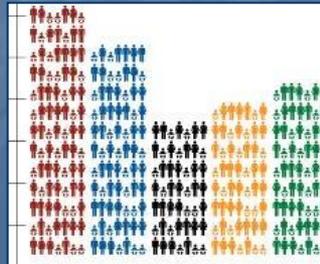


# Medicine prices, availability, affordability and component prices

**Margaret Ewen**

Health Action International, The Netherlands  
Coordinator WHO/HAI Project on Medicine Prices & Availability



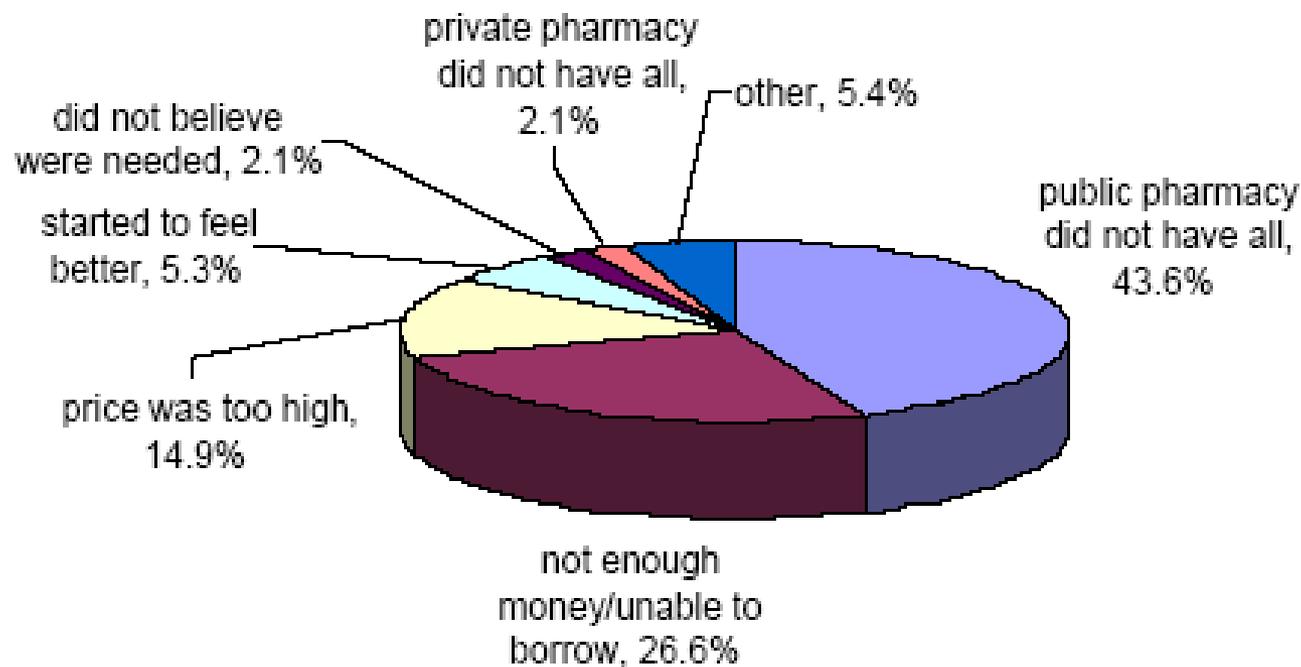
# Wider problems of medicine prices

- Medicines have variable and often high prices; unaffordable and unavailable for large sectors of the global population; major burden on government budgets
- Burden falls directly on most patients in developing countries –until now little known about patient prices and how they are set
- Trade agreements can severely affect the price and availability of medicines
- For medicines to be more affordable, appropriate and well-informed pricing policies are needed; many countries have no such policies
- Prices of medicines are well above production costs so great scope for reductions

# Uganda pharmaceutical survey

## Sept 2002

### Primary reason for not obtaining all of the prescribed medicines

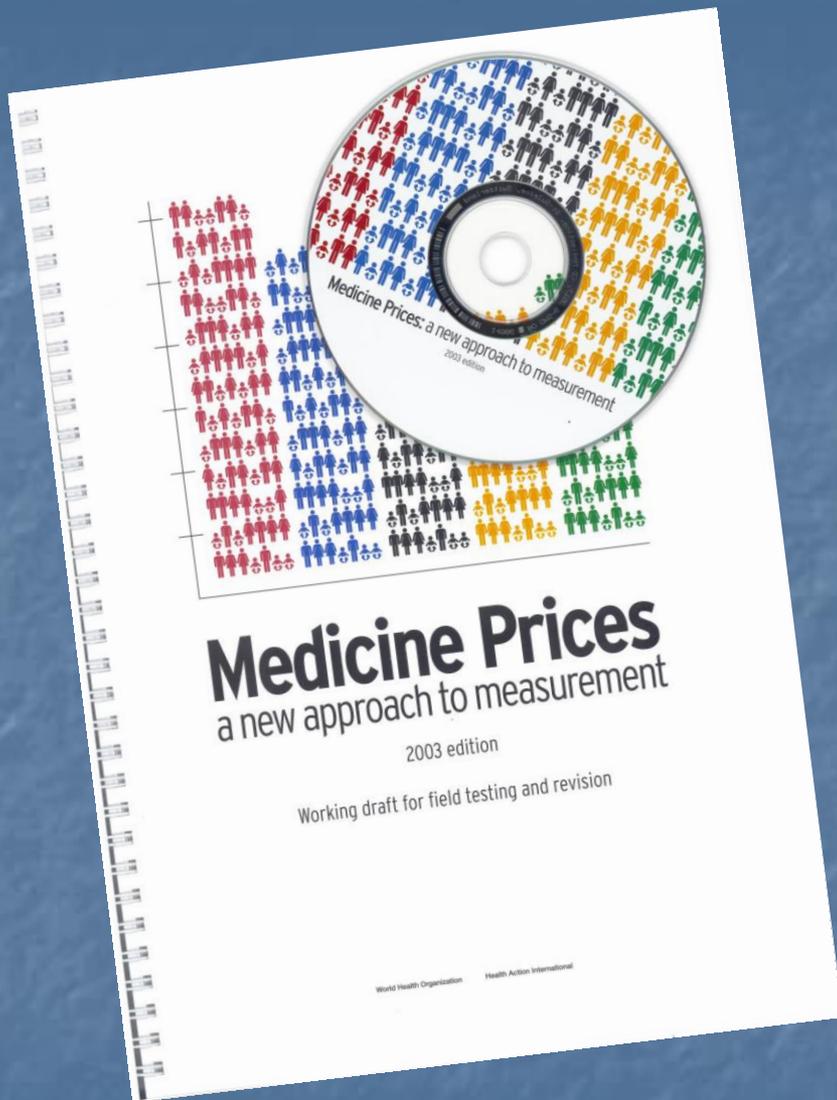


# WHO/HAI Project on Medicine Prices & Availability

## *improve the availability of affordable essential medicines*

- Develop a reliable methodology for collecting and analysing price and availability data across healthcare sectors in a country
- Price transparency; survey data on a freely accessible web site allowing international comparisons
- Advocate for appropriate pricing policies and monitor their impact

# Survey tool



Launched at the World Health Assembly in 2003

Measures:

- patient prices
- public sector procurement prices
- availability
- treatment affordability
- price components in the supply chain

About 50 surveys to date in all regions

Monitoring tool in development

Data & information on HAI website: [www.haiweb.org/medicineprices](http://www.haiweb.org/medicineprices)

# Standardised Methodology

- Systematic sampling: min 6 regions, 5 pharmacies per sector per region
- Public sector facilities, private retail pharmacies and 'other' sectors (e.g. dispensing doctors)
- Prices of 30 pre-selected commonly used medicines – 14 global + 16 regional
- Predetermined dose form & strength, & recommended pack size
- Supplementary medicines highly encouraged, adapted to local needs
- Prices of originator brand and lowest price generic are collected, referenced to international benchmark (MSH)
- Availability of medicine on day of survey
- Affordability - number of days wages for lowest paid unskilled government worker to purchase treatment
- All components of price from manufacturer to retailer identified

## Surveys to date

**Middle East:** Lebanon, Jordan, Kuwait, Syria, Sudan, UAE, Yemen

**Francophone Africa:** Tunisia, Morocco, Algeria, Mali, Chad, Senegal, Niger, Cameroon

**Anglophone Africa:** Uganda, South Africa, Tanzania, Kenya, Ethiopia, Zimbabwe, Nigeria, Ghana

**Asia/Pacific:** Mongolia, China: Shandong & Shanghai, Philippines, Malaysia, Pakistan, Fiji, Indonesia, Vietnam, Cook Islands

**India:** West Bengal, Haryana, Karnataka, Maharashtra (2), Chennai, Rajasthan

**Central Asia:** Kazakhstan, Tajikistan, Kyrgyzstan, Uzbekistan

**Europe:** Bosnia Herzegovina, Kosovo

**South America:** Peru

In progress/planned: Oman, Brazil, Zambia, Mauritius, Libya, Iran, Ukraine

# **Medicine price, availability and affordability survey in Kyrgyzstan, 2005**

**Survey Manager:  
Saliya Karymbaeva  
Drug Information Centre  
Bishkek**

# Methodology

- Number of medicines surveyed: **28**  
Core 19      Supplementary 9
- Type: originator brand, most sold generic, lowest priced generic
- Number of regions surveyed: 6  
**Bishkek** and 5 oblasts:  
**Chui, Naryn, Osh, Jalal-Abad, and Batken**
- Total number of facilities sampled:

<i>Sectors</i>	<i>Number</i>
<b>Public sector</b> <i>(procurement prices)</i>	<b>Tender prices</b> from <b>2 wholesalers</b>
<b>Private retail pharmacies</b> <i>(patient prices)</i>	<b>30</b> <b>(5 per region)</b>

# Medicines surveyed

## Core list

aciclovir 200mg tab, amitriptyline 25mg tab, amoxicillin 250mg tab,, atenolol 50mg tab, beclometasone 50mcg/dose inhaler, captopril 25mg tab, carbamazepine 200mg tab, ceftriaxone 1g inj, ciprofloxacin 500mg tab, co-trimoxazole paed susp, tab, diclofenac 25mg tab, fluoxetine 25mg tab, glibenclamide 5mg tab, hydrochlorothiazide 25mg tab, nifedipine retard 20mg tab, omeprazole 20mg tab, phenytoin 100mg tab, ranitidine 150mg tab, salbutamol 0.1mg/dose inhaler

## Supplementary list

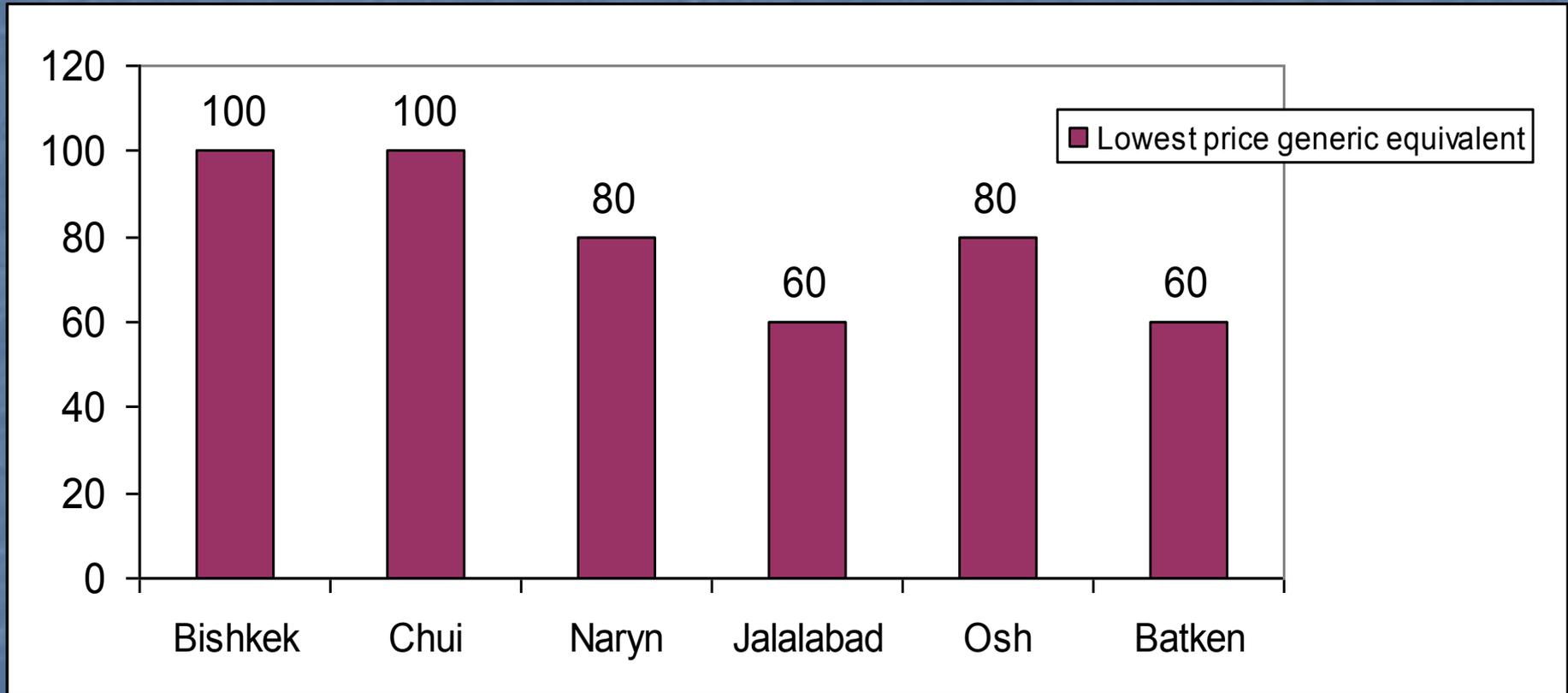
ampicillin 250mg tab, clonazepam 2mg tab, diazepam 10mg, fluconazole 150mg tab, furosemide 40mg tab, gentamicin 40mg/ml inj, mebendazole 100mg tab, metronidazole 250mg tab, verapamil 40mg tab

# Availability

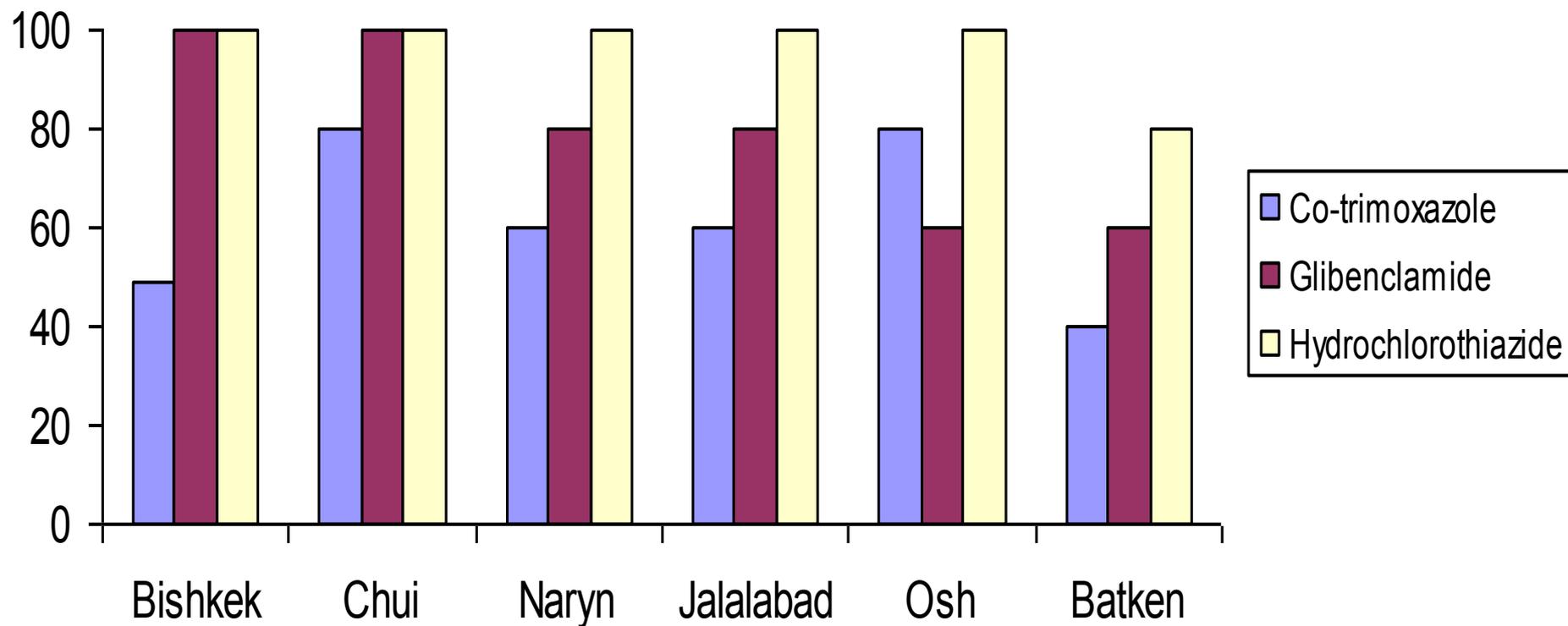
	Private pharmacies	
	Originator Brands	Generics
Median availability	0%	80%

Availability	Medicine
No pharmacies	beclometasone inhaler
1 – 24 %	ceftriaxone inj, clonazepam, fluoxetine, mebendazole, phenytoin
25-49 %	ciprofloxacin, fluconazole
50 – 79%	aciclovir, amitriptyline, carbamazepine, cotrimoxazole susp, diazepam
80% and over	amoxicillin, ampicillin, atenolol, captopril, diclofenac, furosemide, gentamicin inj., glibenclamide, hydrochlorothiazide, metronidazole, nifedipine retard, omeprazole, ranitidine, salbutamol inhaler, verapamil

# Median % availability of generics in private pharmacies per region



# Examples of % availability of generics in private pharmacies across regions

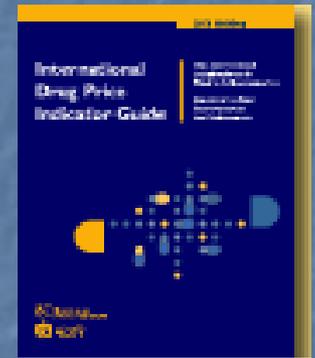


## Median price ratio

- MPR = ratio of median unit price across facilities surveyed by international reference price
- MPR only calculated if medicine found in at least 4 facilities

## International reference price

- external standard for evaluation of local prices
- From: Management Sciences for Health 'International Drug Price Indicator Guide'
- web-based, prices relatively stable, updated annually



# Government procurement prices

	Number of medicines in the 2 tenders (n=28)	Median MPR	25%ile MPR	75%ile MPR
Originator brand	1	<b>59.47</b>		
Lowest price generic equivalent	17	<b>1.29</b>	1.03	2.04

# Examples of high govt. procurement prices

Medicine (generics)	Median Price Ratio
Amitriptyline 25mg tab	3.26
Diclofenac 25mg tab	2.71
Hydrochlorothiazide 25mg tab	4.88
Metronidazole 250mg tab	2.04
Carbamazepine 200mg tab	2.06

# Patient prices in private retail pharmacies

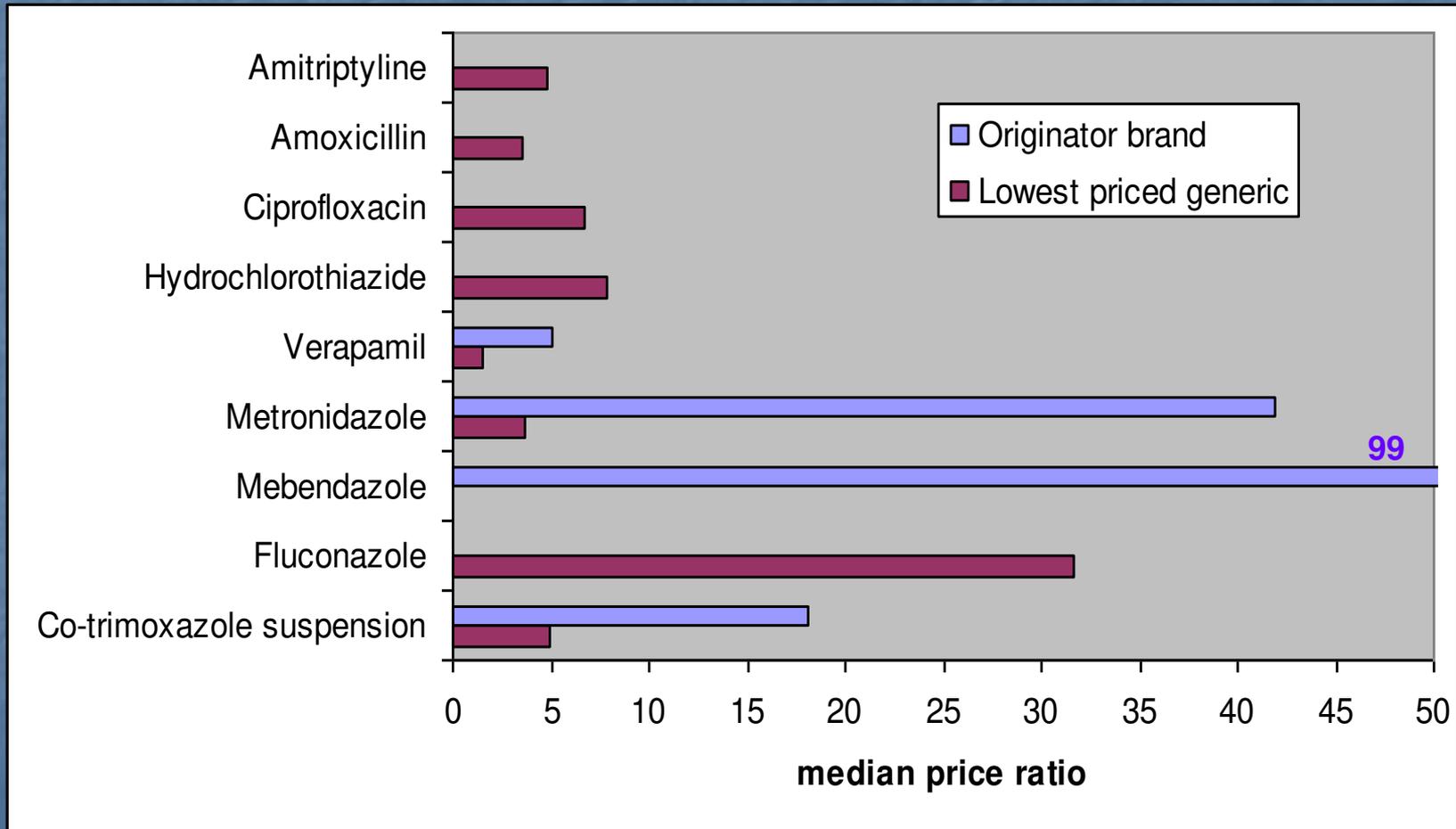
	Number of medicines found in 4+ pharm.	Median MPR	25%ile	75%ile
Originator brand	7	<b>5.42</b>	5.08	29.95
Lowest priced generic equivalent	23	<b>2.56</b>	1.63	4.29

**Paired analysis** (5 meds) : Originator Brand Med MPR **5.42**

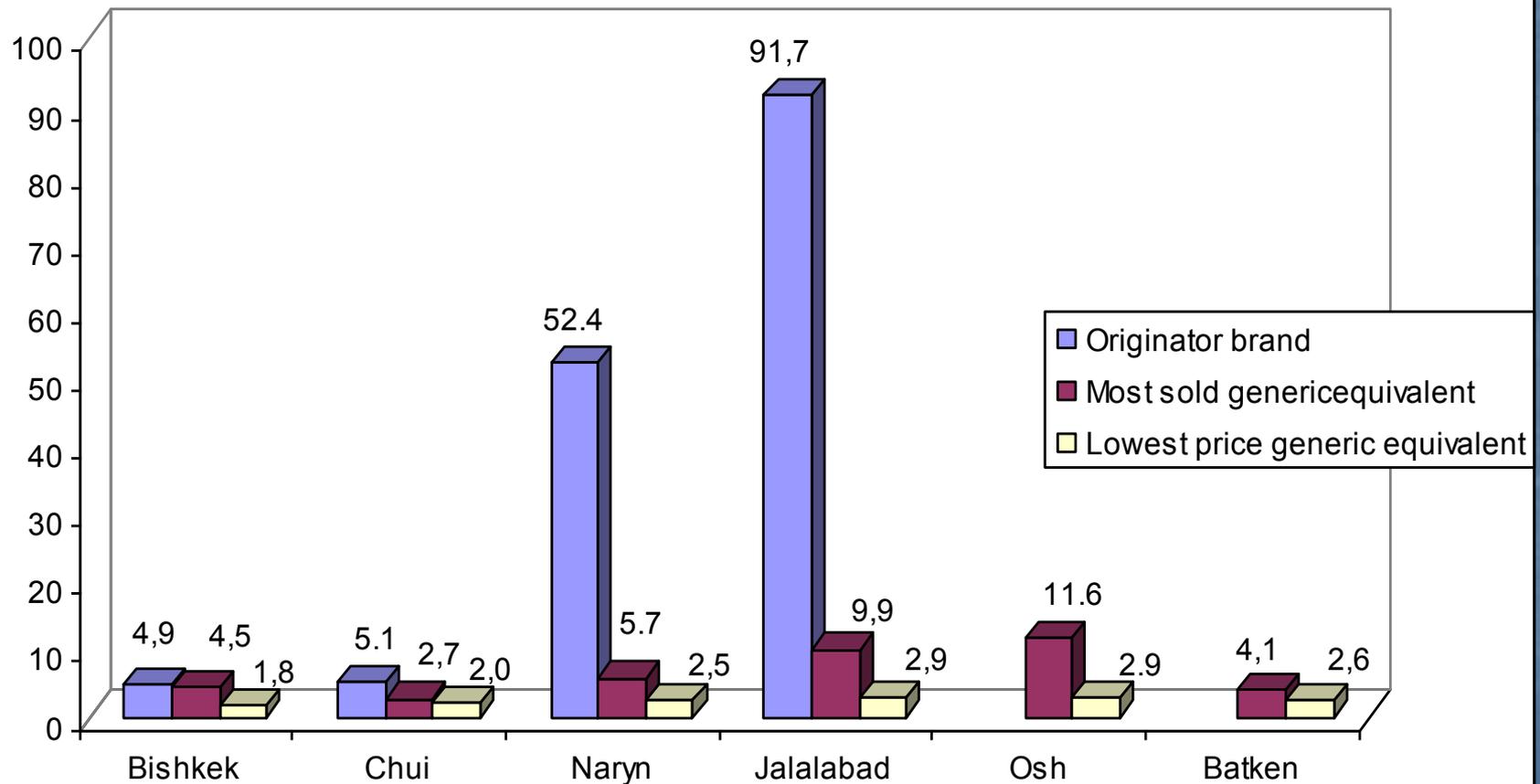
Lowest Priced Generic Med MPR **1.52**

➤ Originator Brands over 3x the price of cheapest generic equivalents

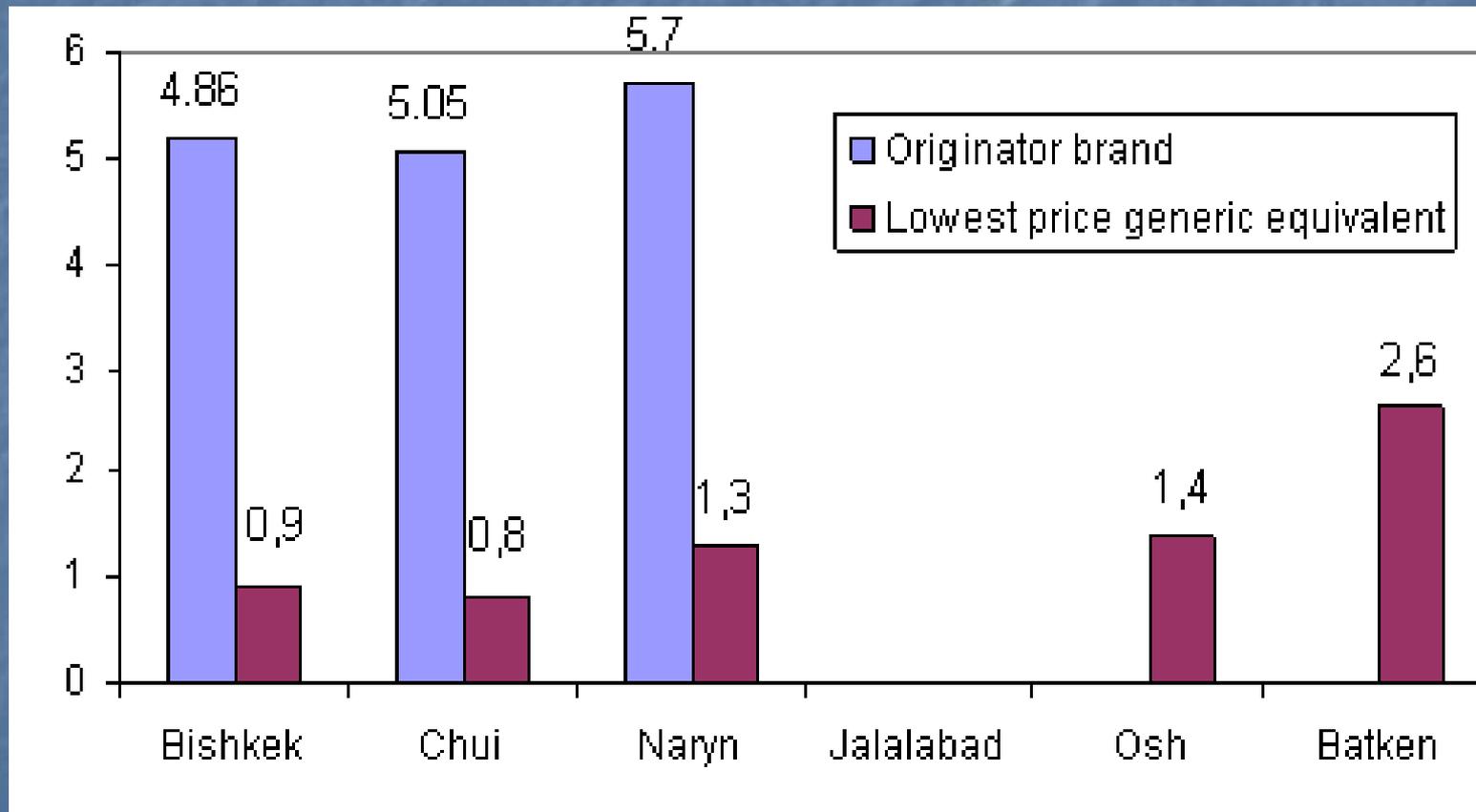
# Examples of patient prices in private retail pharmacies



# Patient prices, private sector, by region



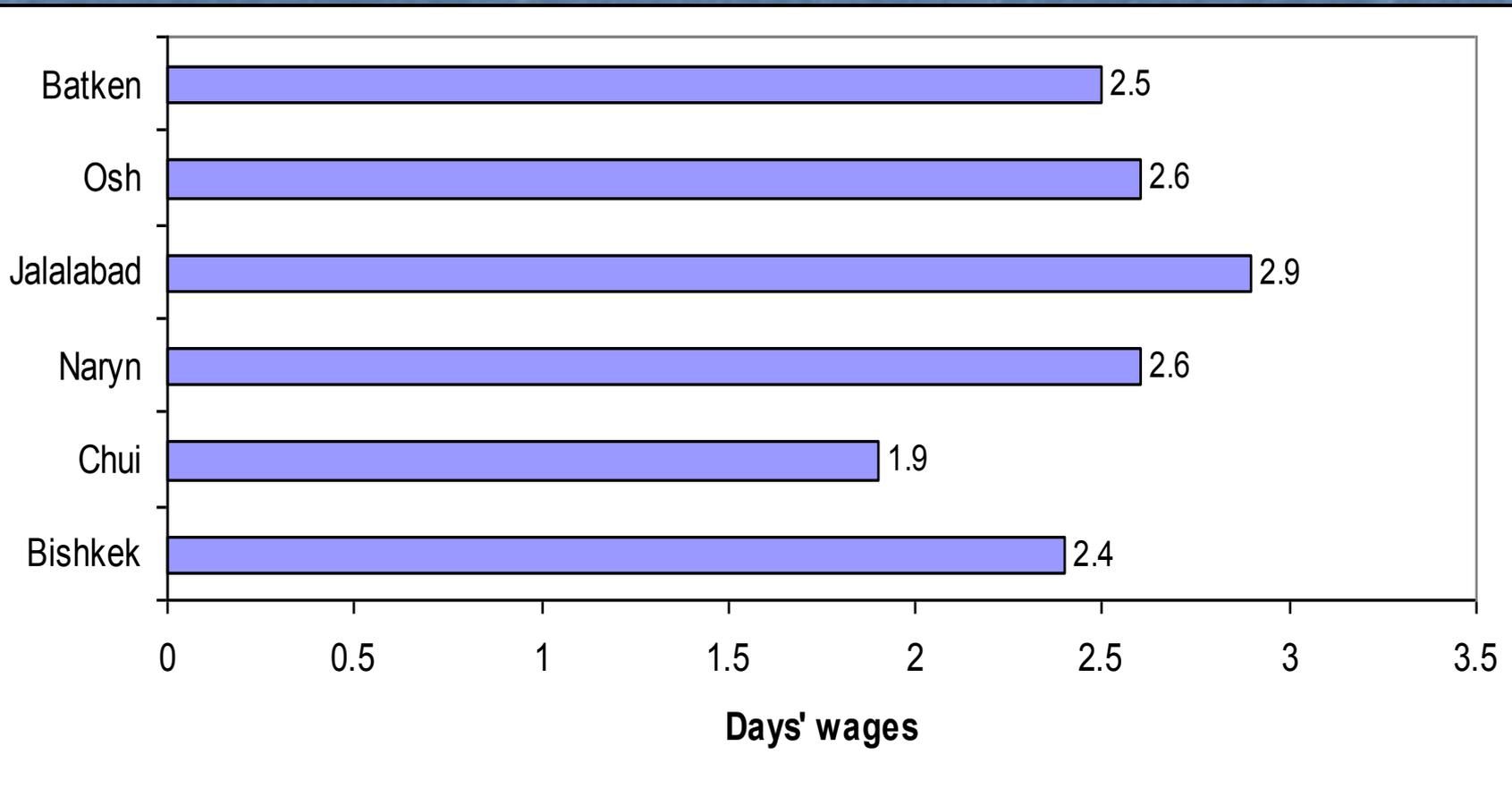
# Patient price, captopril 25mg tab, private sector by region



# Affordability of treatments for lowest paid unskilled gov't worker purchasing medicines in the private sector

Daily wage = 20 som		<b>Days' wages</b>
<b>Hypertension: Hydrochlorothiazide 25 mg x 1 for 30 days</b>	Originator brand	
	Lowest price generic	<b>1.9</b>
<b>Hypertension: Captopril 25mg x 2 for 30 days</b>	Originator brand	<b>17.6</b>
	Lowest price generic	<b>4.5</b>
<b>Diabetes: Glibenclamide 5mg x 2 for 30 days</b>	Originator brand	
	Lowest price generic	<b>2.1</b>
<b>Asthma: Salbutamol inhaer</b>	Originator brand	<b>7.3</b>
	Lowest price generic	<b>4.5</b>
<b>Pneumonia: Amoxicillin 250 mg x 3 for 7 days</b>	Originator brand	
	Lowest price generic	<b>2.6</b>
<b>Ulcer: Ranitidine 150mg x 1 for 30 days</b>	Originator brand	
	Lowest price generic	<b>5.1</b>
<b>Ulcer: Omeprazole 20 mg x 2 for 30 days</b>	Originator brand	
	Lowest price generic	<b>11.5</b>

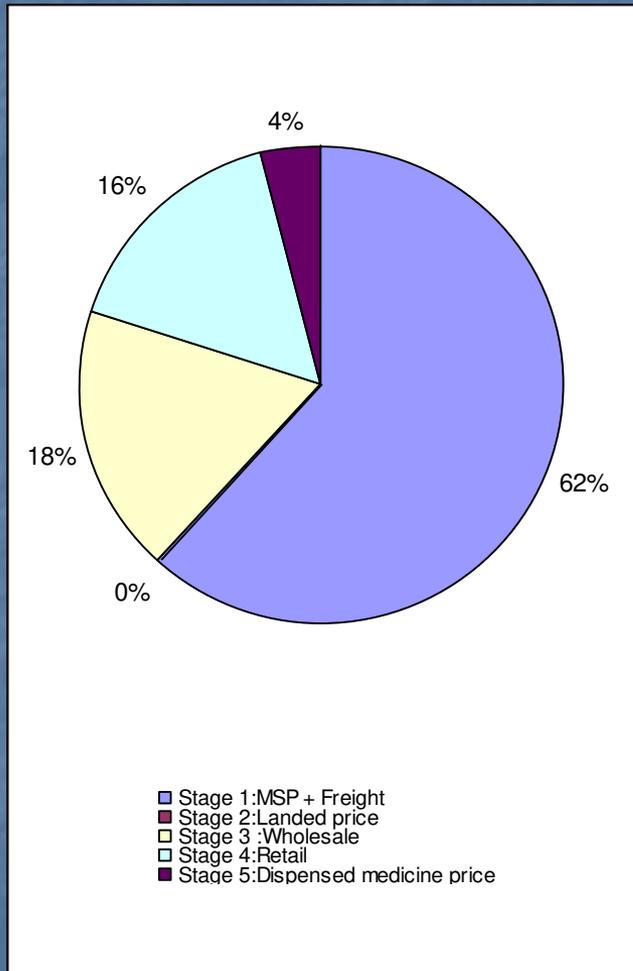
# Affordability of lowest priced generic amoxicillin to treat respiratory infection, private sector



# Price components: hypothetical, imported, private sector

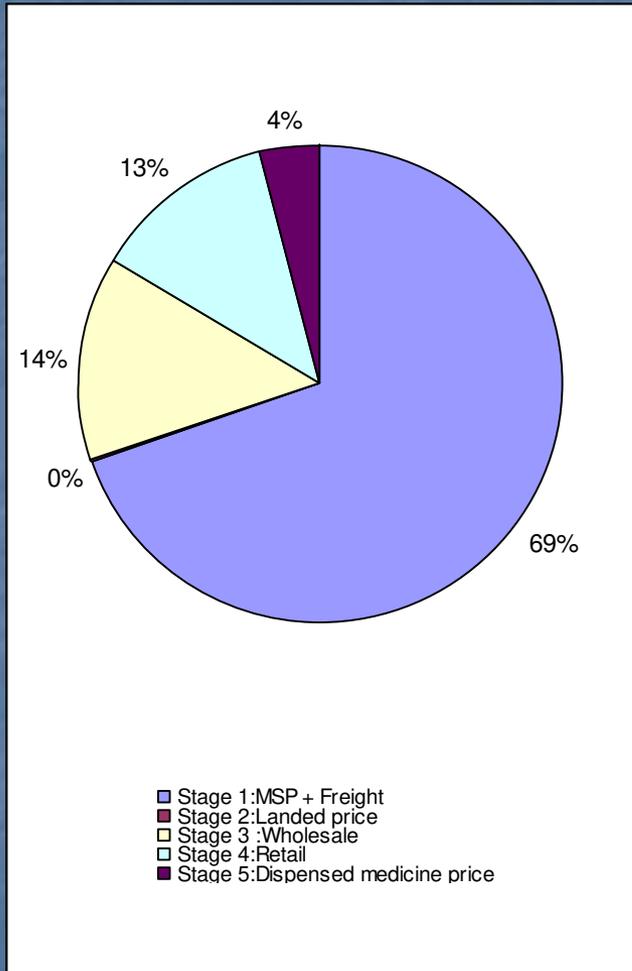
Component	Originator brand		Generic equivalent	
	Charge	Cumulative % mark-up	Charge	Cumulative % mark-up
Import price		0%		0%
Import duty	0.15%	0.15%	0.15%	0.15%
Wholesale mark-up (average)	20%	20.18%	30%	30.20%
Retail mark-up (average)	10%	32.20%	20%	56.23%
Retail sales tax	4%	37.49%	4%	62.48%

# Percentage contribution of components to final patient price, generic atenolol 50mg tabs, imported



Component	Amount of charge	Price in soms	Cumulative % mark-up
CIF		29.52	0.00%
Import tax	0.15%	29.56	0.15%
Wholesale mark-up	30%	38.43	30.20%
Retail mark-up	20%	46.12	56.23%
Retail tax	4%	47.97	62.48%

# Percentage contribution of components to final patient price, originator brand captopril 25mg tabs, imported



Component	Amount of charge	Price in <u>soms</u>	Cumulative % mark-up
CFI		120.54	0.00%
Import tax	0.15%	120.72	0.15%
Wholesale mark-up	20%	144.86	20.18%
Retail mark-up	15%	166.59	38.21%
Retail tax	4%	173.26	43.74%

# Major Findings

- Procurement prices not freely accessible on a website, overall prices were generally reasonable although they were high for some medicines
- Overall patient prices in the private sector were reasonable for lowest priced generics compared to international reference prices but some individual prices were very high
- Originator brands not common: 3-4x more expensive than lowest priced generics
- Availability of generics in private sector reasonable
- Medicines are not affordable (even when cheapest generics purchased)
- Manufacturer's selling price was major component cost; sales tax and import tax apply to medicines

# Recommendations in the report

- Investigation needed into causes of high prices
- Extended study needed on regional variations in prices and availability
- In-depth component study needed with view to regulating mark-ups
- Abolish taxes on essential medicines
- Pro-generics policies and programmes including education for physicians, pharmacists and the public about economic benefits of generics
- Regularly monitor prices, availability and affordability and publish results (especially to patients)
- Establish public outlets with lower prices in rural and remote regions
- Centralise public purchasing (including Health Insurance Fund)