NgenIRS Project: Update on Activities and Progress

VCWG IRS IRM Priorities Workstream Meeting
Geneva, 7 February 2018
### Demand
- **Accelerate uptake of 3GIRS products**

### Market stability
- **Improve global forecast for 3GIRS products**

### Competition
- **Support new WHO approved 3GIRS products from several manufacturers**

### Affordability
- **Reduce prices of 3GIRS products**

### Evidence
- **Gather and disseminate evidence of cost effectiveness and impact of 3GIRS**

#### Funded by
- **Unitaid**

#### Country partners in 2018
- Benin
- Burkina Faso
- Ethiopia
- Ghana
- Kenya
- Madagascar
- Malawi
- Mali
- Mozambique
- Rwanda
- Tanzania and Zanzibar
- Uganda
- Zambia
- Zimbabwe
Accelerating growth of 3GIRS market for public health impact

**Affordability:**
Reduced prices through:
- Co-payment
- Competition
- Volume guarantees

**Acceptability:**
Evidence of impact and cost-effectiveness

**Increased Appropriate Use**
IRM through subnational rotation

**Reduced Malaria**

**Growing, stable Market**
Key accomplishments in 2017

**Accelerated uptake of 3GIRS**
- Tripled partner countries from 4 in 2016
- Helped PMI and GFPRs procure approximately **1 million additional units of Actellic® 300CS**, enough to protect an estimated 8.0 million more people than would have at full price
- Uptake of an additional **1 million bottles** of Actellic at NgenIRS-negotiated reduced price outside of co-payment mechanism

**New quality assured products added to the market**
- WHO PQ listing received for Sumishield® 50WG, the second 3GIRS product available

**Products are reduced in price**
- Significant price reductions negotiated in exchange for volume guarantees in 2017, additional reductions negotiated for 2018
- Stabilized market (sales within 0.31% of forecast)
Summary of achievements and impact through 2017

- Supported spray operations in **12 countries** and the procurement of over **4.5 million bottles of 3 GIRS**, sufficient to protect an estimated 58 million people.

- Partners have procured **1.5 million additional units of Actellic® 300CS**, enough to protect an estimated 12 million more people than would have been possible at full price.

- **Addition of Sumishield® 50WG**, the second 3GIRS product making rotation possible.

- Completed in-country insecticide **forecast consolidations during 2016 and 2017** in collaboration with Malaria Programmes and their donor/implementation partners.

- Negotiations with both Syngenta and Sumitomo Chemical Company for **volume guarantees in return for significant volume discounts** on both Actellic® 300CS and SumiShield® 50WG.

- **Progress in establishing the impact and cost-effectiveness of 3GIRS** in collaboration with partners in Ghana, Mali, Mozambique and Zambia.
Catalysing a reversal in the downward market trend
Growing the evidence base for 3GIRS

- In Mali over 300K cases were averted in 3 years of IRS in the Ségou region.
- In Ghana, in 2015 there was a ~24% decrease in the suspected malaria cases in IRS areas.
- In Zambia the odds of malaria infection were reduced by ~26% in areas with IRS.
- In Mozambique, as part of a RCT there was a ~50% reduction in *funestus* densities over six months post intervention.
- The removal of IRS in Bla was associated with a 70% increase in malaria cases.
- In Zambia improvement of enumeration led to increased impact through better coverage.
- Combining IRS and drug-based interventions (MDA – Zambia, SMC – Mali) leads to a greater impact than either strategy alone.
Building an evidence base

Entomological impact of 3GIRS in Mozambique
After PMI AIRS spraying in 2016, 50% fewer An. funestus were collected from IRS villages than in non-IRS villages.

Epidemiological impact of 3GIRS in Mali
After PMI AIRS spraying in 2014, incidence of malaria dropped 36% in IRS districts compared to non-IRS districts (76,260 cases averted).¹

Partners: CISM, ISGlobal, Tulane, UCSF, NMCP Mali, NMCP Mozambique, PMI, Abt

Epidemiological impact of 3GIRS in Zambia
IRS using Actellic-CS, the first approved and widely used 3GIRS chemical, appears to substantially reduce malaria burden under standard operational conditions in Zambia. Its effectiveness was associated with twice the effect of non-Actellic IRS in this setting.

Further evidence of the overall cost-effectiveness of 3GIRS in a high-transmission setting²
Preliminary results of the NgenIRS-led cluster randomized trial in Mozambique will provide are expected to be shared in March 2018 at MIM.

¹Wagman et al. 2018. Malaria Journal 17:19
An observational analysis of the impact of indoor residual spraying with non-pyrethroid insecticides on the incidence of malaria in Ségou Region, Mali: 2012–2015

Joseph Wagman1, Christelle Gogue1, Kenzie Tynuv1, Jules Mihigo2, Elie Bankineza3, Mamadou Bah3, Diadier Diallo4, Andrew Saiibu5, Jason H. Richardson4, Diakalkia Kone5, Seydou Fomba5, Jeff Bernson6, Richard Steketeé5, Laurence Slutsker7 and Molly Robertson1

Combination of indoor residual spraying with long-lasting insecticide-treated nets for malaria control in Zambezia, Mozambique: a cluster randomised trial and cost-effectiveness study protocol

Carlos J Chaccour1,2, Sergi Alonso1,2, Rose Zulliger3, Joe Wagman4, Abuchahama Saifodine5, Baltazar Candrinho6, Eusébio Macete7, Joe Brew1, Christen Fornadel7, Hidayat Kassim8, Lourdes Loch9, Charfudin Sacoor2, Kenyssony Varela9, Cara L Carty2, Molly Robertson2,4, Francisco Saute2
With multiple long-lasting IRS (3GIRS) products available, the pre-emptive annual rotation goal outlined in GPIRM is achievable.

- Funders and procurers have the opportunity to simultaneously prevent resistance build up and affect the cost-effectiveness of IRS by adopting pre-emptive, subnational rotation strategies where appropriate.
- 100% shifts from one effective long-lasting IRS product to another within the market would undermine the goals of increasing competition, reducing product cost, and reducing market volatility of IRS products.
- Experts have proposed a new strategic approach based on pre-emptive rotation of multiple 3GIRS products within a country to:
  - Support resistance prevention best practices
  - Support stable, multi-year forecasts
  - Support reduced price through competition

7 of 14 NgenIRS Countries are planning to spray both Actellic 300CS and SumiShield 50WG in 2018.
Outlook for 2018 and beyond

• Partners beginning to implement more effective IRM through subnational rotation of two products
• Continued reduction of prices as a result of co-payments, annually renegotiated volume guarantee discounts and increased competition
• Introduction of 3rd product by Bayer in 2018-19
• Phasing out of co-payment support as prices reach sustainable levels
• Continued emphasis on establishing evidence base regarding the impact and cost-effectiveness of 3GIRS and dissemination of results
• Planning for the transition of NgenIRS-funded activities (e.g., forecast consolidation, volume guarantees and price negotiation and evidence gathering and dissemination)
Thank you for your partnership and support