ARTEMISININ AND GLOBAL ACT AVAILABILITY OVER THE NEXT YEARS

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- Artemisinin Conference Chair
ARTEMISININ CONFERENCE 2013

FROM A RAW MATERIAL SUPPLY CHAIN PERSPECTIVE

• Good artemisinin supply for 2013  BUT
• Need for clarity into available funds for ACT procurement, post 2013
• Confirm mechanisms for proportioning GF public and private monies, post 2013
• Pricing above cost
• Artemisinin Resistance
• LLINs, IRS, RDTs
• Semi-synthetic artemisinin and market impact
SUPPLY CHAIN – INTRODUCTION

• ACT Forecasting & Production
• API Supply – derivatives
• Artemisinin Forecasting & Production
  – Natural
  – Semi–Synthetic (SSA)

BUT First:
• Funds for ACT purchase and distribution – Med/Long Term
FUNDs FOR ACTs

• Without confirmed availability of funds, it is impossible to create accurate and realistic, long term ACT Forecasts (BCG)
• Need to urgently clarify how countries proportion fund for private and public sector ACT need, post 2013 – AMFm
• Result is:
  – Delays in, and shortage of, ACT supplies (SSA production lead time is 4 months and natural around 6 months + API and ACT production time,)
  – Leading to patient distress/mortality
  – Lack of stability within the supply chain
  – Failure of businesses within the supply chain
  – Reliance on trust throughout the supply chain
    – 2005/7 – over forecast for funds available – mistrust (A2S2)
    – 2012 – AMFm uncertainties
    – 2013 on – lack of funding information
Drug Products: Qualified ACT Producers

- India: Ajanta, Cipla, IPCA, Strides Arcolab
- China: Guillin Pharma
- NDL: Artecef
- Morocco: Sanofi Maphar
- Uganda: Quality Chemicals, Switz: Novartis
ACT Forecast

ACT Forecasts
BCG 2012

ACT Forecasts

- Total 2014e
- Subsidised Private Sector
- Public Sector
API SUPPLY

- Seven Pre-Qualified API Suppliers (plus 2 integrated manufacturers) for artemisinin based derivatives e.g. Artesunate, Artemether
- Over 30 other, non qualified API producers
- Also have to consider Lumefantrine, Amodiaquine etc

All dependent on long term ACT Forecasting
ARTEMISININ FORECASTING

A2S2 Supply vs. Demand Forecast in Tabular Format

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2014 Demand Forecast

RBM CMWG-7, 5-7 March 2013
ARTEMISININ PRODUCTION

Natural Artemisinin

• Presently around 16 ‘serious’ natural artemisinin producers in China, Vietnam, East Africa, Madagascar and India *

• Other primary extractors in China and India who sell to larger producers and through traders e.g. when prices are high

• Total global production capacity is over 300MT.

• China still has over 80% of the production capacity

• Price fluctuation – viability
Artemisinin Production

EAST AFRICA
(Uganda, Kenya, Madagascar)

CHINA
130 T

INDIA
3T

VIETNAM
18 T

Artemisinin/T = 2011 Artemisinin Production
E = Nb of main producers
SEMI–SYNTHETIC ARTEMISININ (SSA)

- Sanofi – One World/Amyris
  - 35MT in 2013
  - up to 60MT 2014
- Max Plank

- SSA initially proposed as a means to supplement natural artemisinin and stabilise prices – but concern over above proposed volumes/timing.
- Whilst future introduction of SSA is accepted as potentially positive BUT it’s introduction has to be carefully coordinated, otherwise it could seriously destabilise the market.
- Price sensitivity – Sanofi SSA being sold ‘at cost’ (subsidised development), whilst natural extractors have to sell ‘at profit’
Our objective is to provide the most effective treatments, consistently, at the lowest viable cost

**BUT**

- Need clear and long term commitment of funds for treatments, otherwise there can be no accurate ACT Forecasting. **Result:** no part of the supply chain can plan their production, leading to continuing delays in treatment supply, and patient suffering.

Potential growth non approved ACTs and monotherapies

- Need to confirm mechanisms for defining how Global Fund monies will be proportioned between the private and public sectors, and funding for ACT procurement, post 2013

- Need to coordinate the introduction of semi-synthetic artemisinin into the artemisinin supply chain, otherwise prices will continue to fluctuate and production and investment in natural artemisinin production will stop. **Result:** shortage of treatments.

- Viable pricing throughout the supply chain
THANK YOU

QUESTIONS & COMMENTS