Substandard, Spurious, Falsely labelled, Falsified and Counterfeit (SSFFC) Medical Products

Global Surveillance and Monitoring Project

World Health Organization
Agenda

Part 1. SSFFC medical products
Part 2. Surveillance and Monitoring project
Part 3. Pilot study findings
What are SSFFC?

There is no universally agreed definition of counterfeit medicine

- **Substandard**

  Medicines that are outside of specification, excludes genuine manufacturing errors, but may include intentional, reckless or negligent errors

- **Spurious**

  Terminology used in South Asia for products falsely labelled or intended to deceive

- **Falsely labelled**

  Includes genuine product with false packaging

- **Falsified**

  European terminology to include a deliberate intention to deceive

- **Counterfeit**

  Deliberate attempt to imitate a genuine product, focus on IPR
Case Study – Zidolam N - Kenya

- Report in September 2011 from Medecins Sans Frontieres to WHO of sub-standard product
- Product is WHO pre-qualified HIV Anti retroviral, Zidolam-N
- Initially two separate batches, one of which had badly degraded
- Dispensed to patients in Kenya, subsequently recalled
- Genuine product, diverted from Aid programme and repackaged in fake packaging to extend expiry date
Case Study - Avastin (Bevacizumab) - USA

- Product does not include any API
- Two incidents of similar product reported in February and April 2012
- Product reached patients through clinics and hospitals in the US
- Supply chain stretches across 3 continents so far, passing through a web of wholesalers, brokers and dealers
Case Study – 'Orange Medicine' -Vietnam

- Traditional medicine
- Sold as powder or crudely pressed tablets
- Used to restore appetite and for oral Thrush
- Available through unlicensed outlets and street vendors
- 135 serious ADR's, 4 fatalities so far
- Concentrated North west of Hanoi
- Manufacturing source unknown
- Samples contain high levels of lead contamination
Case Study – Plavix, Zyprexa, Casodex – UK
(Clopidogrel, Olanzapine, Bicalutamide)

2.1 million doses imported into the UK

700,000 doses consumed by patients

Supplied via pharmacies, hospitals and homes for the aged

All product contained significantly reduced amount of the correct API
Case Study – Glivec *(I*matinib) – Malta

- High value cancer medicine ($2000 per pack)
- Smuggled across Asia and Europe on route to the UK
- Intercepted in Malta
- Lab testing reveals 99% of API, but dissolution testing showed products failure to dissolve properly
Case study – Isotab – Pakistan
(Isosorbide 5 mononitrate)

- Almost 1000 Serious adverse reactions
- Over 200 Fatalities
- Medicine supplied by a Cardiac Hospital was contaminated with high levels of anti malarial medicine (Pyrimethamine)
- Investigation suggests it was caused by a manufacturing error, compounded by a cover up
Case Study – Coartem – West Africa
( Artemether /Lumefantrine)

- Zero active pharmaceutical ingredient
- WHO prequalified product
- AMFm programme medicine distributed by Global Fund
- Millions of doses seized by Customs
- Found in several W.African countries
- Subject of WHO Drug Alert May 2013
What is the true picture?

$75 billion black market?

100,000 deaths every year?

Customs seize Millions of medicines at border?

400 counterfeit Medicines factories shut down?

Hospitals flooded with counterfeits?

10 tons of counterfeit medicine seized?
Project Objectives

To establish –

- The scale of the issue
- The geographic extent
- The medicines affected
- The harm caused
- The value of the market
- Supply chain vulnerabilities
Project Rationale

- Facilitate operational cooperation
- Inform policy makers of accurate threat
- Enable evidence based decision making
- Provide reliable evidence, not anecdote
Challenges

- Difficult to detect SSFFC products
- Life threatening SSFFC's
- Sub potent SSFFC's
- Fragmented reporting of Incidents
- Engaging the right stakeholders
- Responding proportionately
What do we want to know?

- Imitation of genuine medicines
- Attempt to conceal place of manufacture
- Expiry date alteration
- Misdeclared medicines
- Diverted medicines
- Stolen medicines
- Smuggled medicines
- Falsified documentation
- Misleads concerning it's licensed status
- Imitation of safety/security features
Rapid Alert Form

- Reporting Person Details.
- Suspect Product Details.
- How was suspect product discovered.
- Product Analysis.
- Photographs.
- Communication.
- Dissemination.
- Investigation.
- Comments.
### A. Reporting Person
- **First Name**: Bordignon-Steph
- **Last Name**: Steves
- **Organisation**: WHO HQ
- **Address**: 20 Ave Appia, Geneva, Switzerland
- **Country**: Switzerland
- **Telephone number**: +41 22 791 14 34
- **Mobile/Cell number**: +41 79 244 00 03
- **Email address**: bordignon.steph@who.int
- **Fax number**: +41 22 791 47 30

### B. Suspect Product Details
- **Type of Product**: 
- **Registration, Product or Marketing Authorisation number shown on suspect product**: 
- **Active Ingredient (1)**: 
- **Active Ingredient (2)**: 
- **Main Intended medical use**: 
- **Other uses**: 
- **Marketing Authorisation Holder**: 
- **Manufacturer**: 
- **Dosage Form**: 
- **Container Type**: 
- **Dosage Strength**: 
- **Strength/Dosage Unit of Measure**: 
- **Batch/Lot number, if known**: 
- **Expiry Date, if known**: 
- **Date of Manufacture**: 

### D. Product Analysis
- **Laboratory Analysis undertaken?**: 
- **Method of distribution to public**: 
- **Result of Analysis - Dose**: 
- **Result of Analysis - Packaging**: 
- **Is Laboratory Report attached?**: 

### E. Photographs
- **Are photographs of the suspect product available?**: 

**IMPORTANT** PLEASE ATTACH PHOTOGRAPHS OF SUSPECT PRODUCT TO THE RAPID ALERT

### F. Impact on Public Health
- **Unregulated Supply-Chain?**: 
- **If available within the supply-chain, at what level?**: 
- **If available via the Internet, please record the website**: 
- **Laboratory Contact**: 
- **Name of Laboratory**: 
- **Telephone number**: 
- **Fax Number**: 
- **Email address**: 

**IMPORTANT** PLEASE ATTACH LABORATORY REPORT IF AVAILABLE
**B. Suspect Product Details**

<table>
<thead>
<tr>
<th>Field</th>
<th>Options</th>
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</thead>
<tbody>
<tr>
<td>Suspect Product Name(s)</td>
<td></td>
</tr>
<tr>
<td>Type of Product &lt;please choose option&gt;</td>
<td>Innovator product, Generic, Vaccine, Blood Product, Diagnostic, Herbal Medicine, Traditional Medicine, Other</td>
</tr>
<tr>
<td>Registration, Product or Marketing Authorisation number shown on suspect product</td>
<td></td>
</tr>
<tr>
<td>Active Ingredient (1)</td>
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<tr>
<td>Main Intended medical use</td>
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**What is the primary use for which the medicine is most commonly used?**

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**F. Impact on Public Health**

<table>
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<tr>
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<tbody>
<tr>
<td>Have adverse reactions been reported? &lt;please choose option&gt;</td>
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<tr>
<td>Severity of adverse reactions &lt;please choose option&gt;</td>
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<tr>
<td>Symptoms</td>
<td></td>
</tr>
<tr>
<td>Estimated number of patients adversely affected</td>
<td></td>
</tr>
<tr>
<td>Estimated number of patients at risk</td>
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SSFFC Database

- Incident details
- Risk Assessment
- Reporting Person Details
- Suspect Product Details
- How was product discovered
- Investigation
- Internet Distribution
- Payment Routes
- Comments
- Notes and articles
- Closure and Classification
Establishing harm to Public Health

- What other mechanisms exist that could help identify suspected incidents?
- Some cases have clearly identifiable levels of harm
- Most cases may amount to a lack of efficacy
- How can pharmacovigilance data contribute?
- What other methods could be used to measure the effect of SSFFC products on public health?
Pharmacovigilance

- Developing a link
- Understanding the data
- Partnership working
- Reporting sources
- Guiding market surveillance
What will Countries get back?

- Analysis and Reporting - Geographic
  Country, Regional and Global Level
- Analysis and Reporting – Therapeutic Category
  e.g. Malaria, HIV, TB, Antibiotics, Cancer, Cardiac
- Trend Reporting
  e.g. Supply routes, laboratory analysis, supply chain and procurement vulnerabilities
Next Steps

- Open the project to more Countries in the Western Pacific and European regions
- Roll out the Project to the African Region mid 2013
- Include participation of Pharmacovigilance Units in workshops
- Plan to roll out within the Eastern Mediterranean region at the end of 2013
- Disseminate reports to Countries and Regions concerning the identified and validated trends, threats and vulnerabilities
Thank you

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