Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
26th August 2014

#pharmasupplychainafrica
#imshealth @imshealth
John Prinsloo
Country Manager, Middle Africa
IMS Health
Pharmaceutical Supply Chain in Africa

John Prinsloo, Country Manager Middle Africa
Welcome

1st Event of this kind for IMS in Africa

- Skhumbuzo Ngozwana
  - (MD, Metanoia Pharma Consulting)

- Renia Coghlan
  - (Executive Director, TESS Development Advisors)

- Stephan Muller
  - (Business Development Director, Quintiles)

- John Vorster
  - (Chief Operating Officer, Mezzanine Ware (Pty) Ltd, a subsidiary of Vodacom)

- Dr Ernest Darkoh
  - (Founding partner of BroadReach Healthcare)

- Dan Rosen
  - (Consultant in IMS Health's Thought Leadership team, IMS Health)
Thank you

This day is not possible without you ......

- Liz Wentzel
- Mel Lewis
- Lisa Teepe
- CWT Travel
- IMS Team in Johannesburg
- Speakers
- Guests
IMS Expansion into Africa
During the period 2013 to 2016 IMS will expand with data assets and presence from 17 to 24 African countries

North African countries available:
- Tunisia
- Morocco
- Algeria

FWA countries available:
- Ivory Coast
- Cameroon
- Senegal
- Gabon
- Congo
- Guinea
- Benin
- Togo
- Mali
- Burkina Faso
- Niger
- Chad

Southern Africa countries available:
- South Africa
- Zambia
- Botswana
Details of data offerings rollout in Middle Africa: 2014 to 2016

- Monthly national wholesaler Indicator audits:
  - Botswana: February 2014
  - **Kenya: August 2014**
  - Nigeria: 2015
  - Ghana: 2015
  - Angola: 2016 (quarterly)

- National Import Indicator Audits:
  - Zambia: 2013
  - **Uganda: 2015**
  - Ethiopia: 2016
  - Tanzania: 2016

26 August: Pharmaceutical Supply Chain in Africa
Our Kenya Data
Kenya National Indicator Report

**Phase I:**
- Sales out of the top importers / pharma companies from our first phase data panel:
  - Surgipharm
  - Harleys
  - Europa
  - Sunpar Parma
  - MacNaughtons
  - HighChem
  - Laborex
  - Phillips
  - Pharma Specialities
  - Bayer

**Phase II:**
- Detailed sales from:
  - Lilly
  - Pfizer
  - GSK
- New data partners:
  - Sai Pharma
  - Imperial Health Sciences
- In discussion with:
  - Lords
  - Surgilinks
  - Omaera
  - Njimia
  - Transchem
  - Unisel

26 August: Pharmaceutical Supply Chain in Africa
The IMS Measured Kenya market MAT value ending July 2014 = KES13.09 billion

This is equivalent to ZAR 1.616 billion

The measured Kenya market is delivering an MAT growth of 8% MAT

MAT = Moving Annual Total

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ATC 4 Analysis

The top ten ATC classes contribute 31% to MAT value sales

MAT = Moving Annual Total
The top ten manufacturers contribute 54% to MAT value sales.

The top ten manufacturers have a combined growth of 11.8% versus that of the market at 8%.

MAT = Moving Annual Total

26 August: Pharmaceutical Supply Chain in Africa
IMS’ Medical Radar

With Primary Intelligence, IMS brings performance management solutions to African markets

- **Profile**: A Primary Market Research team in operation for more than 20 years, IMS Medical Radar runs 500-600 projects each year globally.

- Fully in-house Primary Intelligence team at IMS

- **Wide range of offering**: From cross-country performance studies to local, in-depth reports

- **We are growing in Africa**: Since 2014, we can run surveys in Kenya, Tanzania and Uganda, with the support of our local teams. Ghana and Nigeria from 2015.

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Medical Radar – Diabetes in Kenya

Focus on the diabetes epidemic in Africa

- Diabetes and its complications are considered an **epidemic** in Africa.
- The Pharma and Medical community need a **better view** of the market dynamics.
- IMS Health is happy to launch its first **syndicated Medical Radar** study, investigating measures and trends on **Type II Diabetes in greater Nairobi**

- The first of its kind in Middle Africa, this study surveyed **GPs, Specialists, Pharmacists and Chemists** on their Type II Diabetes treatment practices.
- The survey includes robust information from the respondents’ **patient records**

Diabetes in Kenya:
- 700,000 people are diagnosed
- + 700,000 are undiagnosed
- 70-90% of Diabetes cases in Africa are Type II

100+ Respondents
400+ Patient records

26 August: Pharmaceutical Supply Chain in Africa
Typical KPIs captured from physicians in the survey

**What is the market situation?**
- # of patients seen
- Type of patients seen
- # of dynamic decisions

**Marketing influence**

**Cognition**

**Attitude**

**Behavior**

**How are the competing brands performing?**
- Competitive detailing/promotion
- Message recall
- Effective adoption
- Market performance
- Duration of treatment
- Rationales for brand choice
- Impact of promotion
- Brand Perceptions

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Results available in a syndicated PPT report

Clear analyses, segmented by respondent and KPI

Snapshots from our Kenya Type II Diabetes Report

Pharmacists see more T2D patients than Specialists; however, they deal mostly with repeat treatment decisions.

The dynamic market (New, Switch, Supplementary) represents 35-40% of physicians’ case-load.

26 August: Pharmaceutical Supply Chain in Africa
The dynamic market (New, Switch, Supplementary) represents 35-40% of physicians’ case-load

GPs and Specialists view

Proportion of treatment decisions

For GPs and Specialists:
DMP1. Which of the following options best describes the last patient you recall seeing for the treatment of Type 2 diabetes?
DMP2. What did you do following your consultation with the patient?
Once again welcome, enjoy your meeting
Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
26th August 2014

#pharmasupplychainafrica
#imshealth @imshealth
Skhumbuzo Ngozwana

MD

Metanoia Pharma Consulting
Medicines Procurement in the context of the PMPA – is Africa doing enough to promote Local Production: The Price versus Cost Debate
Outline

❖ Intro – The Holy Grail of Healthcare & Africa’s constraints
❖ A snapshot of Health in Africa today
  • The African Pharmaceutical Industry today
  • Medicine Procurement in Africa today
  • The Price versus Cost debate: reality & myths
❖ Introducing the PMPA
  • Leveraging tender procurement to support local production / PMPA
    • Medicine Procurement in other parts of the world
The Holy Grail of Healthcare

- Better Access
- Improved Clinical Outcomes
- Lower Cost

Transparency and Improved Information flows
Access & Barriers

FACTORS LIMITING ACCESS

Supply side issues (Institutional & system)
- Pharmaceutical (e.g. Production, QSE)
- Registration inefficiencies
- Shortage of trained professionals
- Rationale Use

Socio-political
- Poverty & unemployment
- Cultural & linguistic
- Poor governance & management
- Lack of political will
- Increase in infectious & chronic diseases

Economic
- Inadequate budgets
- Lack of distribution chain
- Health infrastructure

Regulatory and policy
- Health financing policies
- Industrial imperatives
- Procurement policies
- IRP laws
- Cross-border inefficiencies

Source: Metanoia Pharma Consulting
A snapshot of Health in Africa today

- The African Pharmaceutical Industry today
- Medicine Procurement in Africa today
- The Price versus Cost debate: reality & myths
- Introducing the PMPA
- Leveraging tender procurement to support local production / PMPA
  - Medicine Procurement in other parts of the world & what Africa should do
High Disease Burden (current)

• 25% of the global disease burden
  • 75% of the global HIV/AIDS pandemic
  • 90% of the malaria cases and deaths
  • 9 countries (excluding North Africa) among the 22 countries with the highest TB burden in the world.
  • MDR-TB and XDR-TB rated among the highest in the world.
  • Significant child mortality – diarrhoeal, measles, URTI
  • An emerging CD epidemic

High Disease Burden (2030 Projections)

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>60 mil</td>
</tr>
<tr>
<td>Diabetes</td>
<td>18.6 mil</td>
</tr>
<tr>
<td>Cancer</td>
<td>1 mil (new cases annually)</td>
</tr>
<tr>
<td>Other (CNS, CVS, Resp.)</td>
<td>Will surpass HIV / AIDS as leading cause of death</td>
</tr>
</tbody>
</table>

Other Healthcare challenges ...

• Poor healthcare infrastructure
  • Software – Shortage of healthcare HR
  • Hard ware – clinics, hospitals, labs, Supply chain inadequate
  • Inadequate quality systems and limited access

• Limited healthcare funding
  • Limited National budgets
  • Donor dependence (?) fatigue
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Defining Procurement

- The process of *purchasing* medicines directly from national or international public or private suppliers; purchasing via global funding agencies and their procurement mechanisms or local government funds, or purchasing directly from international procurement agents; or any combination of the above.
Defining Procurement

• Pharmaceutical procurement and supply management system: involves all steps in the procurement and supply system including selection, forecasting & quantification, tendering, negotiation, purchasing / ordering, storage, selling, distributing and dispensing of medicines and medical supplies.
Procurement systems

• Open tender (local / international): open bidding and winner chosen (cost, supply reliability, local preferences etc)

• Pooled Procurement: part or all of the procurement processes of different procurement agencies are executed jointly e.g. WAHO, SADC (planned)

• Information sharing: members share information (product, prices, quality, source and supplier performance)
Procurement systems

  • Framework Agreements / Long term Agreements: flexible long term contracting with national suppliers
  • Minimum 2 years, fixed prices and volumes per product

• Coordinated informed buying: procurement wherein members jointly research the market, share information on prices, product and supplier performance but procure separately.
Procurement costs breakdown

- Purchasing operations (human resources, administration, etc)
- Medicine Acquisition
- Storage costs
- Inventory holding
- Distribution
- Quality Assurance
Procurement Process flow diagram

Key challenges:
- Poor forecasting & quantification
- Long lead times (tendering & manufacturing and supply)
- Delayed payments
- Huge head counts to administer the complex system
- Limited use of technology (paper based systems)
- Poor technology – fax lines / internet often don’t work
- Poor road infrastructure
- Lack of delivery vehicles – use private sector vehicles common place

Consequence:
Administration & transport costs amount to up to 30% of procurement costs

Donor programs / FBO's / NGO’s may also run a parallel system that feeds into these chain at various levels
Procurement and distribution in Africa

Yadav et al 2011
Procurement & Distribution in Africa

• Chronic lack of funding
• Poor management & understaffing
• Problems of poor forecasting and quantification
• Problems of stock outs & treatment interruptions
• Poor payment cycles (especially for local manufacturers) among a myriad of problems.
• Huge duplication and wastage of scarce resources
• Multiple parallel procurement structures & layers of middle-men
• Opaque and rigid – paper based and inefficient
• Corruption
• Open tenders – not really open, especially for local manufacturers
Procurement & Distribution in Africa

• Requirement for WHO-PQ / SRA registered products in funded markets
• Requirement to be able to fulfil 75% of the tender requirement (Mission Pharma)
• Requirement for bid security guarantee (< 4% of tender value)
• Bid in local currency, yet foreign companies in international tenders bid in $
• No performance based incentives or penalties for non performance by (foreign) suppliers
• Lack of certainty (absence of long term contracts & assured volumes, price inflexibility)
• Playing in an uneven playing field (tariffs, registration requirements)
Current procurement challenges...a view

• Country A: (1 NMS, 7 RMS, 65 DMS)
  • Takes ~ 8 months from order to delivery of the drugs at a DMS

• Country B stock-outs
  • av. 90 days in healthcare facilities
  • Av. 45 days in NMS / DMS

• Country C: Framework agreements with local manufacturers *(Certainty – price / volume / order cycles)*
  • With minimum tender awards for 2 years at fixed prices and volumes per product
  • Has reduced stock-outs and increased medicine availability
  • Better cash flows and efficiencies for local producers
Current procurement challenges...a view

• Country D: Clear unfair advantage for foreign bidders despite 15% preference for locals
  • Foreign firms paid by LC, locals 6-8 months (plus cause of 4-5 months lead times on raw materials paid for upfront; have huge inventory costs, 16-17% interest on working capital at a significant disadvantage)
  • Products need not necessarily be registered with local NMRA, if tender won, must register (expedited by virtue of being on tender)
  • CIF on international orders – CMS has to deal with duties & taxes, exchange rate arrangements (local manufacturers pay 25% tariff on imported API, packaging)
  • CMS supplies all public institutions, but many buy more from private sector than CMS
Current procurement challenges...a view

• Country E: 15% preference (??) for local companies
  • Local companies manufacture ~35% of EDL products
  • 95% open international tenders
  • Local manufacturers more responsive, yet because of price, often lose out to foreign firms with unreliable supply and high default rates

• Regional Economic Community (REC): A survey of 50 tracer items found wide differences in commodity prices
  • some countries paid > 5 times the lowest REC rate
  • In 8% of the tracer items, some countries paid > 50 times the lowest price in the lowest REC country price
A snapshot of Health in Africa today

• The African Pharmaceutical Industry today
• Medicine Procurement in Africa today

• The Price versus Cost debate: reality & myths

Introducing the PMPA

• Leveraging tender procurement to support local production / PMPA
  • Medicine Procurement in other parts of the world
“Demonstrate to your customer the difference between price and cost. *The price is what it takes to purchase the item. The cost is the amount the customer eventually pays.* They are not the same”.

Brian Tracy
Price versus Cost & the real costs of Procurement

- **Poverty Premium (PP)**
  - Cost of resistance and other complications due to stock-outs
  - Commission for local agents
  - Emergency orders at private sector prices / buy-outs
  - Early expiry & disintegration of medicine
  - Air freight / special transport due to late delivery
  - Short packing
  - Product loss - poor packaging / handling

- **Visible cost (VC)**
  - Quoted price

- **Hidden costs (HC)**
  - "Expensive" Local Manufacturer
  - "Preferred Low Cost Producer"

Total Cost = VC + HC

HC = Poor performance = PP

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Pharmaceutical Production Process Flow
African Pharma at a Glance...

- Imports: +/- 95% of API & 75% of FF
- Unsupportive & incoherent policy framework
- Lack of regulatory capacity
- No regulatory harmonization
- Counterfeit & substandard medicines
- Limited specialised pharmaceutical skills
African Pharma at a Glance ...2

• Limited home-grown technologies
• The pandemic blind-side
• Lack of affordable finance & incentive programmes
• Lack of market data
• Weak related and supporting industries
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### PMPA Background/Key Milestones

<table>
<thead>
<tr>
<th>Year</th>
<th>Place</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2005</td>
<td>Abuja</td>
<td>Original decision to develop a PMPA</td>
</tr>
<tr>
<td>July 2007</td>
<td>Accra</td>
<td>Initial Plan endorsed by Heads of State</td>
</tr>
<tr>
<td>March 2011</td>
<td>Algiers</td>
<td>CAMI Roundtable on local production and incorporation of sector in AIDA</td>
</tr>
<tr>
<td>Sep’11 to Apr’12</td>
<td>Vienna</td>
<td>Conceptualisation &amp; country visits and writing of the PMPA ‘business plan’</td>
</tr>
<tr>
<td>May 2012</td>
<td>Geneva</td>
<td>Endorsed by the Conference of African Minister’s of Health</td>
</tr>
<tr>
<td>July 2012</td>
<td>Addis</td>
<td>PMPA Business Plan approved by Heads of State</td>
</tr>
</tbody>
</table>
PMPA Core objectives

• Support local pharmaceutical manufacturing to:
  • increase access to affordable quality medicines
  • ensure sustainable supply of essential medicines
  • improve public health outcomes
  • promote industrial and economic development
PMPA Vision

To develop a competitive and enduring integrated pharmaceutical manufacturing industry in Africa, able to respond to the continent’s need for a secure and reliable supply of quality, affordable, accessible, safe and efficacious medicines.
Pharmaceutical manufacturing system

Key:
- Material flows
- Influence, including through regulatory oversight, policy, lobbying etc.
- Supply of services/access to knowledge
- Influence, including through regulatory oversight, policy, lobbying etc.

Various National Ministries including Health, Finance, Industry, Trade

*Note trade associations can perform a range of functions on behalf of their members to influence the business environment, such as dissemination of best practice, partnership brokering, lobbying
## African Pharma Value Chain...deficiencies

<table>
<thead>
<tr>
<th>Capacity &amp; skills shortages</th>
<th>Poor quality &amp; counterfeit drugs</th>
<th>Facilities not GMP compliant</th>
<th>Weak regulatory framework</th>
<th>Lack of/poor technology</th>
<th>Limited access to markets</th>
<th>No market data</th>
<th>Lack of partnerships &amp; linkages</th>
</tr>
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<tbody>
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</tbody>
</table>

### Challenges:
- Conflcting policies & regulations (trade, health & industrial)
- Absence of shared vision amongst stakeholders
- Lack of funding & government support
- Mismatch between industry needs & education provision
- Graft & '92 laws
- Weak supporting industries
- Poor business practices
PMPA ‘Package of Solutions’
HR Development

Key objective:
To build capacity to meet skills requirements for local production of affordable and safe quality medicines

Key Interventions:

- Training of:
  - NMRAs (all aspects of GMP, GDP, GLP, GWP, policy etc.)
  - Pharmaceutical companies (e.g. formulation, GMP, Lean manufacturing, business management, plant operations)
  - Govt policy makers (e.g. policy development & coherence)

- Facilitate the review & reorientation of science/pharmacy/engineering curricular at institution of higher learning
Access to Products & Technology

Key objective:
Assist African companies to access and acquire best in class technology & improve product portfolios

Key interventions:
- Working with CoEs, develop formulations and diffuse technology to GMP compliant companies
- Working with UNDP/UNCTAD/ARIPO etc., exploit TRIPS flexibilities to supply donor funded markets
- Negotiate directly with patent holders for voluntary licences
- Facilitate access to technology through partnerships; e.g. WHO/EGA/KEMRI/NIPRD etc.
Access to funding & incentives

Key objective:
Assist African companies to access affordable capital, and advise governments on conducive incentives

Key interventions:
- Advisory and technical assistance to governments on development of policies including incentive programmes that are supportive of the growth of the pharma industry
- Mobilise enthusiasm for pharma sector and lobby for review of funding /and investment criteria (e.g. local banks and international finance organisations)
Regulatory systems strengthening

**Key objective:**
Assist NMRAs to develop the capacity to fulfil their mandate – ensuring that the products on the market are safe, efficacious and of good quality

**Key interventions:**

- Offer technical assistance to
  - Develop legislative framework for the NMRA
  - produce organisational development plans, policies and procedures
  - NMRA’s and partnership with AMRH for regulatory harmonisation

- Establish a “GMP road map” & an audit tool to establish baseline for industry & Enhance capacity of NMRA’s to enforce
## Facilitating partnerships & business linkages

**Key objective:**
Promote business linkages and partnerships to facilitate access to products, finance, and skills development

<table>
<thead>
<tr>
<th>Key interventions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a web portal with corporate profiles and a B2B facilitation platform</td>
</tr>
<tr>
<td>Facilitate bi-annual matchmaking meetings and fairs with global counterparts</td>
</tr>
<tr>
<td>Strengthen linkages with ANDI and other CoE’s</td>
</tr>
<tr>
<td>Strengthen industry associations &amp; partner with them to foster internal partnerships (e.g. Pooled procurement of products and service)</td>
</tr>
</tbody>
</table>
Enhancing market data collection & access

**Key objective:**
facilitate the collection of market data

**Key interventions:**
- Identify & partner with reputable research organisations to collect market data and intelligence
- TA to government procurement agencies to develop forecasting and data collection abilities
Facilitating access to market

Key objective:
Assist companies to improve product quality & portfolio thereby strengthening their access to local & funded markets

Key interventions:
- Facilitate international acquisition of international GMP standards and product and technology to supply funded markets
- Promote regulatory harmonization and intra-regional trade
- Exploit TRIPS flexibilities
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  - Medicine Procurement in other parts of the world & what Africa should do
Medicine Procurement in other parts of the world - India

• Government agencies / States buy local
• Difficult for foreign firms to compete
  • Local companies enjoy significant economies of scale - Tax incentives for exporters in SEZ’s / Export zones
  • Import duties on FF up to 56% & average customs duties on pharmaceuticals 25% to 35%.
  • Import duties on API ~ 35% (recent Lobbing to hike rates on API from China)
Medicine Procurement in other parts of the world - Russia

- Local producers have price preferences
- Target 2020 - 90% of essential drugs and 50% of all drugs sold in Russia must be manufactured domestically.
- Various government incentives for local producers ($4 Bn)
Medicine Procurement in other parts of the world - Brazil

- Local preferences up to 25%
- Import duties on pharmaceuticals up to 17%; average duty 15%.
Leveraging local Procurement for PMPA

- More aggressive preferences for local producers – restrict the import of certain basic medicines to local producers
- Enter into framework agreements / long term contracts (5 years) with local companies to improve competitiveness (scale economies, lean manufacturing, cash flow management..)
- Lobby international funding community (PEPFAR / GF) to carve out a portion for international GMP compliant local manufacturers
- Restrict tenders (GMP, past performance, local content)
- Competitive negotiation (approach local players for quotes – e.g. WAHO Danadams / Evans ARV / anti-malarials)
- Direct Procurement from local companies - negotiated discounts and direct delivery to health centres / clinics etc
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Pharmaceutical Supply Chain in Africa

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#pharmasupplychainafrica
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Renia Coghlan
Executive Director
TESS Development Advisors
« African markets are still poorly understood »

Will more data, better data help address unmet medical need and expand market opportunities?

A case study of malaria medicines

IMS Health
Pharmaceutical Supply Chain in Africa
Johannesburg, 26th August 2014
1.2 billion > 0

1.2 billion = 0

1.2 billion = 300 – 500 million
A Rapidly Changing Environment

1992: Malawi switches from CQ to SP
1999: Medicines for Malaria Venture addresses R&D
2000: Millennium Development Goals agreed, including malaria
2001: WHO recommends use of Artemisinin Combination Therapy (ACT)
2002: Creation of the Global Fund
2002: Zambia is first country change policy to use ACT
2005: President’s Malaria Initiative launched
2006: UNITAID launched
2006: **41 of 46 endemic countries adopt ACT 1st Line**
2008: ACT Watch launched
2009: Global Fund revises it’s PQR reporting database
2010: AMFm is launched (2012 reabsorbed into GF)
2013: cumulative signed funding for malaria: USD 8 bn

More data, better data….??
Anti-Malarials Market in Africa

2001 WHO Recommendation leads to a MARKET SPLIT

- 46 Endemic Countries
  - Donor Funds *
    - ACT
    - Gvt Distribution
  - Out of Pocket
    - CQ / SP
    - Private Sector

* 11 Manufacturers have WHO Pre-Qualification for anti-malarial medicines
A Homogenous Public Market

- 9 molecules (of which 3 not used & 1 severe malaria)
- 11 Pre-Qualified manufacturers

- 2 major donors (plus top up from others)
- Funding agreed on a multi-annual basis

- Tenders: Gvt or increasingly directly through donors
- Demand forecasts are established on an annual basis
- Donors work closely with manufacturers around orders
What About the Private Sector?

Availability of non-artemisinin therapies among private for-profit outlets stocking antimalarials, 2011

- Benin: 2011 - 69%, 2009 - 25%
- DRC: 2011 - 4%, 2009 - 4%
- Madagascar: 2011 - 95%
- Nigeria: 2011 - 77%
- Uganda: 2011 - 18%
- Zambia: 2011 - 0%
What About the Private Sector?

Private-for-profit sector antimalarial market share

Source: ACT Watch

- 2011 Benin: 30% CQ, 34% SP
- 2009 DRC: 25% AQ, 35% SP, 20% QN
- 2011 Madagascar: 60% CQ
- 2011 Nigeria: 26% CQ, 42% SP
- 2011 Uganda: 26% SP
- 2011 Zambia: 71% SP
Will more data, better data help address unmet medical need and expand market opportunities?

Assumes several premises:
- Is there a demand for more data?
- Do epi & market data ‘talk’ to each other?
- What role have market data had in investment decisions?
Public Sector: Filling a Data Gap

- Demand scale-up leads to market/supply monitoring
- Accountability requires monitoring of distribution efficiency

Value & Volumes Need?

- Measure Stock Availability
- Measure Donor Market Volumes
- Measure Public Sector Stock-Outs
- Measure National Markets (IMS/MMV)
- Measure Prices
**Public Sector Scale-Up**

<table>
<thead>
<tr>
<th>Total ACT Doses Delivered*</th>
<th>2005</th>
<th>2006</th>
<th>2010</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11mn</td>
<td>76mn</td>
<td>219mn</td>
<td>331mn</td>
<td>367mn (estimate)</td>
</tr>
</tbody>
</table>

Malawi: 7 million treatments  
Tanzania: 17 million treatments  
Nigeria: 100 million + treatments / year

**Market data have improved significantly since 2009**
- Financing and volumes data generally available from donors  
- Future planning data (disbursement, orders) likely to improve

*Source: WHO World Malaria Report 2013, UNITAID ACT Demand Forecast Q1 2014*

**Market data as a result of market growth, not to drive growth**
Private Sector Data

Market data for the private sector are more limited

- MMV-IMS collaboration on national pharmaceutical markets
  “There is no private sector for antimalarials in Zambia” : TRUE
  Now we can measure how small this private sector is

- 11% of market value for malaria (2012)
- 4.5% of market volume for malaria
- 21 different importers
- 18 different products
  - 16 mainly used for treatment
  - 2 mainly used for prophylaxis

- ACT Watch provides some data for 8 countries in Africa
  (Benin, DRC, Kenya, Madagascar, Nigeria, Tanzania, Uganda, Zambia)
Will more data, better data help address unmet medical need and expand market opportunities?

- Will the market continue to grow?
- Will the product class segmentation remain?
- How will socio-economic changes affect the market?
A Changing Context in Africa

1. 1.1 billion population, growing to 2.6 bn in 2050?
2. 43% currently under age 15
3. 34% middle class, 40% urbanisation (70% slums)
4. Pharmaceutical spending \( \approx \) USD30bn by 2016
5. 10.6% compound annual growth rate
6. Changing disease burdens
7. Changing financial constructs
   - External vs national funding vs insurance vs OP paymts
Disruption or Opportunity?

- **Growing middle class**
  - depends on continued economic growth
  - health insurance schemes offer new opportunities
  - generics and/or affordability schemes (tired pricing)
  - demographic changes vs income inequality

- **Change in policy**
  - Zambia no longer imports CQ, Nigeria NAFDAC had 312

- **Change in disease burden**
  - addressing unmet medical need (cancer, diabetes)
  - targeted treatment: parasitaemia in Zambia is 16%

- **Change in public sector healthcare provision**
  - reliance on external funding for certain areas
  - externally driven initiatives
Examples: Zambia

- 2007 World Health Assembly Resolution WHA 60.18 on the withdrawal of oral artemisinine « Urges Member States to…cease progressively the provision in both the public and private sectors of oral artemisinin monotherapies » .....July 2009

- **Revised Malaria Treatment Guidelines, Feb 2014:**
  - DHQ-PQP as alternative 1st line
  - Inj Artesunate for severe malaria
  - Artesunate suppositories for pre-referral

<table>
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<tr>
<th>Molecule</th>
<th>% Total 2009</th>
<th>% Total 2010</th>
<th>% Total 2011</th>
<th>% Total 2012</th>
<th>% Total 2013</th>
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<tr>
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<td>79.8%</td>
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<td>1.9%</td>
<td>7.6%</td>
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<td>% Total Market*</td>
<td>98.4%</td>
<td>99.6%</td>
<td>99.8%</td>
<td>99.8%</td>
<td>99.9%</td>
</tr>
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</table>

Total Imports by Product, **Standard Units**

*Difference is made up of 15 products, almost all imported by the private sector*
Examples: Tanzania

- Funding /Procurement-related delays

Figure 1 Percentage of health facilities reporting total artemisinin combination therapy stock-out, by health facility type (Public and Voluntary), Tanzania, October 2011 to December 2012.

What Drives Data Collection?

Malaria is a great example of externally driven market growth

46 Endemic Countries

- Donor Funds *
  - ACT
  - Gvt Distribution

- Out of Pocket
  - CQ / SP
  - Private Sector

<table>
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<tr>
<th>AVAILABILITY</th>
<th>AFFORDABILITY</th>
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<tr>
<td>- Avoid stock-outs</td>
<td>- Stable market</td>
</tr>
<tr>
<td>- Avoid over consumption &amp; expiry</td>
<td>- Low price, low margin</td>
</tr>
<tr>
<td>- Financial planning</td>
<td>- « I know my market »</td>
</tr>
<tr>
<td>- Production planning</td>
<td>- Little interest in data investments</td>
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</tbody>
</table>

UNMET MEDICAL NEED? HUGE MARKET EXPANSION

MARKET OPPORTUNITIES? PUBLIC HEALTH NEED
Conclusion: Africa is Changing

1.2 billion > 0

Unmet Medical Need
- Ensure the right people get treated (16% parasitaemia)
- Ensure people get treated with the right product
- Changes in disease burden offer both growth and medical need

Market Growth
- Manage industry expectations
- Prevent a ‘boom & bust’ dynamic e.g. nets industry
- Invest in new products, invest in the right products
- Different drivers of market growth (donor / gvt / insurance)
Thank You

Renia Coghlan
renia@tessadvisors.org
Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
26th August 2014

#pharmasupplychainafrica
#imshealth @imshealth
Stephan Muller

Business Development Director
Quintiles
The “Merck Model” – Current best practice, but for how long?

A critical review of the current best practice commercial pharmaceutical model in Sub Sahara Africa and how economic changes in Africa will impact pharmaceutical distribution, marketing and sales over the next decade.

Stephan Muller
Director: Business Development
Quintiles Commercial Africa

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The “MERCK” Model

- Commercial model that incorporates:
  - Manufacturing
  - Logistics
  - Distribution
  - Sales
  - Marketing
  - Compliance
  - Pharmaco-vigilance
  - Finance
  - HR

and putting the manufacturer at the centre and in control of the commercial process.
Where we were a decade ago

Benefits
- No credit risk
- No stockholding
- No investment in sales and marketing
- Supply what we want

Risks
- No control over
  - Pricing
  - Pharmacovigilance
  - Messaging
  - Brand

Benefits
- Exclusivity
- Market control
- Free pricing
- Additional sales and marketing fees

Risks
- Cash flow
- Currency
- Credit
The Merck model

Benefits
• Low credit risk
• Own stockholding and forecasting
• Full control over Sales & Marketing
• COMPLIANCE!
• Price agility
• Own Brand Strategy
• HR Development

Risks
• Forward placed Inventory

Benefits
• Constant supply
• Cash flow
• Competitive pricing
• Free sales and marketing service
• Global brand support
• Decreased inventory

Risks
• Credit
The Merck model

Manufacturers

Benefits
- No credit risk
- No stockholding
- No investment in sales and marketing
- Supply what we want

Risks
- No control over
  - Pricing
  - Pharmacovigilance
  - Messaging
  - Brand

Importers

Benefits
- Exclusivity
- Market control
- Free pricing
- Additional sales and marketing fees

Risks
- Cash flow
- Currency
- Credit

Benefits
- Low credit risk
- Own stockholding and forecasting
- Full control over Sales & Marketing
- COMPLIANCE!
- Price agility
- Own Brand Strategy
- HR Development

Risks
- Forward placed inventory

Benefits
- Constant supply
- Cash flow
- Competitive pricing
- Free sales and marketing service
- Global brand support
- Decreased inventory

Risks
- Credit
3rd Party providers

- Certified pharmaceutical warehousing
- Registered pharmacist on site
- Full track and trace capabilities
- Holding manufacturer’s stock for distribution only
- Financial transaction only occurs when an order is placed on the warehouse
- Regional “Hub and Spoke” capabilities

- Independent sales and marketing provider
- Not connected to a specific stockholder
- Internationally trained sales people
- Full Compliance training and monitoring
- 3rd party employees with full local HR and Labour Law compliance
- Scalable resource per country with no employment risk
- Facilities provision

Manufacturer: “My stock, my warehouse, my distribution, my sales people, my revenue – but never my problem!”
Is the Merck model still relevant and viable?
Where it makes business sense!

- Current standing
- Future strategy
- Appetite

It's not about this specific business model, but all about change that drives business growth.
“All progress demands change, but not all change bring progress”
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<th>Support required</th>
<th>Solutions</th>
<th>Quintiles</th>
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<tbody>
<tr>
<td>Human Resources</td>
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<tr>
<td>Recruitment</td>
<td>Shadowmatch recruitment tool&lt;br&gt;Extensive database</td>
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<tr>
<td>Distribution</td>
<td>Local stockholding/trade option&lt;br&gt;Partner vetting&lt;br&gt;Distributor management</td>
<td>✓</td>
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<tr>
<td>Regulatory</td>
<td>Dossier submission&lt;br&gt;Follow up&lt;br&gt;Registration maintenance</td>
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</tr>
</tbody>
</table>
Conclusions

• Growth
  › Innovative processes
  › New technology

• Safety
  › Compliance & Governance
  › Quality

• Longevity
  › Flawless implementation
  › Invest for the future
Thank You

stephan.muller@quintiles.com
+27 (0) 83 274 5479
Additional slides
Future impact

• Local manufacturing
  › Ownership and Control
  › Accessibility
  › Cost

• Technology
  › E-tailing
  › Remote consultation
  › Sales methods

• Legislation
  › Regulatory process
  › Primary Healthcare
  › Market Access

• Urbanisation
  › Mega Cities
  › Distribution Dynamics
  › Sales requirements

• Disease profiles
  › Lifestyle vs Infectious
  › Geriatric medicine
  › Alternative/Complimentary

• Compliance
  › Legal Risk
  › Global effect
  › Financial rewards
Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
26th August 2014

#pharmasupplychainafrica
#imshealth @imshealth
John Vorster
Chief Operating Officer
Mezzanine Ware (Pty) Ltd, a subsidiary of Vodacom
Vodacom: Mobility, Visibility, and Access to quality healthcare 26 August 2014

power to you
Agenda

• Vodafone and Vodacom Business Africa
• Vodacom mHealth
• Sample solutions deployed through web and mobile applications
• Stock visibility through to the last mile
• Scaling mHealth solutions across Africa
Vodafone’s Global Footprint and Vodacom Business Africa:

The world’s leading mobile telecommunications company…

Through branded local Operating Companies and Partners
Vodafone mHealth Solutions

Vodacom Business Africa (VBA)

- Established a Vodafone Global Enterprise (VGE) hub in South Africa in 2009.
- Has a physical presence in over 20 and provides services across 40 countries.
- Now proudly commands:
  - The most comprehensive fixed data network coverage in the region.
  - A strong mobile footprint, supplemented by local partners.
  - Specialized knowledge in order to deal with the highly complex and risky regulatory, tax and licensing requirements.
  - The tools necessary to deliver a consistent, centralized managed service including billing, ordering and reporting across the region.
- We are establishing two new regional hubs in Nairobi and Accra,
- To support 600 VGE Multi-National Customers who require business services in Africa.
Journey to business growth

Evolution toward industry solutions and platforms

Vodafone Communication Services

Email, Fixed Network, Mobile, Collaboration

Work on any device
Work the way you want

Personal Productivity

Help me manage my comms
Help me operate globally

Business Management

Help me operate more effectively
Keep me ahead of the game

Business Growth

CORE COMMUNICATIONS MANAGED SERVICES FOR ENTERPRISE INDUSTRY SOLUTIONS
mHealth is a major growth platform

At the intersection of mobile innovation and health transformation

**TRENDS**
- Chronic Disease Epidemic
- Ageing Demographic
- Cost pressures on providers
- Increased Patient Empowerment
- Genericisation of markets

**CHALLENGES**
- Poor information mx: paper based
- Poor infrastructure & human capital base
- Lack of patient compliance
- Inequality in access to services & Rx
- Demand for better quality of care

700,000,000 total cellular connections across Africa in Q2 2012*
Vodacom empowers people and machines (M2M) in mHealth

Automatic
data collection from wireless sensor devices

Manual
data collection software

Global M2M Platform
- Dedicated global data network

Device/ Data Management
- Versatile software platforms

Types of applications
- Chronic disease management
- Patient Engagement
- Assisted Living
- Clinical research
- Health system workflow
Web/Mobile applications delivered through Mezzanine

- Building mHealth solutions since 2005, including mobile and web applications and server installations.

- 5,000+ daily users of uniquely created workforce management applications across urban and rural landscapes.

- Active deployments and local hosting in 4 (shortly 6) African countries
  - Tanzania, Kenya, Mozambique, South Africa (Nigeria and Zambia)

- Four broad solution clusters:
  - Workforce Management
  - Patient Reminders and Support
  - Stock visibility
  - Cold chain monitoring
  - mLearning
Creating dynamic solutions for diverse clients and partners
Our mHealth platform

- Security
- Identity
- Mobile Learning
- Data Collection
- Task Scheduling
- Event-driven payments
- Intelligent Workflows
- Client Interaction
- Reporting
From 2008: Stock Visibility
The first large scale, national deployment

- Nurses at dispensary level submit stock levels for key Malaria drugs via SMS – in return for an incentive
- Significant reduction in drug stock-outs, improved availability of critical medicines
- Quick, easy deployment based on Vodafone’s managed service capability
- Full commercial roll-out to 5,100 public health facilities in Tanzania in 2011
From 2008: CHW management in Kenya and South Africa

- Mobile based workforce management solution for Community Health Workers (CHWs).
- Supports CHWs to provide better quality and more efficient health and social care services.
- Enables lower-skilled health workers to perform part of the workload currently assigned to higher-skilled workers.
- Increases access to quality care
  - Captures clinical data
  - Facilitates basic triage at point of care
  - Enables automated and real-time reporting.
Managing mother-and-child health through CHW workflows
From 2013: mVacciNation

1. Caregivers are registered in the system and receive relevant health notifications and vaccination records via SMS.

2. Health Workers use smartphones at facilities and during outreach visits to register caregivers and vaccination events.

3. Facilities report stock levels of vaccination stock on a regular basis in real-time.

4. Supply and demand are matched through graphic, real-time maps.
Register children, vaccination visit and antigens received

The human cost of a stock out
Register fridge temperature and stock level, expiry, wastage
Stock Visibility in South Africa, Nigeria and Mozambique

Capturing stock levels at 1,000+ primary healthcare facilities

- **Stock Visibility**
  - Sub-District, District and Provincial Management has real-time oversight on Stock levels

- **Weekly and Monthly Stock Count**
  - Outlets use native application to submit stock levels, stock received and stock lost

- **Weekly and Monthly Reminders**
  - Automated notification to all facilities remind them to submit stock levels, stock received and stock lost

- **Stock Distribution**
  - Timely stock delivery to facilities
Cross-referencing data indicators for optimal accuracy

Issued = Stock Intake – (Stock On-hand + Wastage + Transferred)

* Or cross-referenced with aggregated or individual treatment indicators?
Set up individual user access and permissions through web

Load a specific product-set relevant to each pharmacy
System stakeholders access
Reporting via a web dashboard
Reporting via XLS, PDF and SMS
Making mHealth matter in Africa

Direct benefits of visibility into daily primary healthcare management

• Primary healthcare facility monitoring in real-time improves individual health-worker performance (Quality of Care).

• Ability to simultaneously monitor stock levels and communicate with patients will expand the demand for pharmaceutical products in a responsible fashion (Increased Adherence).

• Ability to cross-reference data points (eg patients treated vs stock usage) increases data quality (Quality of Data).

• Visibility on stock levels at dispensing level ensures better supply chain planning (Access to Care / Availability of Product).
  o Received, Issued, Transferred, Wasted, Expired, Available
Scaling mHealth in Africa

Securing the right tool-kit with which to make mobility matter in healthcare

- Know the environment and use the right channels to communicate with stakeholders.
  - Primary Health Facilities - Dedicated. Under-resourced.
  - District/Provincial Staff - Experts. Better resourced. Internet access.

- Ensure adequate life-cycle support for application development and iterative improvement.

- Offer remote access to secure hosting and data back-up in all footprint countries.

- Manage devices and data connectivity on behalf of clients – especially the public sector.

- Provide multi-tenant ICT infrastructure to ensure compliance with patient data regulations.

- Support external integration options to make optimal use of legacy systems.
Vodacom
Thank You
26 August 2014

to you
Tweets

- **Wolf369 @milhofx 5m**  How can we discuss pricing of medicines if more than 60% of the African population don't have access to healthcare? #imshealth #phama

- **Wolf369 @milhofx 33m**
  If Africa is a wholesales market, why should we consider changing the distribution models that have been tried and tested? #imshealth

- **Wolf369 @milhofx 1h**
  What are the major challenges you would experience in local manufacturing of pharma products in Africa? #imshealth

- **Brad Simpson @3PuttBrad 33m**
  John Voster #Vodacom / #MezzanineWare a business partner truly understanding opportunities in the Healthcare space #Pharmasupplychainafrica
Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
26th August 2014

#pharmasupplychainafrica
#imshealth @imshealth
The Opportunities of Africa’s Private Sector: Why Distribution is Critical to Crack the Kola

Daniel Rosen – Thought Leadership
August 26th 2014
Five key messages for multinational companies in Africa’s private sector

1. Africa’s growing middle class represents a strong and continuing growth opportunity for the pharmaceutical industry.

2. However, numerous barriers must be overcome to truly realise the potential of these markets. The legacy of inefficient and ineffective distribution systems is one of the key barriers.

3. Ineffective distribution can mean patients pay high prices for branded medicines, even when manufacturers have priced for affordability.

4. Optimising distribution can improve outcomes, increase product volumes and profitability without altering ex-manufacturer prices.

5. Companies need to understand the supply chain, including final price to patient, identify inefficiencies, barriers and opportunities for better distribution, and lastly put in place monitoring systems to ensure on-going understanding of distribution.
Africa’s past and forecast economic growth drives a $35Bn opportunity by 2018

Over the next 5 years, growth opportunities will continue to move away from traditional markets

2014-2018: Global Markets Dynamics

North America
Size: US$ 425-445Bn
CAGR ‘14-18’: 2-5%

Western Europe
Size: US$ 202-222Bn
CAGR ‘14-18’: 0-3%

Central & East Europe
Size: US$ 59-79Bn
CAGR ‘14-18’: 3-6%

Asia Pacific
Size: US$263-283Bn
CAGR ‘14-18’: 9-12%

Japan
Size: US$96-116Bn
CAGR ‘14-18’: 1-4%

Middle East
Size: US$ 14-34Bn
CAGR ‘14-18’: 6-9%

Latin America & Carrib.
Size: US$ 95-115Bn
CAGR ‘14-18’: 7-10%

Africa
Size: US$ 25-45Bn
CAGR ‘14-18’: 10-13%

Global Market
Size: $1,248-1,268Bn
CAGR ‘14-18’: 4-7 %
Excluding Northern and South Africa, 14 major SSA cities make up ~10% of the $35Bn opportunity in 2018

Pharmaceutical opportunity by city excluding Southern and Northern Africa

of total country pharma spend

- Lagos: $0.4Bn 19
- Dar es Salaam: $0.3Bn 38
- Khartoum: $0.3Bn 47
- Accra: $0.3Bn 30
- Luanda: $0.3Bn 65
- Abidjan: $0.2Bn 60
- Kumasi: $0.2Bn 20
- Harare: $0.2Bn 44
- Nairobi: $0.2Bn 27
- Kampala: $0.2Bn 27
- Port Harcourt: $0.2Bn 6
- Dakar: $0.1Bn 62
- Lusaka: $0.1Bn 41
- Addis Ababa: $0.1Bn 14

- These cities represent a high concentration of pharmaceutical spending
- Many are likely to grow in the future, with a growth rates higher on average than the top ten cities

Sources: IMS Thought Leadership Africa Forecasts January 2014. Canbeck city data September 2012
Greater wealth concentration has implications for portfolios as chronic medicine demand increases.

South Africa has yet to enact many of its NHIS reforms and while much effort has been made to target HIV/AIDS this does not show up in the retail numbers.

Pre-Arab spring, Egypt had not really prioritised healthcare provision compared to other North African markets.

In recent years FWA has not gone through any major transformations in the healthcare landscape that would impact the retail segment.


The Opportunities of Africa’s Private Sector: Why Distribution is Critical to Crack the Kola
Most chronic diseases fall outside of current NGO priorities and more heavily onto the private sector.

- As a chronic, non infectious, initially asymptomatic diseases, both diabetes and hypertension aren’t current priorities for NGO’s and Donors.
- This may change in the coming decade with rising chronic disease.

- Branded small molecule products have a proven track record in the African private sector.
- Little existing awareness or education on the disease.
- Cheap older generics present on most government EDL formularies, there may be an appetite for alternatives.
- Demonstrate value by ensuring greater product pull through and compliance.

Investment in increasing the levels of awareness and diagnosis can maximise the opportunity and provide ROI.
Success in the private sector is driven by the ability to overcome hurdles in the paths to market and patient success. Success in responding to these is linked to decentralised structure.

Path to market:
- Registration process
- Pricing & reimbursement
- Distribution
- Marketing & sales
- Post-launch pharmacovigilance

Variation in development exists between public and private markets

Path to patient:
- Patient Awareness
- Healthcare Access
- Diagnosis
- Treatment

Limited variation between public and private markets
Efficient distribution requires consolidation and competition

‘The public CMS systems in Africa have the size but operate as state distribution monopolies and very often are inefficient as a result’

‘You want enough distributors for competition but not so many that they fail to reach critical mass in economies of scale.’
Fragmented, uncompetitive distribution increases price to patient, reducing ability to pay and volumes

Looking at cost breakdown rarely is MSP over 50% of the price to patient

Source: Differential Pricing for Pharmaceuticals; *Hypothetical and not including sub-distribution
The Opportunities of Africa’s Private Sector: Why Distribution is Critical to Crack the Kola
Differential pricing alone isn’t enough to lower prices sufficiently as shown by the AMFm

- Despite the AMFm selling ACT therapies into seven test markets at just US$0.15, in all markets bar Ghana the price to patient significantly exceeded the US$0.45 expected retail price.

- Uganda’s ~30 importers of anti-malarials can add between 20-70% to the CIF (landed price).

- Single source (originator) products have the highest mark-ups and multisource (generic) products the lowest.

- Credit and foreign currency are the main cost outside the operational costs (logistics, storage etc...)

If demand is elastic, and it isn’t always, how can you shift the affordability curve?

Price demand elasticity is likely to be highest in the mid priced branded segment.

To effectively reduce the price to patient there must be measures to control final price

Ways to support retailer profitability

- **Lower input costs**
  - Differential pricing
  - Dual brand strategies
  - Price-volume deals
  - Fix wholesale exit prices

- **Grow volumes**
  - Improve availability
  - Invest in patient education
  - Create agreements with private insurers

- **Reduce overheads**
  - Improve credit conditions
  - Give stock management training
  - Creating buying groups of pharmacies
The ‘Right’ distribution model is critical; there isn’t a one size fits all markets solution

The most effective models minimise credit costs

Pre-Import Pre-Wholesale

Post-import Pre-Wholesale

NGO Piggy Back

Single Importer

Direct to Clinic Distribution

Importer order frequency
Number of manufacturers
Level and size of warehousing / stock holding
Number of licensed importers

Source: IMS analysis
The Opportunities of Africa’s Private Sector: Why Distribution is Critical to Crack the Kola

Can better data improve availability and reduce prices?

Enterprise challenge
- Lack of basic infrastructures across the developing world
- Zero/poor visibility of in-market medication supply chain across the developing world
- Medication stock-outs across health facilities are a regular occurrence and prevent patients from timely access to medicine

Vodafone solution
- A web-enabled communication automation solution
- Enables real-time capture, analysis and distribution of data on medication stock levels and expiration data

Help me operate more effectively

Stock Management

Benefits
- Real-time information about stock levels reduces stock-outs and improves supply chain efficiencies
- Monitoring expiry dates reduces wastage, eliminates out-of-date drugs from the system, and enables efficient stock redistribution
- Advance visibility of low stock levels allows for a more proactive distribution strategy
- Greater access to medicine, improved health outcomes
What does big pharma need to do to turn challenges into opportunities in African distribution?

If branded pharmaceuticals are highly price elastic, which will depend on which products you want to sell, what can a pharma company do to grow revenues?

Credit
Credit is the lifeblood of the distribution system. Changing distribution model to reduce credit requirements or to take greater risk is the best way to reduce price to patient.

Exclusivity agreements reduce uncertainty and risk but drive up prices. If you are serious about Africa these agreements may have to be reviewed. Influencing the retailer is also key to ensuring final price to patient goes down.

Lobbying
Realistically there is little pharma can do to intervene in the progression of public pharmaceutical provision beyond providing training and lobbying government ministers.

Model
There is still a need for multiplicity and greater visibility of products to ensure that supply doesn’t run out. Improved data/ordering can ensure availability. Holding product in market will also shorten the refill cycle.

Availability

The African environment for private pharmaceuticals is at a point of change... How well you adapt to change will determine your ability to retain market leadership and grow.

The Opportunities of Africa’s Private Sector: Why Distribution is Critical to Crack the Kola
153
There are a number of potential supporting activities to evaluate and address distribution challenges

How can pharmaceutical manufacturers address the African distribution challenge to improve patient access to modern medicines?

**Understand the distribution chain**
- What model do you currently employ in the market?
- What is the final price to patient?
- Where is the price increasing most, the importer, wholesaler or retailer?
- What is the level of affordability for your typical patient?

**Develop an appropriate strategy**
- Which distribution model best suits the market and key therapy areas?
- Which importer and wholesaler partners should be used?
- How can we control the retail mark up and final price to patient?

**Monitor continuously**
- How can we monitor the final price to patient moving forwards?
- How can wholesalers be incentivised according to final price and volume sales?
- How can we maintain our understanding of price demand elasticity in the market?

**Example activities**
- Conduct data inventory and local management/team discussions
- Price elasticity studies, including quant / qual research
- Profiling of innovative practices & competitor case studies
- Defining archetype models and assigning countries
- Development of realistic model given on the ground realities
- Partner screening & evaluation
- Pilot new approach
- Facilitated sharing of learning with other teams
- Ad hoc research to review prices in the market / sampling

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Panel discussion – Skhumbuzo Ngozwana as facilitator

Dan Rosen, Stephan Muller, John Vorster, Ernest Darkoh & Renia Coghlan
Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
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<tr>
<td>8:30-8:45</td>
<td>John Prinsloo (Country Manager, Middle Africa, IMS Health)</td>
<td>Welcome and Introduction to IMS Health in Africa</td>
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<tr>
<td>8:45-9:30</td>
<td>Skhumbuzo Ngozwana (MD, Metanoia Pharma Consulting)</td>
<td>Medicines Procurement in the Context of the PMPA (Pharmaceutical Manufacturing for Africa) - is Africa doing enough to promote Local Production: The Price versus Cost Debate.</td>
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<tr>
<td>9:30-10:15</td>
<td>Renia Coghlan (Executive Director, TESS Development Advisors)</td>
<td>&quot;African markets are still poorly understood&quot;: will more data, better data help address unmet medical need and expand market opportunities? A case study of malaria medicines.</td>
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<td>10:15-10:45</td>
<td>Tea break</td>
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<tr>
<td>10:45-11:30</td>
<td>Stephan Muller (Business Development Director, Quintiles)</td>
<td>The ‘Merck Model’ – Current best practice, but for how long: A critical review of the current best practice commercial pharmaceutical model in Sub Sahara Africa and how changes in the economic landscape in Africa will impact pharmaceutical distribution, marketing and sales over the next decade.</td>
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<tr>
<td>11:30-12:15</td>
<td>John Vorster (Chief Operating Officer, Mezzanine Ware (Pty Ltd, a subsidiary of Vodacom)</td>
<td>Mobility, visibility and access to quality healthcare.</td>
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<tr>
<td>12:30-14:00</td>
<td>Lunch and African coffee cupping</td>
<td>Radisson Gautrain and Bean There</td>
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<tr>
<td>14:00-14:45</td>
<td>Dr Ernest Darkoh (Founding partner of BroadReach Healthcare)</td>
<td>Getting Medicines to the Patient: Addressing the Last Mile.</td>
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<tr>
<td>14:45-15:30</td>
<td>Dan Rosen (Consultant in IMS Health's Thought Leadership team, IMS Health)</td>
<td>The Opportunities of Sub-Saharan Africa: Why Distribution is Critical to Crack the Kola.</td>
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<td>15:30-16:00</td>
<td>Tea break</td>
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<tr>
<td>16:00-17:30</td>
<td>Panel discussion – Skhumbuzo Ngozwana is facilitator, Dan Rosen, Stephan Muller, John Vorster, Ernest Darkoh &amp; Renia Coghlan</td>
<td>Distribution into Africa – Constraints, solutions, failures and successes. Skhumbuzo Ngozwana to facilitate</td>
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<td>17:30</td>
<td>Close</td>
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</tbody>
</table>
Pharmaceutical Supply Chain in Africa

Radisson Gautrain, Johannesburg
26th August 2014

#pharmasupplychainafrica
#imshealth @imshealth
Main Title, 24pt, Dark Blue

Subtitle, 20pt Cyan

- Main text starts at 20pt
- Font is verdana, Dark Blue
- **If chapter title, can be bolded for emphasis**
- Default bullets, default subtitle and default table color is darker Cyan, RGB code 46, 141, 158
- Default color for shapes is Dark Blue with white text
- IMS Health logo is 4cm on internal pages, no trademark. On the cover its 5.5cm with Intelligence Applied & trademark
- URLs are Dark Blue: [www.imshealth.com](http://www.imshealth.com)
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