

# Uganda IRS Project: RTI International Experience:

*DOREEN KABASINDI WANDERA*

*[WWW.rti.org](http://WWW.rti.org)*





# Research Triangle Institute (RTI) International

- **RTI International is dedicated to conducting research and development that improves the human condition by turning knowledge into practice.**
- **RTI offers innovative research and technical solutions to governments and businesses worldwide in the areas of health and pharmaceuticals, education and training, surveys and statistics, democratic governance, economic and social development, advanced technology, energy, and the environment.**
- **RTI implementing IRS in 14 countries in Africa**





# Malaria situation in Uganda

## Uganda is a high disease burden county:

- Over 95 percent of the country is endemic to malaria
- Malaria accounts for 25 - 40 percent of cases in out patient departments of public health facilities
- Malaria is responsible for 8 - 14 percent of in-patient deaths in Uganda
- Uganda loses 100,000 deaths due to malaria annually
- Children under 5 and pregnant women are most at vulnerable to malaria.





# Uganda Malaria Control Using IRS

*100% PMI/USAID funded, RTI is supporting the MOH to implement the strategy of vector control through indoor residual spraying (IRS)*

- Large scale IRS implementation commenced in Mar'06 in Kabale and later in Kanungu districts, after more 40 years since the last exercise - using lambda-chyhalothrin (ICON 10% WP); DDT-Oyam & Apac; ICON CS in Acholi region
- 2008, the program was scaled up in 8 districts





# Program Components

1. Baseline and post-spray entomological studies are conducted in each district. (MOH, DVCO, Liverpool Associates in Tropical health/LATH)
2. Develop Information Education & Communication materials for awareness and community mobilization.
  - o Radio announcements, talk shows & spots messages, film van, banners, posters, megaphones, district sensitization meeting
  - o Conduct TOT & Training: Spray operators, Supervisors, Team leaders, Wash persons, Store keepers & Mobilisers





# IEC....

## Topics covered during re-fresher training include:

- Record keeping
- Pump repair and maintenance
- Insecticide mixing (or formulation)
- Safe use of insecticide, sprayers and PPE
- Environmental compliance
- Clean up during IRS implementation
- Community approach and mobilization
- Occupation safety
- Poison control





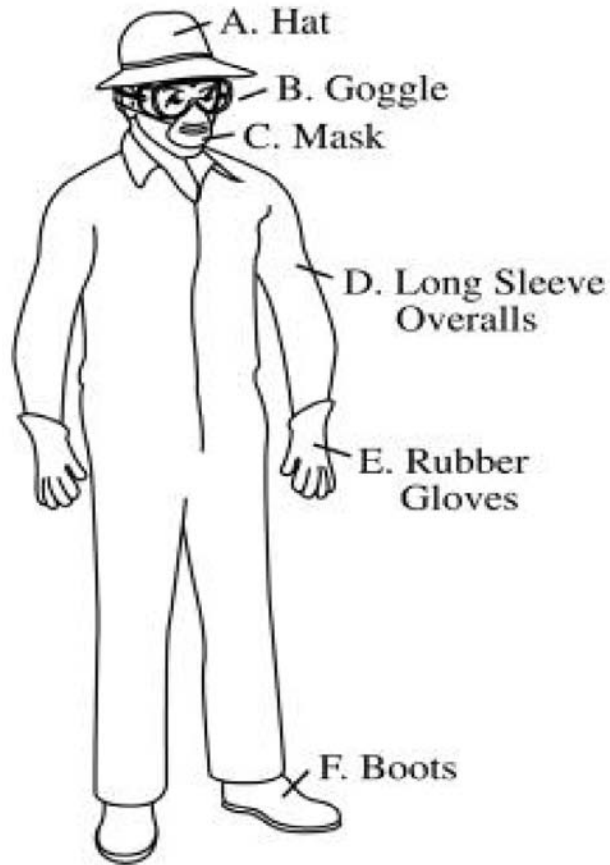
# Components....

3. M & E -generate and disseminate data on spray coverage and population protected (train
4. Environmental Inspections for Compliance (**Safe insecticide transport, Storage, use, disposal & Human safety**); Develop materials for Spray operators, Store Keepers, Drivers, and Community





# Personal protection of Spray Operators



**Broad rim hat:** (protects head, face and neck from spray droplets).

**Goggles:** (protects eyes against spray fall-out.)

**Face mask/respirator:** (protects nose and mouth from airborne particles of the spray fall-out.)

**Face shield:** (protects face from the spray fall-out.)

**Long sleeved overalls:** (Keep overalls outside of boots.)

**Rubber gloves:** (protects the hands)

**Boots:** (protects the feet)







## Program results (July '06 – Feb' 09)

- High coverage achieved - more than 95% of targeted homes have been sprayed in all areas
- High compliance and acceptance from community members
- Spray personnel trained, equipped, deployed, monitored and evaluated for program productivity
- More than 4.5 million people protected in past 30 months
- Rapid decline of malaria parasitaemia





## Human capacity trained to deliver IRS

District	SUP	TL	SO	WP	RV	SK
Amuru (1 round)	8	81	803	78	0	8
Kabale (2 rounds)	40	93	571	56	88	0
Apac (1 round)	36	107	535	54	0	15
Gulu (1 round)	16	83	747	75	32	16
Oyam (1 round)	14	115	800	115	0	8
Kanungu (1 round )	11	47	314	28	22	0
Pader (3 rounds)	19	81	796	82	0	18
Kitgum (3 rounds)	23	80	847	80	52	17
<b>Total</b>	<b>167</b>	<b>687</b>	<b>5,413</b>	<b>568</b>	<b>194</b>	<b>82</b>





## Houses sprayed with residual insecticide

District	HH Sprayed	Sachets used
Kabale (2 rounds)	179,413	118,990
Kanungu (1 round)	45,321	34,209
Kitgum (3 rounds)	254,983	106,499
Pader (3 rounds)	442,667	167,679
Amuru (1 round)	102,247	33,767
Gulu (1 round)	131,821	52,863
Oyam (1 round)	94,876	31,625
Apac (1 round)	103,205	30,301
<b>Total</b>	<b>1,354,532</b>	<b>575,933</b>





# Population protected from malaria with IRS

District	Population	Males	Females	< 5 children	Preg women
Kabale (2 rounds)	853,286	407,571	445,715	142,973	6,022
Kanungu (1 round)	191,399	90,266	101,133	36,222	5,580
Kitgum (3 rounds)	1,147,959	575,911	617,142	270,383	45,471
Pader (3 rounds)	1,783,890	784,920	968,970	437,621	111,811
Amuru (1 round)	399,175	184,203	214,972	108,079	21,147
Gulu (1 round)	525,505	243,983	281,522	117,443	22,728
Oyam (1 round)	315,765	153,146	162,619	70,549	12,274
Apac (1 round)	322,697	125,206	197,491	78,761	16,298
<b>Total</b>	<b>5,539,676</b>	<b>2,595,206</b>	<b>2,989,564</b>	<b>1,262,031</b>	<b>241,332</b>





# Program challenges

- Few people know about IRS, its effectiveness and safety in controlling malaria- Some Resistance in some communities
- Because of the ongoing public debates, politicization many people think IRS means spraying with DDT and are not aware of other chemicals used.-
- Spraying during the dry season is preferred but rains some times never stop i.e June - July period in northern Uganda.
- Planning for constrained resources, families own multiple homes; in Camp/satellite camp/village
- Finding sprayable surface is a challenge; unfinished structure- as peace and security return to northern Uganda - movement of residents from IDP camps to ancestr





# Challenges.....

- harvesting season - sorghum, millet, peas, ground nuts, maize and beans. Houses closed
- Cumbersome-House clearing; property, food items- waiting ;So many people specially urban resist the campaigns
- Effectiveness interrupted by human behavior & external factors such as anti-IRS decampaigns – Lango region –DDT; Pader-Organic farmers
- Unanticipated events e.g. outbreak of hepatitis E ; WFP etc disrupt the program implementation for some time. More budgetary allocated is needed to meet these challenges





# Challenges.....

- Sustainability of Spray operators Trained personnel- go to other activity
- Hard-to-reach areas are not accessed by hired trucks. Alternative modes of transports such bicycles are needed
- Chemical resistance-Recent study by RTI/LATH??
- Fear for unknown side effects- some people reluctant to participate
- Expensive adventure-Donor dependent/sustainability?



# Thank you

