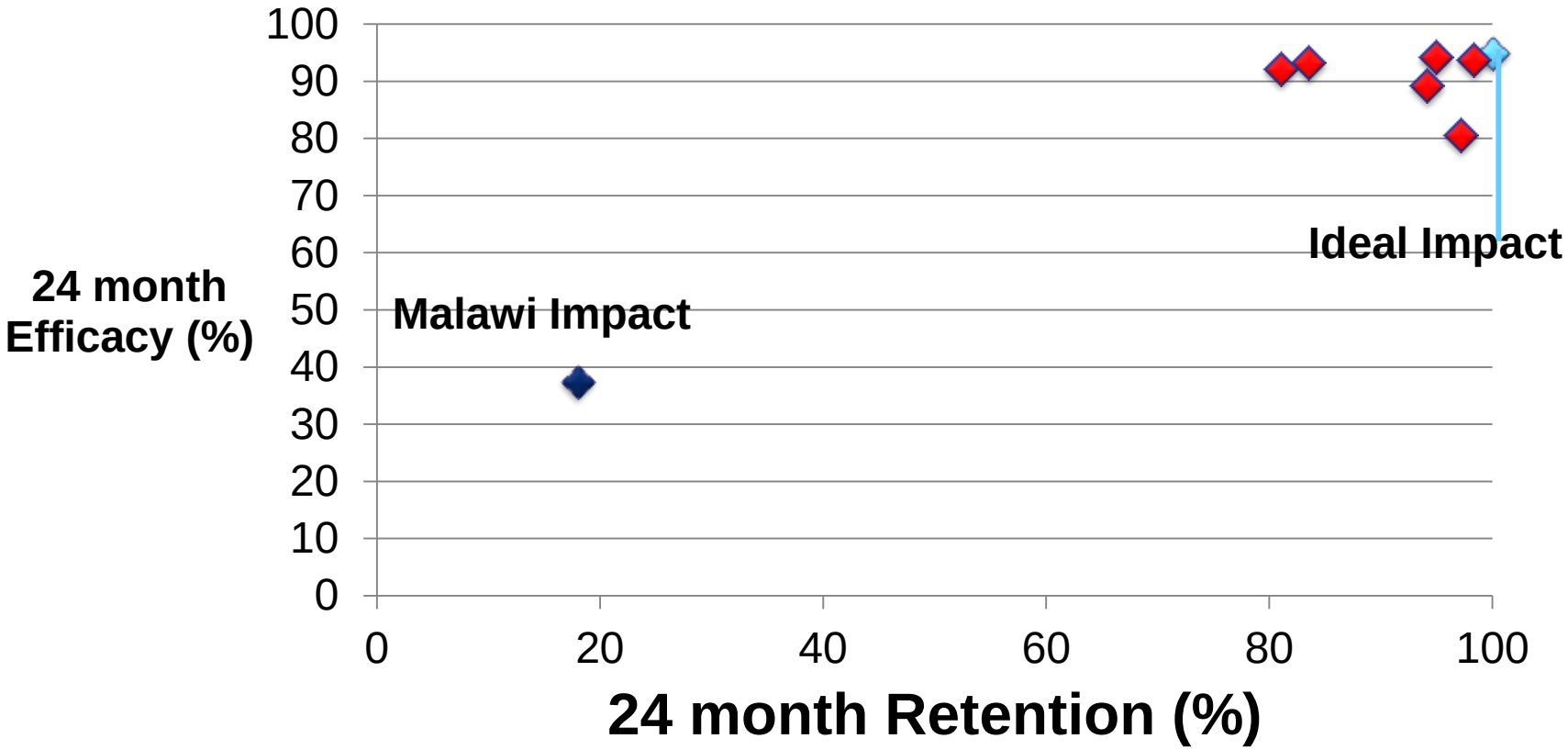
Impact of PMTCT program 2010



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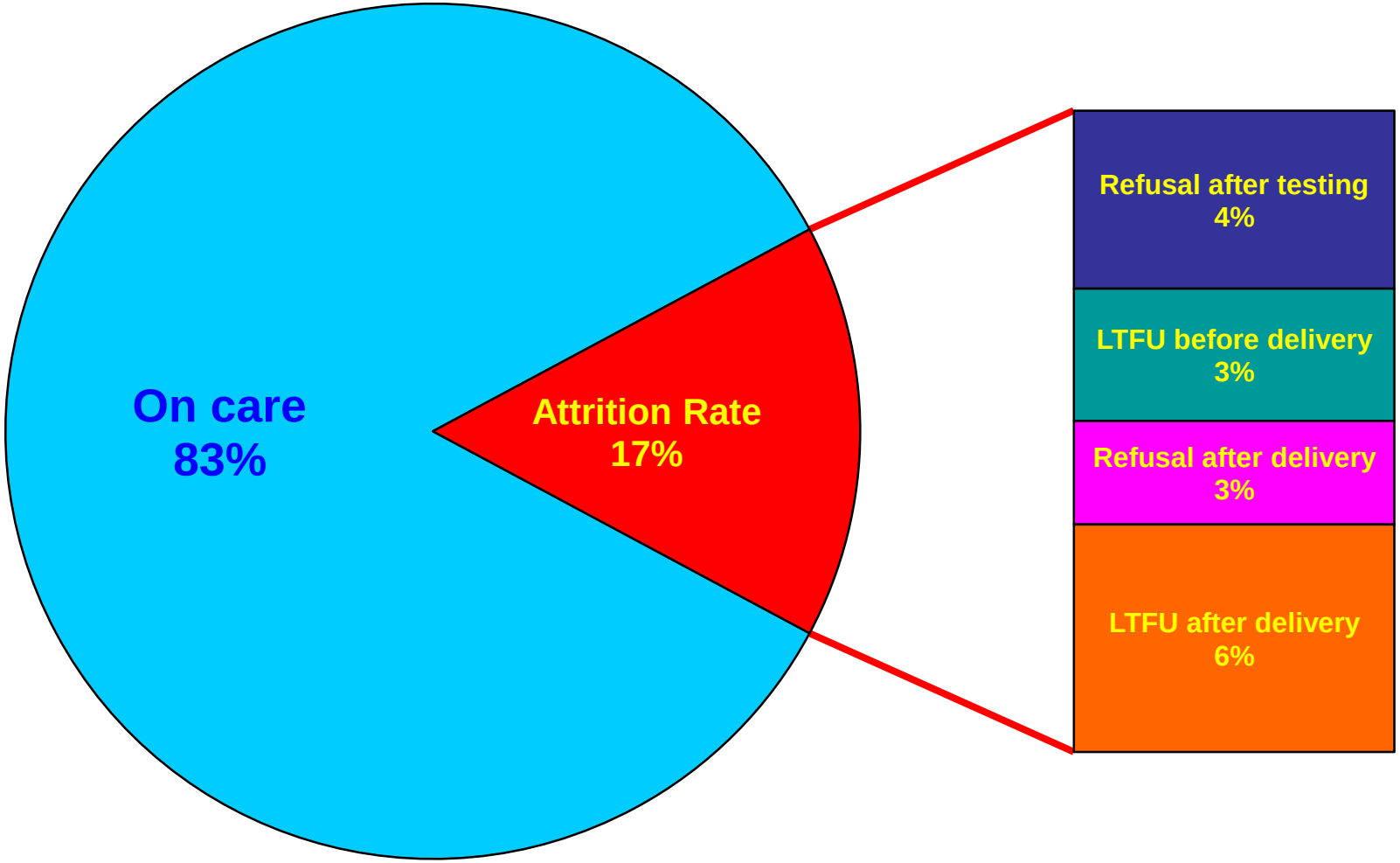
36 months after delivery - Attrition Rate

patient accessing the service between 2009-2010 and followed up until 2014



Median Observation days : 962 (IQR 25-75: 661-1369)

Attrition Rate - Determinants

		N	%	
Age	< 24	182/646	28.2	< 0.001
	24-31	221/1430	15.5	
	> 31	92/771	11.9	
Pregnancy Trimester of starting care	First	42/802	5.2	< 0.001
	Second	259/1317	19.7	
	Third	196/729	26.9	
Integration ANC/PMTCT care	Partially/not Integrated	389/2127	18.3	0.009
	Fully integrated	97/693	14.0	

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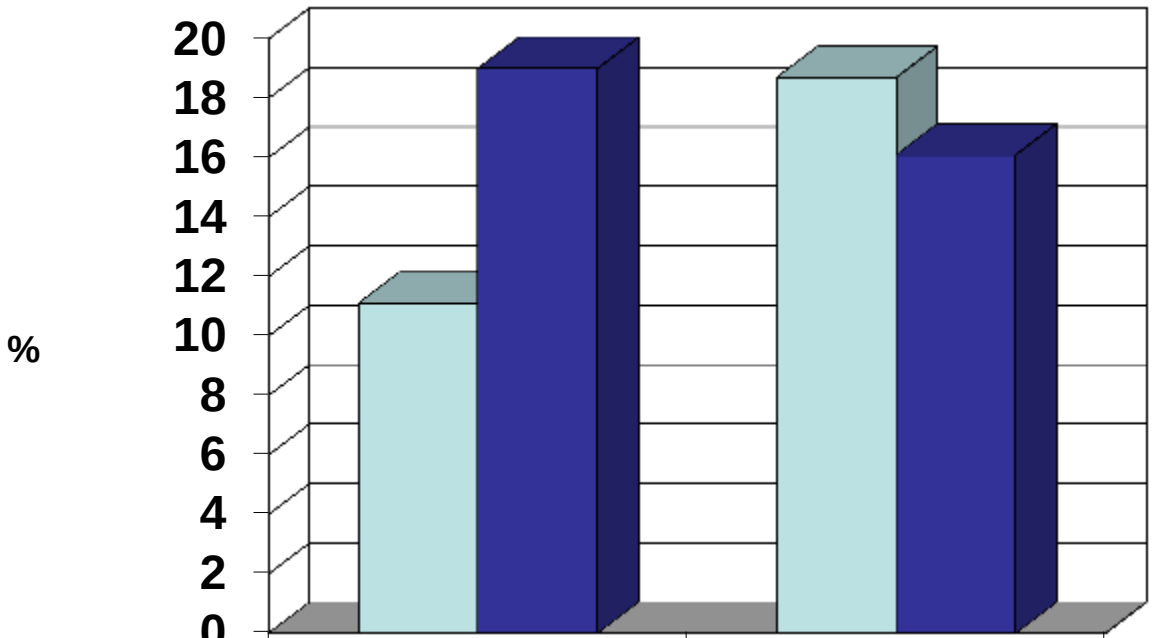
Attrition rate according to health and socio-economic status



	Health status	Socio Economic Status
Low	11,1	18,7
High	19	16,1

Socio Economic status

LOW: people who accessed no education or only primary school, and is unemployed and has no electricity at home. HIGH: people who accessed secondary school, and/or with a formal job and/or with electricity at home

Health status

LOW: CD4 count <350 AND/OR Viral Load > 5log AND/OR WHO-CS 3-4 HIGH: CD4 count >350, AND Viral Load < 5log AND WHO-CS 1-2

Attrition risk adjusted for baseline demographic, socio-economic and clinical parameters (multivariate Cox Proportional risk analysis)

	RR	(95,0% CI)	
		Lower	Upper
Health Status	1,521	1,197	1,932
Socio Economic Status	1,370	1,083	1,734
Age > 31	1		
Age < 24	2,236	1,592	3,139
Age 24-31	1,315	0,958	1,804
Starting care at 3rd trimester	1		
Starting care at 2nd trimester	0,558	0,438	0,709
Starting care at 1st trimester	0,225	0,135	0,375
ANC/PMTCT integration	1,493	1,065	2,094

Who is the defaulter?

- Young women (less than 24 years old)
- Low education level
- No formal employment
- Good health status
- Late presenter to ANC in pregnancy

To increase the adherence to the PMTCT protocol of these patients a strong social and economic intervention is probably needed

Reasons for getting lost-to-follow up

- Transport
  - Dzoole and Kapire have similar caractheristics
    - Rural area (Dzoole is Dowa district, Kapire in Mangochi close to Balaka border)
    - Health centres with maternity
    - Different cathment area

	Dzoole	Kapire
time to arrive to the centre (minutes)	110	46
24 months Lost-to-follow up (%)	1.7	2.9

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Reasons for getting lost-to-follow up

- The women don’t thinks to be sick
- They are worried for stigma in the family and in the village
- they are not ready to accept the results
- they are not ready for life long treatment
- they don’t know how to delivery the news to the husband and relatives
- The first communication (post-test counselling) could be not enough because of the psychological consequences of realizing to be HIV positive
- Some times communication between nurse/medical staff and pregnant woman is not effective ….
- they thinks that they are going to die soon
- they don’t have hope to have a HIV free child
- Traditional beliefs about HIV care
- Fear of side effect / ignorance about the impact of drugs
- New social condition (a new marriage or a new job)

Peer-to-peer Education

- Peer-to-peer education is a continuous activity
- Peer-to-peer educators are expert clients
- Peer-to-peer educator should be trained about:
  - HIV Infection
  - PMTCT
  - Safe Motherhood
  - Nutrition, Breastfeeding and Weaning
- Peer-to-peer educator should be a witness (PLWHA positively)
- The peer-to-peer educator is a bridge between the clinical activities and the patients' life

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Peer-to-peer Educator

- The Educator is requested to do a one week training course
- He is requested to be at the centre two or three days per week
  - To welcome the patients
  - To facilitate the access to the centre
  - To establish personal relationship with the patients
  - To give positive message about the quality of life after being tested positive
- He is requested to trace patients living in their same areas who gave their consent at the first visit, when they miss appointments and are not traceable by phone or friends

Positive message to be delivered

- To have the chance to be tested is a good opportunity
  - To know your status and get the adequate treatment
  - ARVs help you to live «healthy» and are free-of-charge
  - To prevent the child will be sick
  - To get other clinical «benefit» as regular check for the pregnancy
- To get ARVs allows to have an HIV-free child
- Together we can fight the stigma
- I can help to speak with your husband/relatives
- You can live a positive life even with HIV infection, as i do
- You have the possibility to learn a lot about this disease and the pregnancy and i can help you

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Reasons for being on care

- Food
  - Namandanje and Kapire have similar caractheristics
    - Rural area (Namandanje in Machinga district, Kapire in Mangochi district)
    - Health centre with maternity
    - Different cathment area

	Namandanje	Kapire
Time to arrive to the centre (minutes)	91	46
Food supplementation	NO	YES
24 months Lost-to-follow up (%)	5.9	2.9

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Care Models

- Main center
  - Clinical, nursing, Laboratory service available, peer-to-peer educators available, patient data gathering and management
- , Rural center
  - Clinical, nursing service available, referral Laboratory service, peer-to-peer educators available, patient data gathering and management
- Rural center supported by mobile team
  - Clinical or nursing service, referral Laboratory service, mobile team twice per week to support the maternity personnel for ordinary of HIV + pregnant women, peer-to-peer educators available, patient data gathering and management
- Mobile Unit
  - Mobile team dedicated to outreach service in the villages to test people, to increase awareness about safe motherhood: peer-to-peer educators available,

Conclusion

- Prevention of MTCT of HIV could be a model for many other intervention in the field of prevention at community level.
- The effort should be focused on education and moving the service as closer as possible to the pregnant women
- Innovative model including technologies and expert client could help to improve retention on care that is the main challenge
- The DREAM program is ready to put his experience on the field in order to finally reduce under 3% the MTCT rate

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