Improving asthma management in the Asia-Pacific region

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Asthma control in the Asia-Pacific region: The Asthma Insights and Reality in Asia-Pacific Study


Hospital admissions and emergency visits in the past year according to asthma severity

The Asthma Insights and Reality in Asia-Pacific Study

What about systemic steroid?

Asthma medication use according to asthma severity

Essential components in the management of asthma

- Political commitment in improving the management of asthma
- Diagnosis of asthma by a simple tool
- Standard case management by essential anti-inflammatory medicines (inhaled corticosteroids)
- Uninterrupted supply of essential asthma medicines
- Recording and reporting to assess outcome of management
Political commitment in improving the management of asthma

- Publish national asthma guidelines

- Ensure accessibility of asthma care
  - Strengthen capacity in the diagnosis and management of asthma at primary health care and first-level referral facilities

- Ensure affordability of essential asthma medicines
  - Include inhaled corticosteroids in essential medicines list

Affordability of asthma medicines

Moderate persistent asthma, one year in 1998

- Algeria
- Vietnam
- Syria
- Guinea
- Mali
- Ivory Coast
- Burkina Faso
- Turkey

US Dollars

Drug cost  Nurse’s salary

The Union Asthma pilot project
*Benin, China, Sudan*

- Common findings:
  - Patients usually came with asthma attack, with a high frequency of unplanned visits (emergency room and hospitalisation)
  - Insufficient capacity in the diagnosis of asthma
  - Long term asthma management using inhaled corticosteroids was lacking

Union Asthma Pilot project

- National adaptation of The Union asthma guide
- Situation analysis
- Pre-intervention study
- Training
- Intervention: standard case management of asthma
The Union Asthma Guide

• Good essential practice adapted from GINA guidelines
• Objective: quality and cost-effective asthma care for the majority of asthma patients
• Organisation of care in general services
• Standardised diagnosis with simple tools
• Standardised treatment with essential medicines
• Evaluation to assure quality of care

4 STEP APPROACH TO ASTHMA with HFA inhalers (CFC-free)
Diagnosis and treatment based on symptoms and lung function

- HFA-Beclometasone 100 µg *
  - Severe: 8 puffs / day
  - Moderate: 4 puffs / day
  - Mild: 2 puffs / day
  - Intermittent: 0 puff / day

* And HFA-Salbutamol 100 µg as needed

With The Union’s technical package for asthma management
Asthma in China

- The prevalence of asthma varies widely among settings with an estimated mean prevalence of 2.1%
- Has one of the highest asthma case fatality ratios in the world
- To date, inhaled corticosteroids have not been included on the essential medicines list.

Asthma: a hidden disease in rural China

- Huaiyuan county, Anhui,
  - 1.3 million inhabitants, 19 townships
- Situation analysis: Huaiyuan County Hospital and 5 township health centers
  - Asthma was never diagnosed.
  - Inhaled corticosteroids were never available prior to the project.

Kan X, et al, manuscript in preparation
Asthma: a hidden disease in rural China

- Patients presenting with cough and difficult breathing
  - diagnosed with chronic bronchitis and
  - treated with a combination of antibiotics, systemic steroids, xanthine derivatives, and/or oral beta-2 agonists.

- Inhaled salbutamol: available at county general hospital.
- Prednisolone
  - widely available at village level at a very low price (100 tablets for less than USD$ 0.5)
  - frequently used by patients who had shortness of breath.

Challenges and Solution

- Challenge: High cost of inhaled corticosteroids
  - Include asthma in chronic disease program

- Challenge: High proportion of asthma patients stop treatment
  - Strengthen patient education
  - Case holding by “preventive” sector
Results under routine conditions*

Evaluation of quality of care

* Outcome after one year: Union Guide in Algeria, Morocco, Syria and Vietnam

### Mission

The Union created the ADF:

- to provide affordable access to quality assured, essential asthma medicines for low- and middle-income countries
- to promote a quality improvement package for the diagnosis, treatment and management of asthma
ADF Strategy

- Promote use of a quality improvement package for the diagnosis, treatment and management of asthma in the general health services
- Use pooled procurement strategies to lower prices of medicines
- Target populations with large numbers of patients unable to afford asthma medicines

How does the ADF work?

- ADF organises qualification of manufacturers and products, since asthma inhalers are not part of the WHO Prequalification Programme
- ADF establishes contracts with selected manufacturers for qualified products and proposes these products to countries, organisations, programmes
- Countries purchase generics at affordable prices
- ADF provides training materials and an information system

Additional services available at The Union:
- Training courses and technical assistance
ADF Products

Main products:
• Beclometasone 100 µg/puff, 200 doses, HFA inhaler*
• Salbutamol 100 µg/puff, 200 doses, HFA inhaler*

Alternative corticosteroids:
• Budesonide 200 µg/puff, 200 doses, HFA inhaler*
• Fluticasone 125 µg/puff, 120 doses, HFA inhaler*

*On the 17th WHO Essential Medicines List March 2011

ADF Product Prices for 2011

Additional costs: transport, insurance, preshipment inspection and 10% fees for ADF services

<table>
<thead>
<tr>
<th>Product</th>
<th>Primary Supplier (Country)</th>
<th>Price per unit FCA (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beclometasone 100µg/puff 200 doses, HFA inhaler</td>
<td>Beximco (Bangladesh)</td>
<td>1.28</td>
</tr>
<tr>
<td>Salbutamol 100 µg/puff 200 doses, HFA inhaler</td>
<td>GSK Export (UK)</td>
<td>1.08</td>
</tr>
<tr>
<td>Budesonide 200µg/puff 200 doses, HFA inhaler</td>
<td>Cipla/Medispray (India)</td>
<td>2.60</td>
</tr>
<tr>
<td>Fluticasone 125µg/puff 120 doses, HFA inhaler</td>
<td>Cipla/Goa (India)</td>
<td>2.50</td>
</tr>
</tbody>
</table>
Client Criteria

The client must agree to:

• Take the responsibility for the importation of medicines into the recipient country
• Sell the medicines with a minimal mark-up or to provide them free of charge to patients
• Not re-export or resell these medicines
• Make a full payment in advance to ADF (by bank transfer or letter of credit from a bank)

Monitoring Requirements

The client is required to:

• use the products supplied according to international guidelines for diagnosis and treatment
• identify an individual responsible for providing monitoring reports to the ADF
• submit routine monitoring reports, as specified in the Technical Agreement with the ADF
Minimum Requirements for ADF monitoring reports

• Declare which classification is used for symptoms (intermittent, mild, moderate, severe or uncontrolled, partly controlled, controlled).
• For any patient treated with corticosteroids supplied through ADF, provide data collected at initial visit and at yearly monitoring visit
  • Lung function evaluation (in % of predicted PEF, using peakflow meter or spirometry)
  • Nb of puffs of corticosteroid prescribed
  • Number of emergency visits and hospitalisations

ADF Clients

Countries that have already received their orders
• Pilot Projects in Benin (NTP), El Salvador (NTP), Sudan (Epi-Lab)
• Kenya (KAPTLD)
• Burundi (NTP)

Current orders
• Vietnam (CHDI)
• Guinea Conakry (NTP)
• Burkina Faso (NTP)
Financing mechanisms for asthma medicines

Various options:

- **The Global Fund**: through the Practical Approach to Lung Health (PAL) component of TB grants
  eg: Burundi, Guinea Conakry and Burkina Faso
- **Governemental budget line**
  eg: El Salvador
- **Other donors**: budget line to purchase asthma medicines (eg: Kenya, Vietnam) and sometimes to initiate a revolving fund (eg: Benin, Sudan)

Revolving Fund: a sustainable solution for asthma

- One of the methods for financing asthma medicines is a **Revolving Drug Fund (RDF)** in which, after an initial capital investment, medicine supplies are replenished with monies collected from the sales of medicines.
  - The initial capital may be a donation of asthma medicines paid by donors and purchased through ADF
  - Medicines are sold to patients in health structures at a price including the cost of the medicines delivered in country + a small additional margin (to cover local charges and increase the revolving fund progressively)
  - The money is then collected at central level and used again to place a new order to ADF
Examples of prices in Benin, El Salvador, Kenya and Sudan

<table>
<thead>
<tr>
<th>Products</th>
<th>Unit Price for the NTP in Benin</th>
<th>Unit Price for the patient in Benin*</th>
<th>Unit Price for the MoH in El Salvador</th>
<th>Unit Price for KAPTLD in Kenya</th>
<th>Unit Price for the patient in Kenya**</th>
<th>Unit Price for Epi-Lab in Sudan</th>
<th>Unit Price for patient in Sudan***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beclometasone 100µg/puff 200 doses, HFA inhaler</td>
<td>1.90€</td>
<td>2.13€</td>
<td>1.59€</td>
<td>For free</td>
<td>1.60€</td>
<td>1.84€</td>
<td>1.63€</td>
</tr>
<tr>
<td>Salbutamol 100 µg/puff 200 doses, HFA inhaler</td>
<td>1.50€</td>
<td>1.68€</td>
<td>1.23€</td>
<td>For free</td>
<td>1.25€</td>
<td>1.44€</td>
<td>-</td>
</tr>
</tbody>
</table>

*12% margin applied in Benin  
**15% margin applied by KAPTLD  
***18% margin applied for Sudan

Reduction in yearly cost for a case of severe asthma when purchasing through ADF (in euros)

<table>
<thead>
<tr>
<th>Year</th>
<th>BENIN</th>
<th>EL SALVADOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>79</td>
<td>83</td>
</tr>
<tr>
<td>2010</td>
<td>48</td>
<td>35</td>
</tr>
</tbody>
</table>

In 2009, through national procurement  
In 2010, through ADF procurement
Contact

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