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# Main highlights of Pharmaceutical Price and availability in Georgia 2009 - 2016

June 22, 2016



# STRUCTURE OF THE REPORT

TERM DEFINITION

GOALS AND OBJECTIVES, TERM DEFINITIONS

MAIN FINDINGS, CONCLUSIONS AND POLICY  
RECOMMENDATIONS

SUMMARY OF SURVEY RESULTS

SURVEY ANALYSIS (GRAPHS AND TABLES)

SURVEY METHODOLOGY



# PROJECT GOAL

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## Goal:

- Generate further evidence on pharmaceutical prices and availability in Georgia through continuous monitoring on medicine prices to inform and strengthen health policy and contribute to evidence-based discussions around current trends and processes in pharmaceutical market in the country



# PROJECT OBJECTIVES

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## Objectives:

1. Track changes over the time (2009 - 2016) and draw sound conclusions on originator brands (OB) and lowest price generics (LPGs) availability, price and mark-up
2. Examine differences across the country regions, pharmacy types and prescription requirements
3. Determine affordability trend among population



# DEFINITIONS

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- **OB** – Originator Brand
- **LPG** – Lowest Price Generic
- **Availability of survey medicines**
  - % of surveyed medicines available at a sampled retail pharmacy on the day of surveyor's visit
- **Median price**
  - Figure describing central tendency of prices
- **Mark-up**
  - Difference between the import and retail prices for a particular medicine



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# MAIN FINDINGS, CONCLUSIONS AND POLICY RECOMMENDATIONS



# Remaining Challenges for the Government

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## AVAILABILITY

- There was an **overall improvement of OB availability** in 2016, but worsening LPG availability has been observed.
- **Regional inequality** in drug availability remains a challenge, particularly for LPGs

## PRICES

- OB and LPG medicine **prices continue to increase**. This finding is consistent with the results of:
  - GeoStat- Official Inflation Rates in Georgia, February, 2016
  - Health Sector Barometer, Curatio International Foundation, 2016
  - Medicine Affordability and Quality Survey, OSGF, 2015
  - Health Utilization and Expenditure Survey, MoLHSA, 2015
- **Horizontal inequality** also remains unaddressed, especially for LPGs. LPG prices significantly differ across regions and pharmacy types.

## MARK-UP

- OB/LPG **mark-ups again started to raise** and deserves close look in future



# Trends in Generic Drug (LPG) Availability

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- Pharmacies in Georgia are more focused on supplying **OB brands over LPGs**, thus since 2009, **LPG availability has significantly deteriorated** and currently OB availability is almost two times higher compared to LPG.
- The observed trend in **decreased LPG availability** could be caused by several factors:
  - ✓ **Insufficient knowledge and/or trust** in the quality of LPGs among consumers and providers;
  - ✓ **Low demand for LPGs among the population** caused by physician reluctance to prescribe generics;
  - ✓ **Deep-seated OB brand preference** tendency among providers due to highly supported marketing strategies used by pharma companies offering commissions/kickbacks to prescribing physicians;
  - ✓ **Revenue maximizing strategies of pharmaceutical suppliers** that supply and promote OBs over LPGs, in the absence of state policies for generic substitution. OBs having higher markups and higher prices, help the industry generate greater profits than LPGs.



# Trends in Pricing Strategies

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- It is likely that increased competition caused by **legal changes in the drug law** late in 2009 was instrumental in determining the downward trend in OB prices that was observed during the 2009-2012 waves, albeit OB prices rebounded and significantly increased in 2016.
- OBs are largely imported from the West, therefore the price increase documented in 2016 might partially be explained by the significant **devaluation of the national currency** against the USD and EURO that began in late 2014, and continued throughout 2015. Consequently, OB prices increased in all pharmacy networks and in independent pharmacies.
- Unlikely to OBs LPG prices were declined since 2010. Surprisingly, **locally manufactured LPGs are sold at a higher price compared to imported analogues**, most likely affording greater profit potential to local manufacturers. And along with marketing strategies used by the largest retail networks (also linked to local manufacturing), promoting locally-produced drugs over imported ones, helps local producers effectively use their market power in a poorly regulated marketplace.



# Competitive Prices and Observed Trends

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- Competition among the larger, more organized pharmacy networks competing in both retail and wholesale markets has most likely led to **price stabilization within the OB segment of the market** due to the fact that median prices for OBs are quite comparable.
- However, developments in the LPG segment of the pharma market point to the fact that **local manufacturers of LPGs are most likely squeezing profit margins of larger competitor networks**, which probably explains the 30% rise in LPG prices in “other pharmacy networks”. If true, this obviously has a negative financial effect on LPG accessibility for the public.



# Trends in Price Markups

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- If between 2009-2012 mark-up levels were on a decline, in 2016 **we observed an increase in the markup of both OBs and LPGs**, which most likely allowed for greater profits.
- In 2015, MoLHSA initiated a prescription policy with the goal of reducing the level of irresponsible drug use in the country. The importance and/or need for the introduction of a prescription system similar to those established by other countries is undeniable. However, the lack of necessary instruments for the effective operation of the system, most likely allowed pharmaceutical companies to use this initiative to further increase their profits. This assumption is supported by the fact that in 2012 markups were **largely comparable** for prescription and non-prescription drugs, but in 2016, we observe **significant changes in behavior**. Namely: a) Markups for prescription OBs became 89% higher compared to non-prescription OBs; and b) Markups for prescription LPGs are 210% higher compared to non-prescription LPGs
- Both these findings allow us to assume that market players have likely **exploited** the opportunity afforded them by the prescription mandate introduced by the government in 2015, and are trying to maximize their profits at the cost of consumers/patients.



# Main Developments after prescription policy introduction

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- We have observed a trend of **increasing markups** for prescription drugs compared to non-prescription drugs.
- Pharmacies have also **increased OB availability** in the group of prescription drugs at the cost of reduced LPG availability in the same group.
- This may be driven by the marketing, prescribing and selling of more OBs and **consequently generating higher profits**, because of higher markups and significantly higher prices for OBs compared to LPGs.
- These developments allow us to conclude that **prescription mandates that lack the support/reinforcement from other policy levers, have most likely had a negative effect on the population's access to drugs**, especially LPGs, and therefore, have resulted in higher costs placed on the public.



# Emerging Policy Recommendations (1)

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- A single policy intervention in Georgia's complex pharmaceutical market will most likely not be enough to achieve policy goals i.e. **reduced cost to the public and improved access to pharmaceuticals.**
- Therefore, a **multi-pronged policy** implemented by the government appears to **be the best approach**, and should include the following:
- To contain pharmaceutical costs:
  - ✓ **Introduce reference pricing on the market** – the government can achieve this by learning from other countries' (high/low/middle-income) experiences and best practices. Through observing others' experiences, the most appropriate reference pricing methodology can be utilized to further facilitate the regulation of drug prices in the country.
  - ✓ **Encourage the utilization of generic prescription drugs** by enforcing generic substitution in prescription
  - ✓ **Introduce strict rules and controls for drug promotion, marketing, education, and**



## Emerging Policy Recommendations (2)

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- Enhance **pharmaceutical market monitoring** to adequately adjust for weaknesses in the policy or its implementation:
  - ✓ Continue the **regular monitoring of drug availability and price trends** on the market;
  - ✓ **Improve prescription drug monitoring** - especially the tracking of the share of generic drugs prescribed.



# ACKNOWLEDGMENTS

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## Technical support / Information provision

- Ministry of Labor, Health and Social Affairs of Georgia (MoLHSA)
- State Regulation Agency for Medical Activities

## Financial support - The World Bank (WB)

- Aparnaa Somanathan/Health, Nutrition & Population Global Practice – Senior Economist
- Nino Moroshkina/Consultant



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# SUMMARY OF SURVEY RESULTS



# I. Availability of Medicines

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- Availability of OBs did not change and remained at 2012 level, but LPG availability significantly deteriorated since 2012. OB availability is two times higher than LPGs.
- Availability differs by regions for both OB and LPG and in certain regions seems to be a challenge, particularly for LPGs
- Availability of both – OB and LPGs, is higher in Pharmacy Networks, compared to independent pharmacies in 2016. However, since 2009, OB availability declined in PSP/Aversì/GPC networks, whereas improvement is noticed in other pharmacies
- At the same time LPG availability is almost twice higher in PSP/Aversì/GPC compared to other networks and independent pharmacies in 2016. Nevertheless, LPG availability significantly worsened since 2009 in all studied pharmacies



## II. Medicine Prices

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- Since downward trend in prices for OB observed during 2009-2012, significant increase is recorded in 2016.
- Unit median price on LPGs slightly declined in 2016 compared to 2012.
- OB/LPG Price change by regions reveals horizontal inequity.
- During the period of 2009 – 2016 the negative OB net price change is observed in all surveyed regions , while in case of LPGs net price change is positive in all, except Imereti and Kvemo Kartli regions, where LPG unit median price decrease is observed



## II. Medicine Prices (cont....)

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- In 2016 OB median unit price is relatively same in all types of pharmacies, but median unit price for LPGs significantly differ with the highest price observed in Other Pharmacy Networks and the lowest in Independent Pharmacies
- Compared to 2012, OB unit median price increased in Pharmacy networks in 2016, whilst price decrease is observed in independent pharmacies which could be a response to an increased competition.
- LPG price increase in 2016 relative to 2012 price is observed only in Other Pharmacy Networks, whilst it shows declining trend in PSP/Aversi/GPC and Independent Pharmacies.



## III. Mark-up

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- The data shows that mark-up levels for both, OB and LPG were on a declining trend during 2009 and 2012, but rebounded in 2016. Though mark-up levels for OB/LPG recorded during 2016 are considerably lower compared to levels recorded in 2009.
- PSP/Aversis/GPC have the highest OB mark-ups while for LPGs the highest mark-up were recorded in Independent Pharmacies and Other Pharmacy Networks.



## IV. Prescription and Non-prescription Medicines (1)

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### Findings related to OB

- Introduction of prescription requirements most likely resulted in increased availability of prescription OBs in 2016 while availability of non-prescription OB worsened/declined, when compared with previous years.
- Also pharmacies apply two times higher mark-ups for prescription OBs compared to non-prescription ones. Consequently unit prices for prescription OBs are higher compared to non-prescription OBs.



## IV. Prescription and Non-prescription Medicines (2)

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### Findings related to LPG

- Contrary to OBs, introduction of prescription requirements most likely negatively affected LPG availability for both, prescription and non-prescription LPGs. Notably, availability of prescription LPGs is 2 times lower compared to non-prescription LPGs in 2016.
- Mark-ups for prescription and non-prescription LPGs increased in 2016 compared to 2012 and markups for prescription LPGs are two times higher compared to non-prescription ones.
- Overall, LPG availability continues to deteriorate since 2009 in all pharmacies regardless of prescription requirement.



## IV. Availability, Price and Mark-up of Prescription and Non-prescription Medicines (4)

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### LPG Price

- Unit median price for prescription LPGs is 2 times higher than non-prescription ones in 2016.
- While unit median price increased for prescription LPGs since 2012, an opposite tendency is observed for non-prescription LPGs.
- Remarkably, comparative analysis of locally produced and imported LPG prices showed that locally produced LPGs are about 30% more expensive than imported ones.



## V. Standard Treatment Costs

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- The standard OB & LPG treatment prices have INCREASED over the course of last four years, except of LPG treatment for Hypertension
- Albeit standard treatment price increased in 2016, treating patients with LPGs is still much, much cheaper.



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# SURVEY ANALYSIS GRAPHS AND TABLES

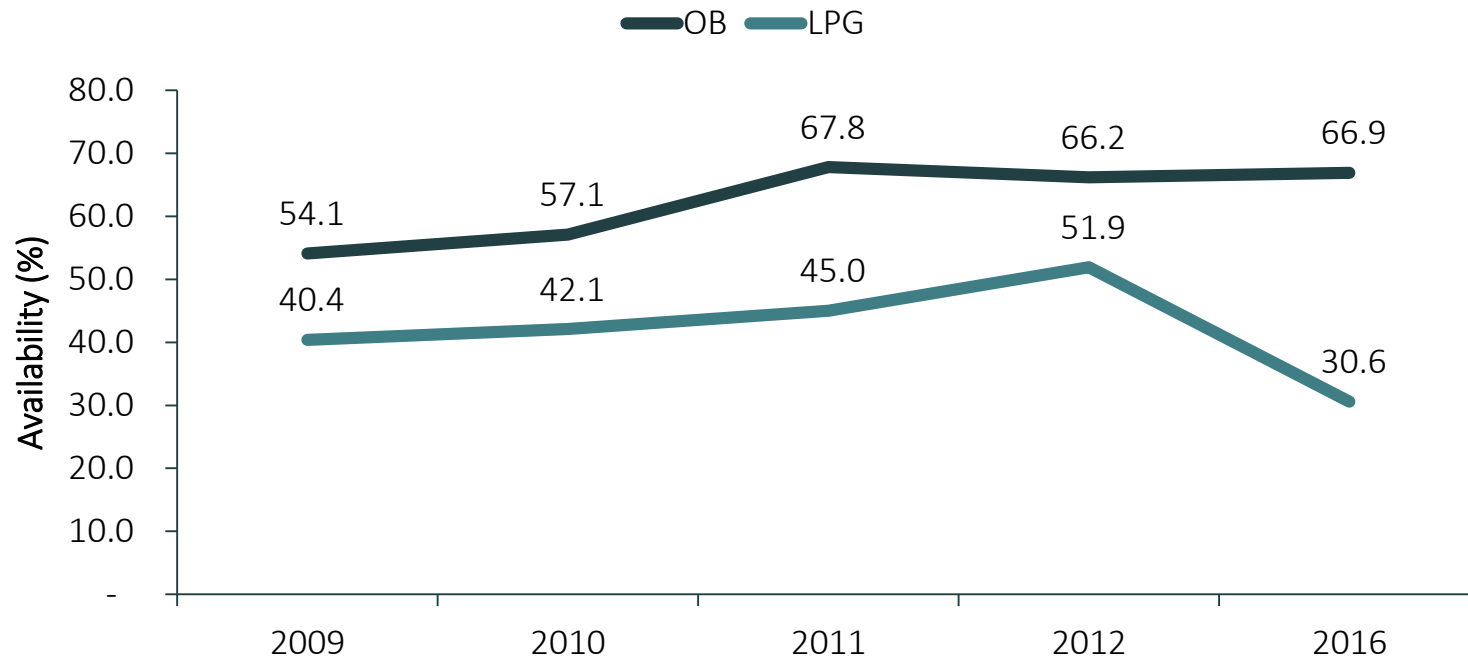


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# I. AVAILABILITY



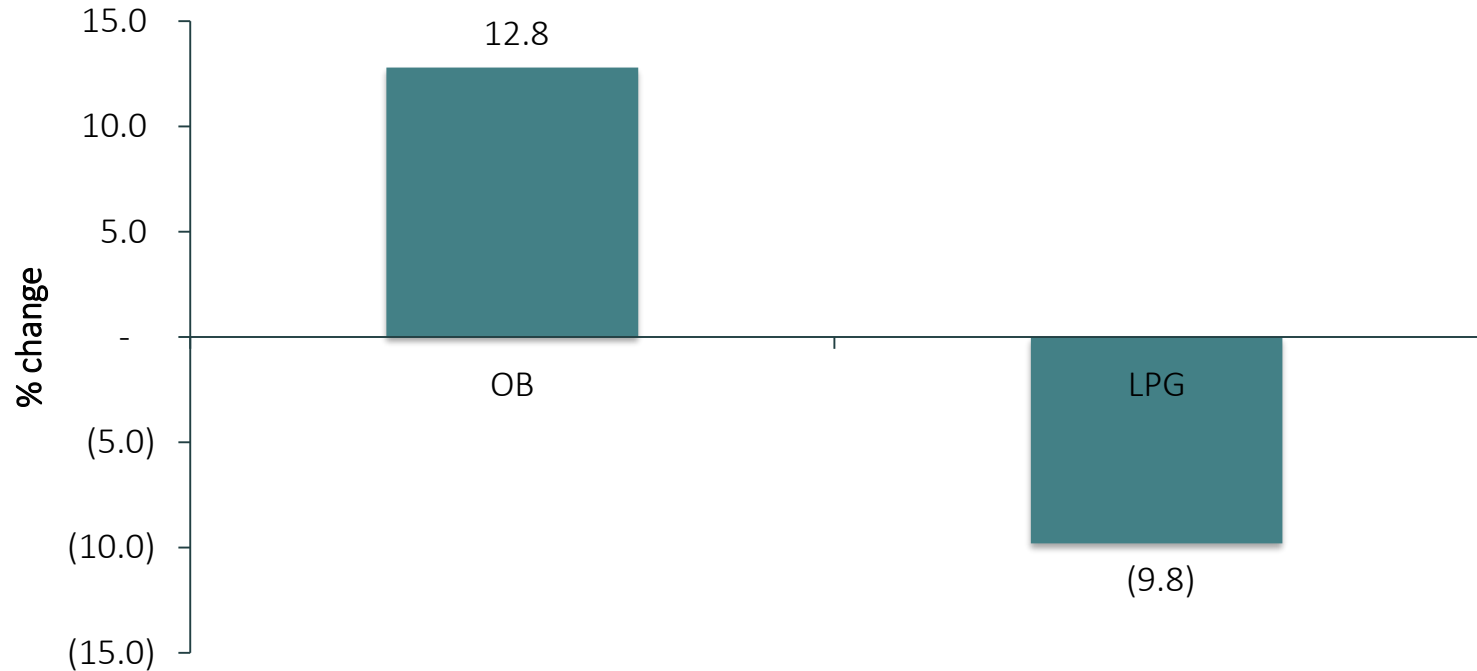
# Median availability (%) of OBs/LPGs by Years



Availability of OBs and LPGs gradually improved from 2009 to 2012 years. In 2016 OB availability remained almost at the level of 2012, whilst LPG availability decreased by 21.3%.



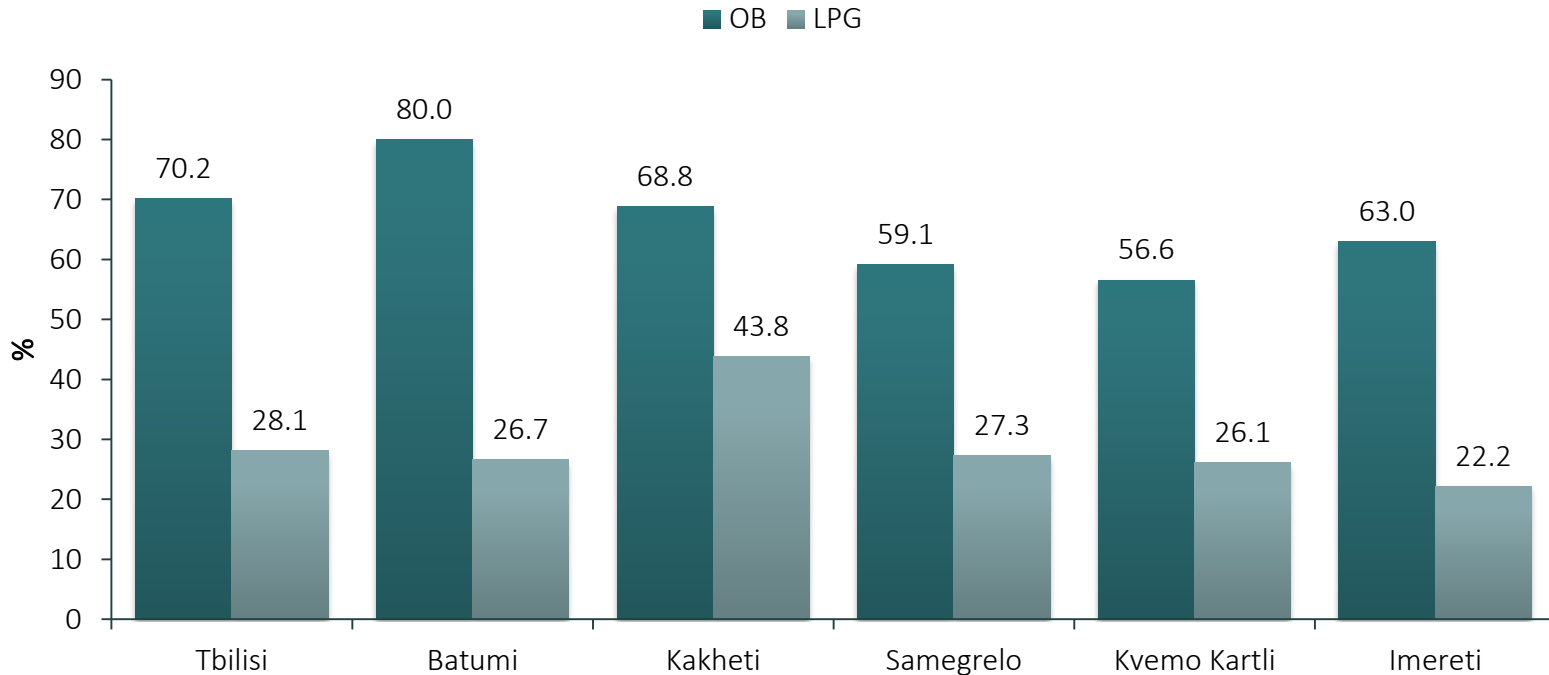
## Availability Change of OB & LPG between 2009-2016 (%)



- OB median availability improved in 2016 since 2009 by 12.8%, whilst LPG median availability continues to worsen (-9.8%).



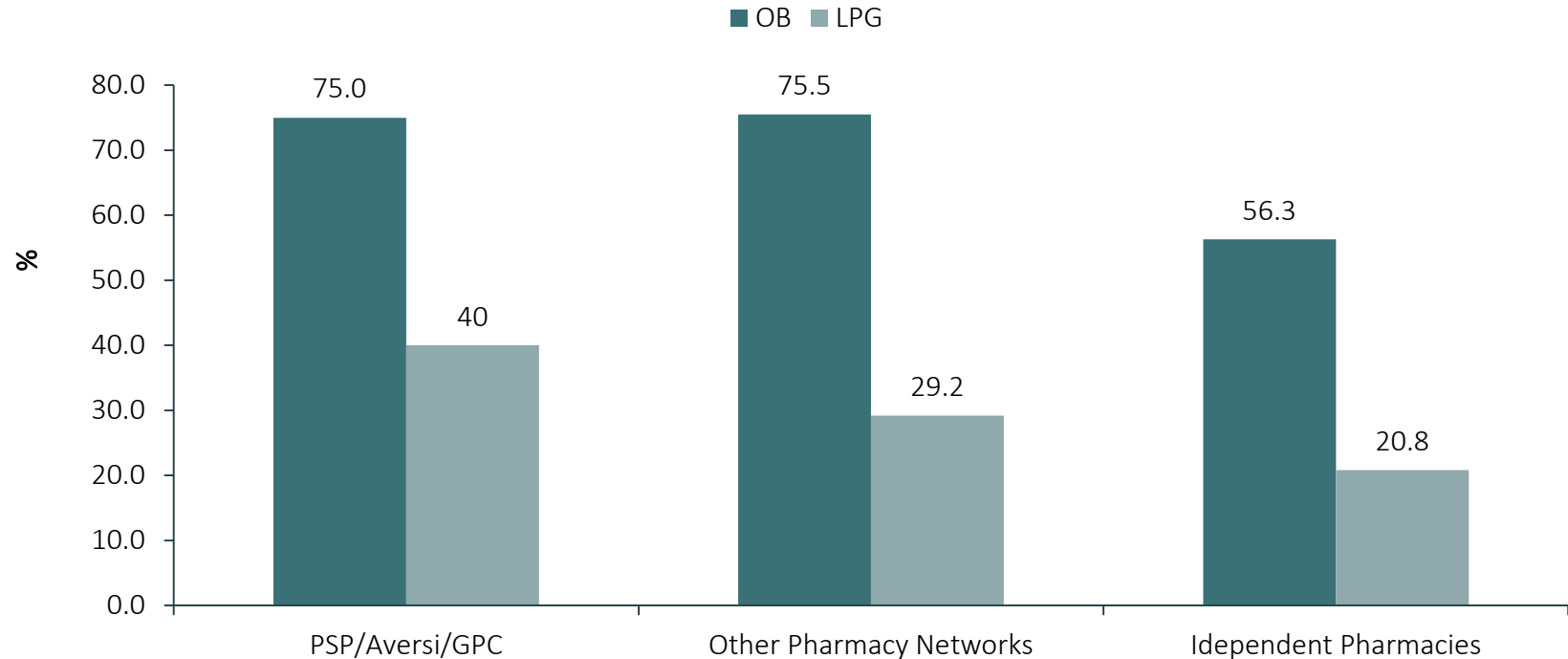
## Median Availability of OB/LPG across Survey Regions, 2016



- Availability of OBs is more than 2-times higher than LPGs in surveyed regions.
- The highest OB availability is observed in Batumi and Tbilisi (two major urban locations).
- LPG availability varies from 22% to 44% across regions and is quite low
- Mixed dynamics of OB availability is observed across regions in different periods indicating the horizontal inequity



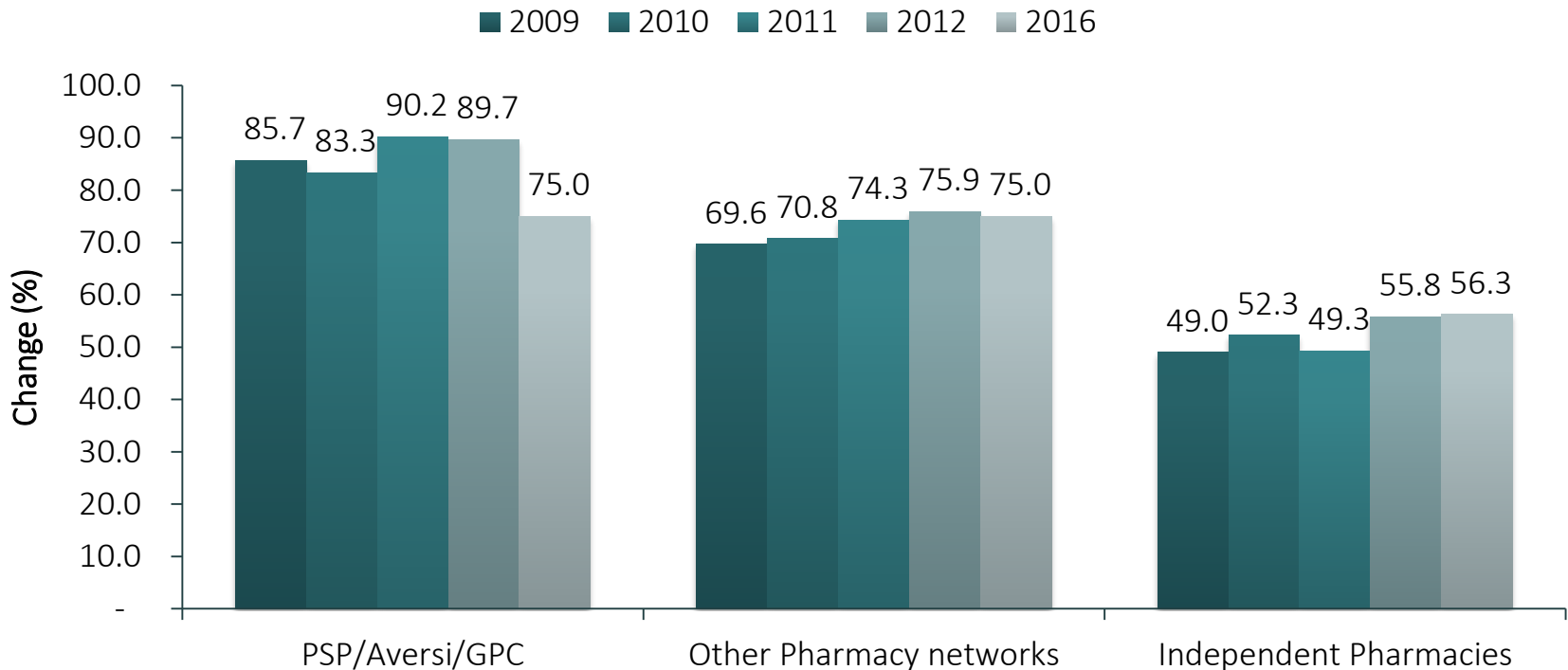
# Median availability of OB/LPG across Pharmacy Types in 2016



- Availability of both – OBs and LPGs, is higher in Pharmacy Networks, compared to independent pharmacies.
- LPG availability is higher in PSP/Aversis/GPC network compared to other networks and independent pharmacies



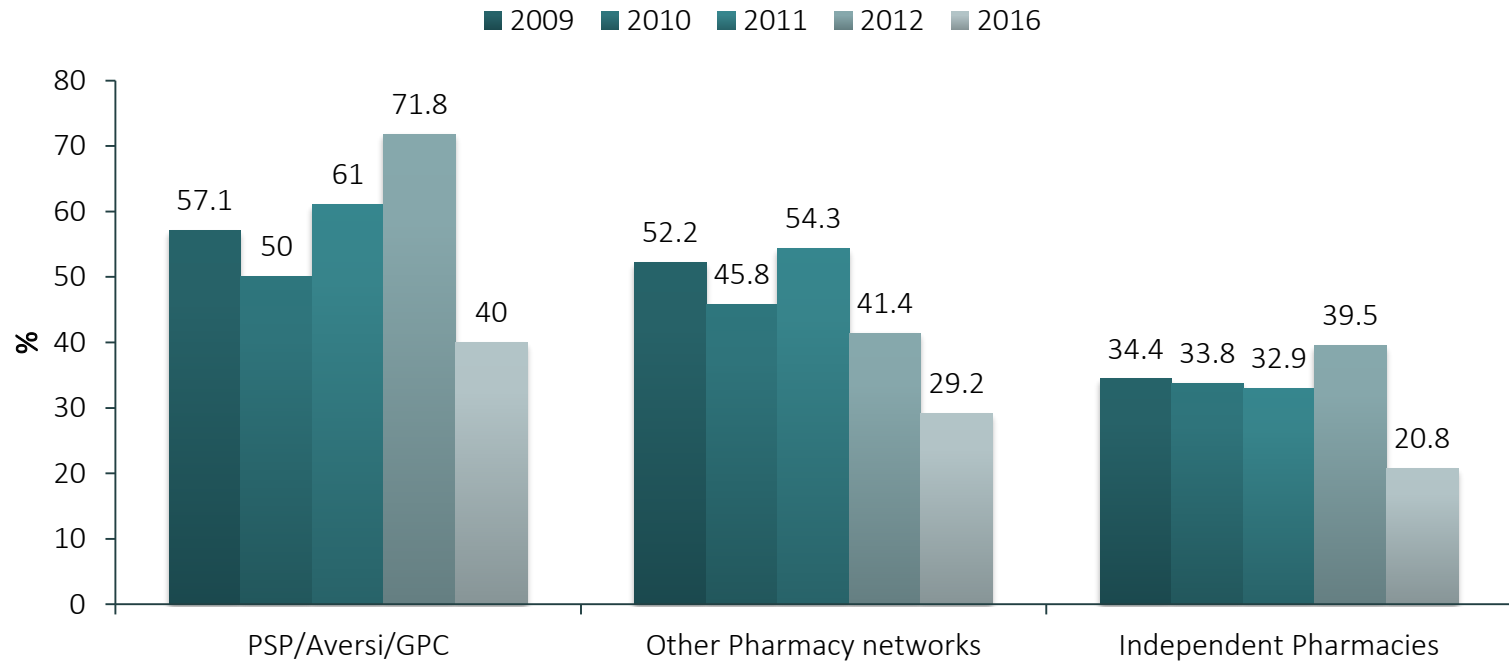
# OB Median Availability Change by Pharmacy Type, 2009-2016



- In 2016 compared to 2012 OB availability remained stable in other pharmacy networks and improved in Independent Pharmacies, while deteriorated in PSP/Aversis/GPC



## LPG Median Availability Change by Pharmacy Type, 2009-2016



- Compared to 2012, LPG availability in 2016 worsened in all types of pharmacies.
- Overall LPG availability shows negative (declining) trend since 2009.



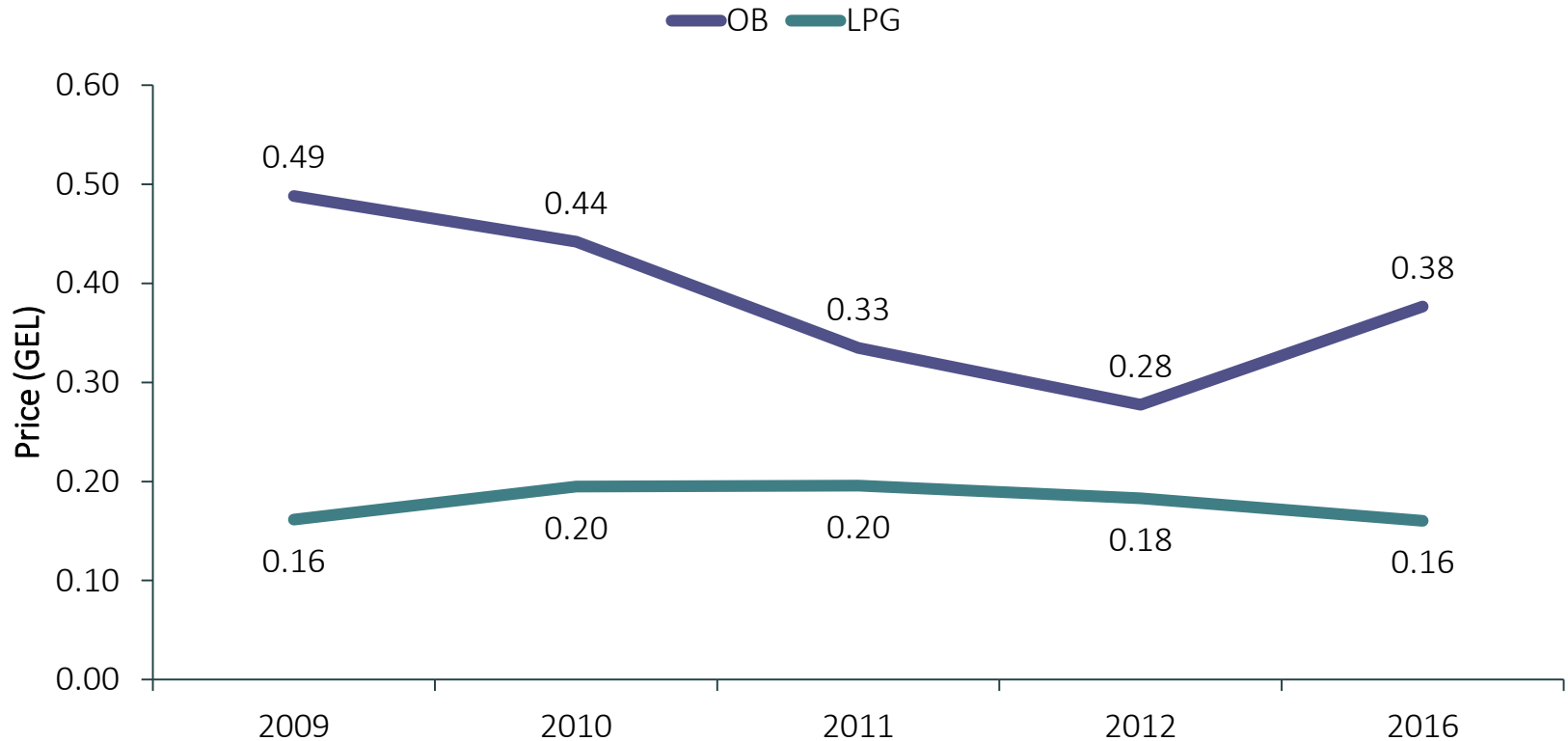
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# II. MEDICINE PRICES

*(Unit Median Prices in GEL)*



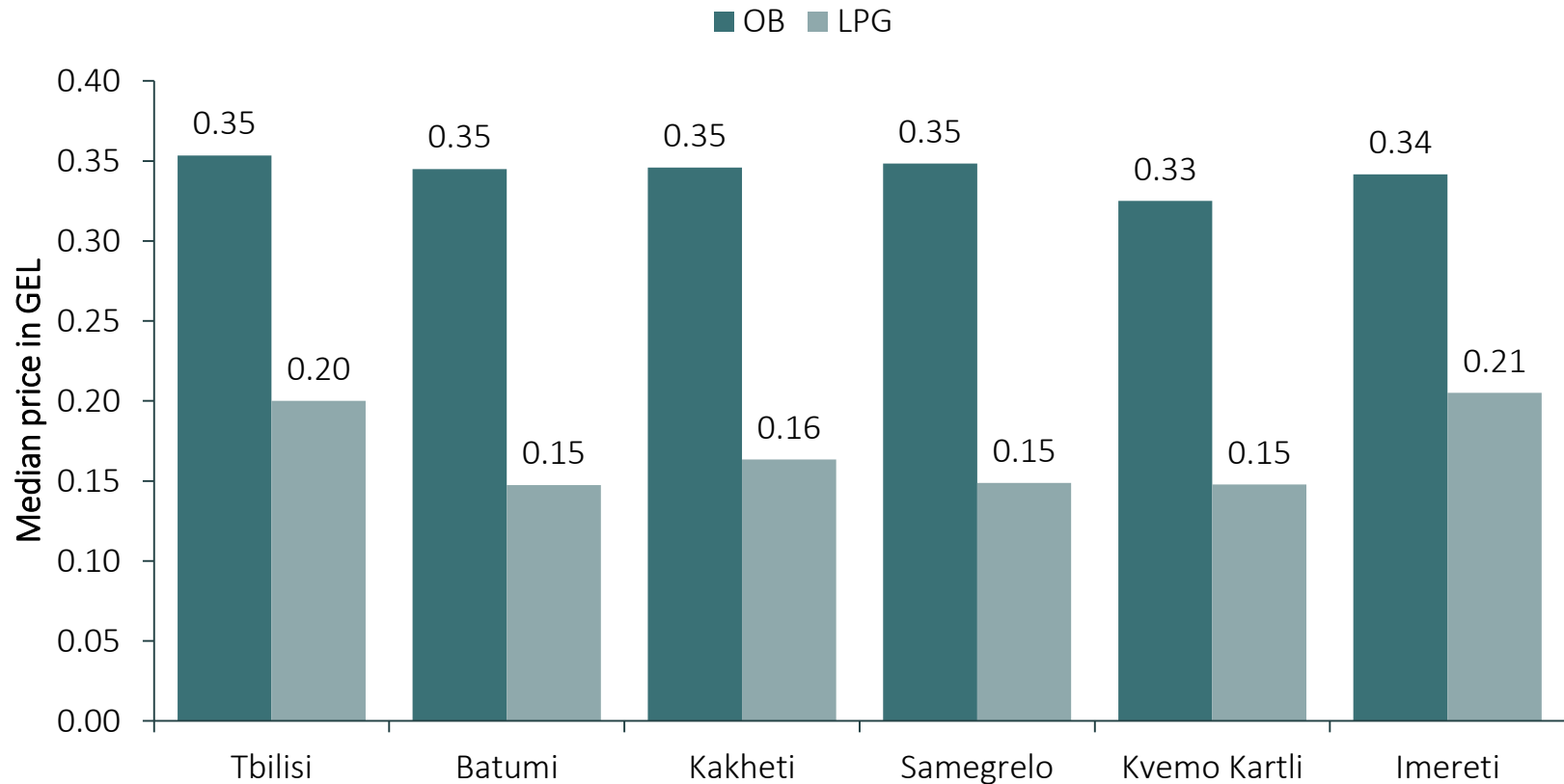
## OB & LPG Unit Median Price by Years (GEL)



- After gradual decline since 2009 price for OB medicines increased in 2016, whilst unit median price on LPGs declined down to 2009 level.
- LPG Unit prices are almost twice cheaper compared to OB prices



# Unit Median Price Across Survey Regions in 2016



- OB median unit price is almost same in all surveyed regions
- LPGs are about twice cheaper compared to OBs, but unit median price differs by regions with the prices in Tbilisi and Imereti regions being 33% and 40% higher



# OB Unit Median Price Change (GEL) Across Survey Regions (2009-2016)

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	GEL	
	2012 vs 2016	2009 vs.2016
Tbilisi	0.06	(0.13)
Batumi	0.15	(0.11)
Kakheti	0.07	(0.13)
Samegrelo	0.05	(0.09)
Kvemo Kartli	0.03	(0.09)
Imereti	0.06	(0.14)

- OB median unit price increased in 2016 in all surveyed regions compared to 2012, but negative net price change is observed in the period 2009 - 2016 in all regions.



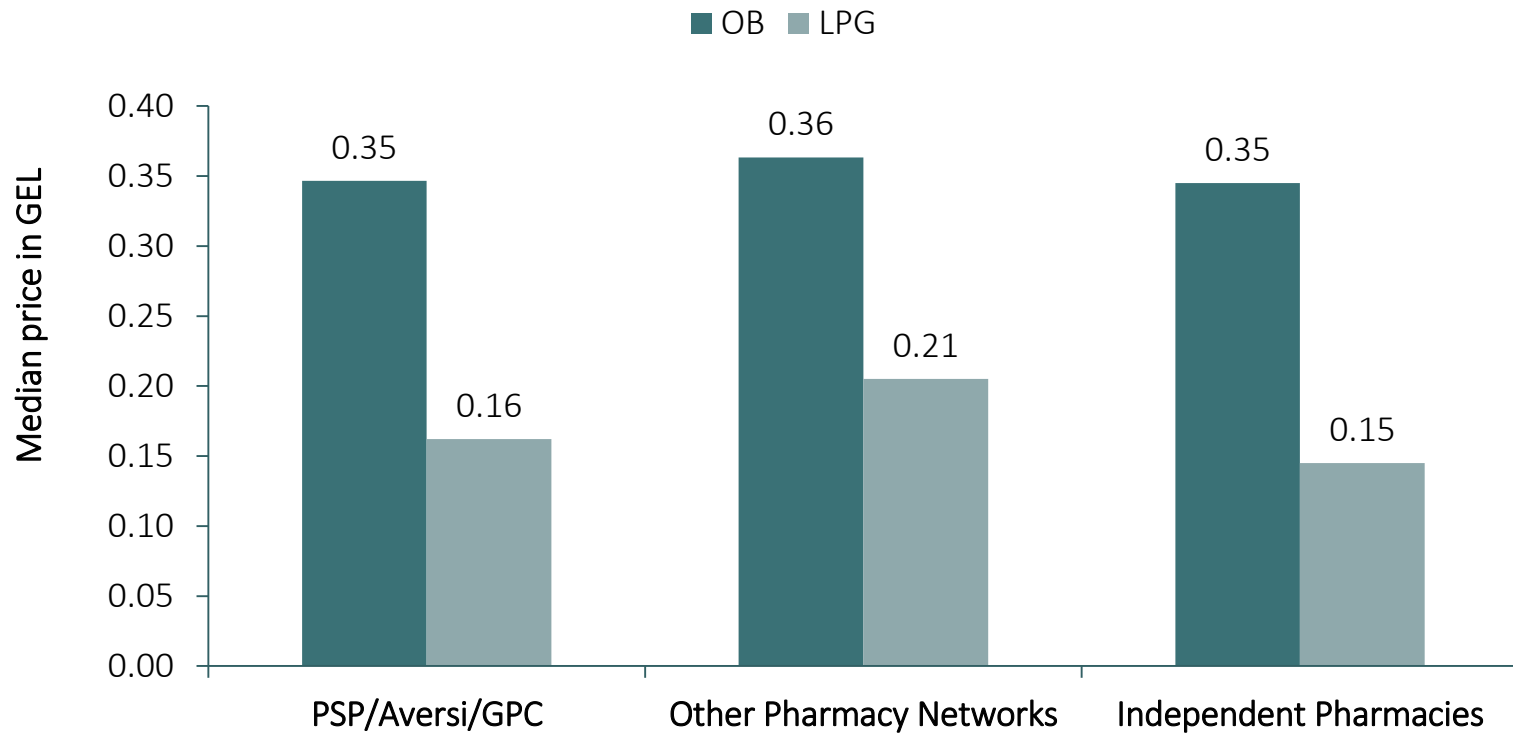
# LPG Unit Median Price Change Across Survey Regions (2009-2016)

	GEL	
	2012 vs 2016	2009 vs.2016
Tbilisi	0.051	0.024
Batumi	(0.023)	0.001
Kakheti	0.011	0.049
Samegrelo	(0.028)	0.049
Kvemo Kartli	(0.006)	(0.006)
Imereti	0.068	(0.020)

- LPG median unit price change differs by regions.
- LPG net price change since 2009 is positive in all regions except Imereti and Kvemo Kartli regions, where LPG unit median price decrease is observed



# Unit Median Price across Pharmacy Types in 2016 (GEL)



- OB unit median price by pharmacy types did not reveal any tangible difference in 2016, whereas unit median price for LPGs is highest in other pharmacy networks



# OB Unit Median Price Change (%) by Pharmacy Type (2009 – 2016)

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	2009 vs 2012	2012 vs 2016	2009 vs 2016
PSP/Aversi/GPC	-33%	17%	-18%
Other pharmacy networks	-38%	8%	-22%
Independent pharmacies	-39%	21%	-26%

- OB price increase is observed in all pharmacies in 2016.
- Since 2009, OB price decrease is revealed in all pharmacies with highest decline noted in independent pharmacies ( -26%)



# LPG Unit Median Price Change (%) by Pharmacy Type (2009 – 2016)

	2009 vs. 2012	2012 vs. 2016	2009 vs 2016
PSP/Aversi/GPC	-3%	-10%	-13%
Other pharmacy networks	-4%	27%	21%
Independent pharmacies	10%	-18%	-9%

- LPG price change for the period 2012-2016 varies by pharmacy type.
- Price decrease is observed in PSP/Aversi/GPC and Independent Pharmacies, whilst OB price increased by 27% in other pharmacy networks
- Since 2009, price increases only in Other Pharmacy Networks and this growth amounted to 21% between 2009-2016

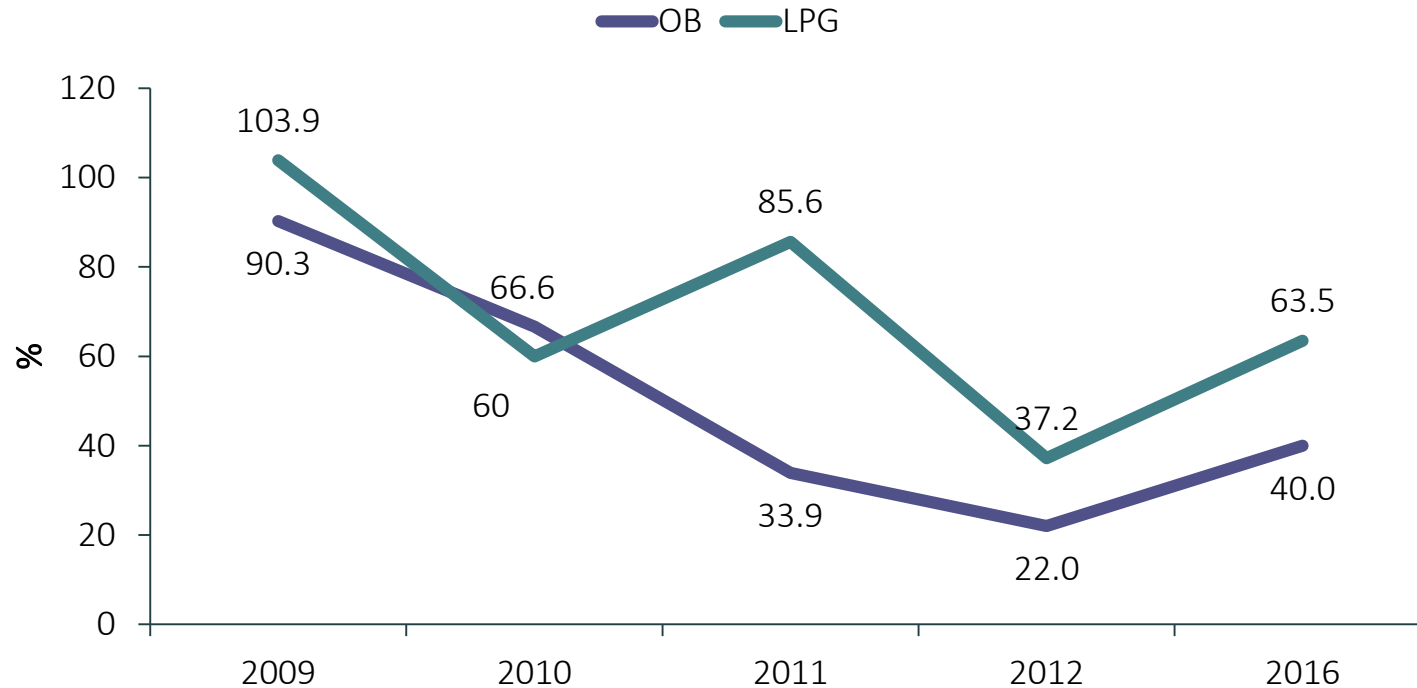


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## III. MEDIAN MARK-UP



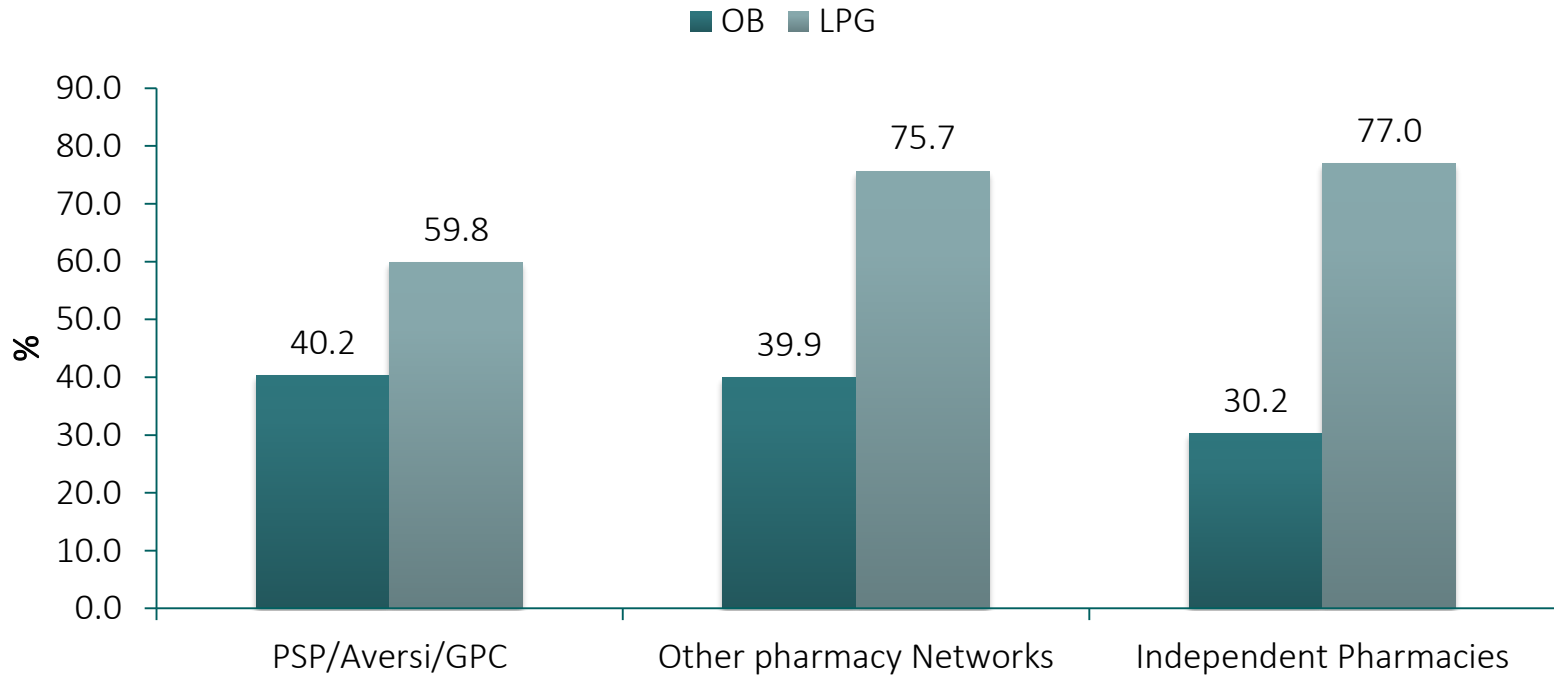
# OB/LPG Median Mark-up by Years (2009 – 2016)



- OB mark-up started to decrease since 2009 and reached 22% in 2012 but since it rebounded and reached 40% in 2016
- Similar to OBs, median mark-up for LPGs declined between 2009-2012 and increased up to 63.5% in 2016



# OB/LPG Median Mark-up by Pharmacy Type in 2016



- The lowest OB mark-up is revealed in Independent pharmacies and OB mark-ups vary between 30 to 40% depending on the pharmacy type
- In PSP/Aversi/GPC network LPG median mark-up is the lowest compared to other pharmacies

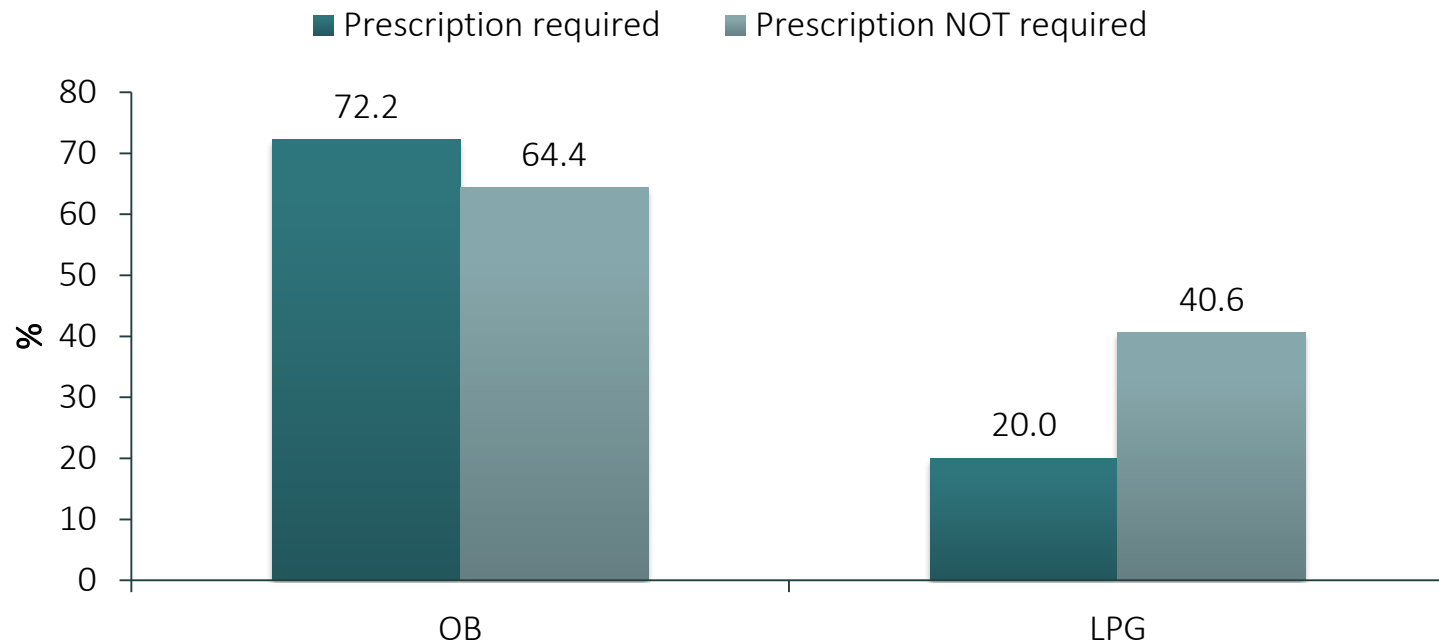


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# **IV. AVAILABILITY, PRICE AND MARK-UP OF PRESCRIPTION AND NON- PRESCRIPTION MEDICINES**



## Median availability of OB/LPG by Prescription Requirements, 2016

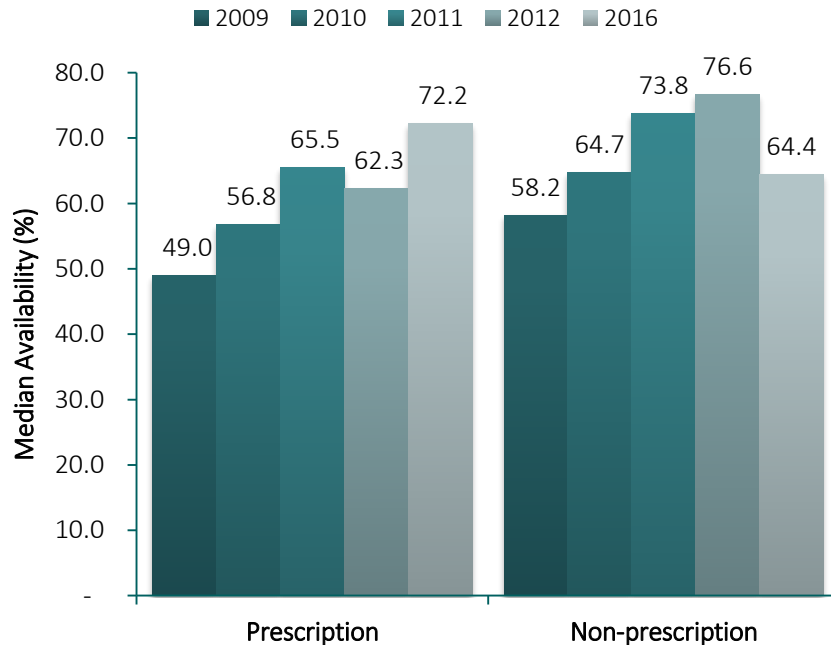


- Availability of prescription OBs is higher than for OBs not requiring prescription.
- Availability of non-prescription LPGs is two times higher compared to prescription LPGs

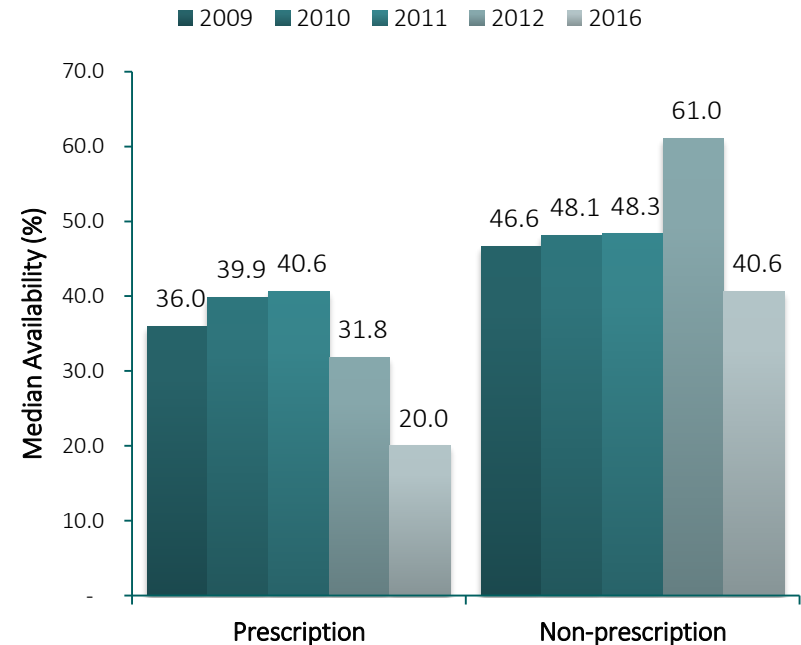


# OB/LPG Median Availability trend by Prescription Requirement and years (2009-2016)

OB Availability trend by prescription type



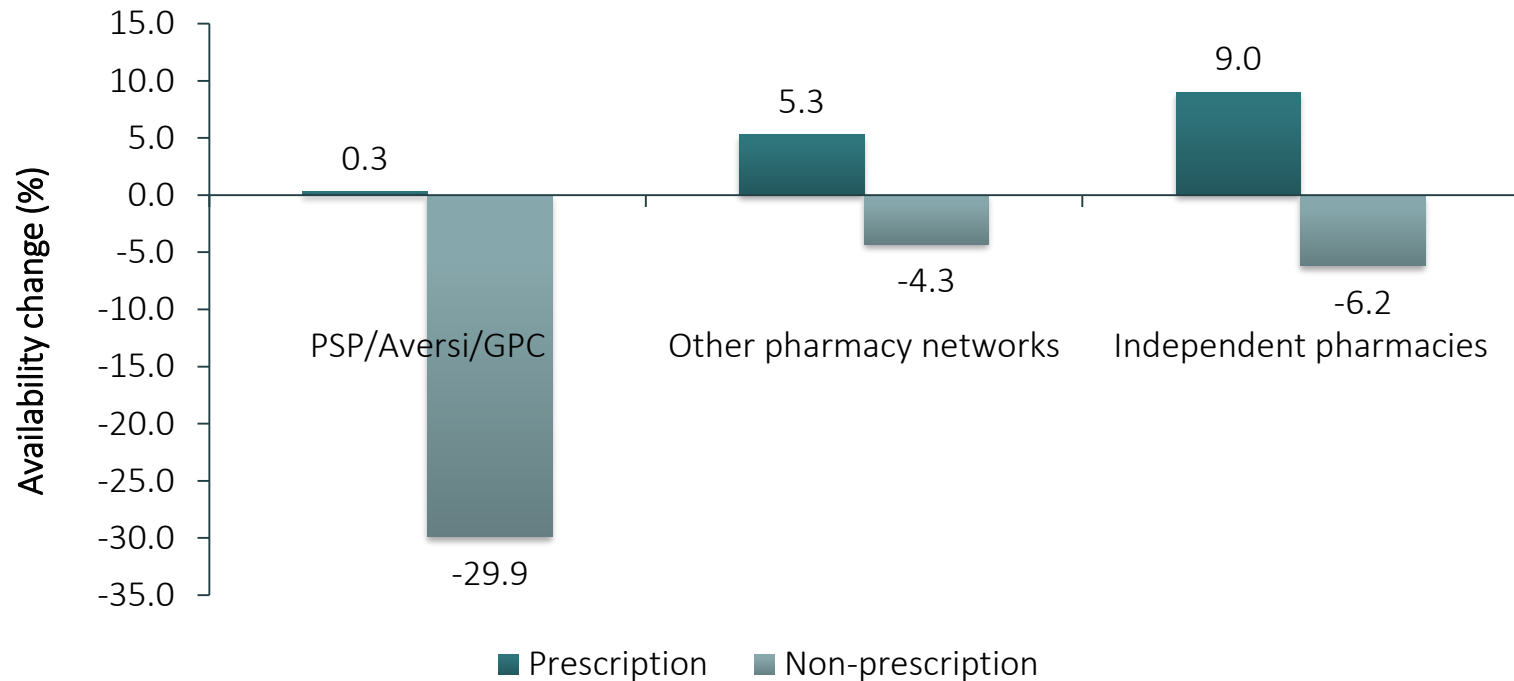
LPG Availability trend by prescription type



- Prescription practice introduced in 2014, seems to have a mixed impact on drug availability.
- OBs requiring prescription increased by 10% in 2016 compared to 2012, while availability of those not requiring prescription declined by 12%.
- LPG availability regardless of prescription requirement decreased in 2016 but more significantly in the prescription group of drugs.



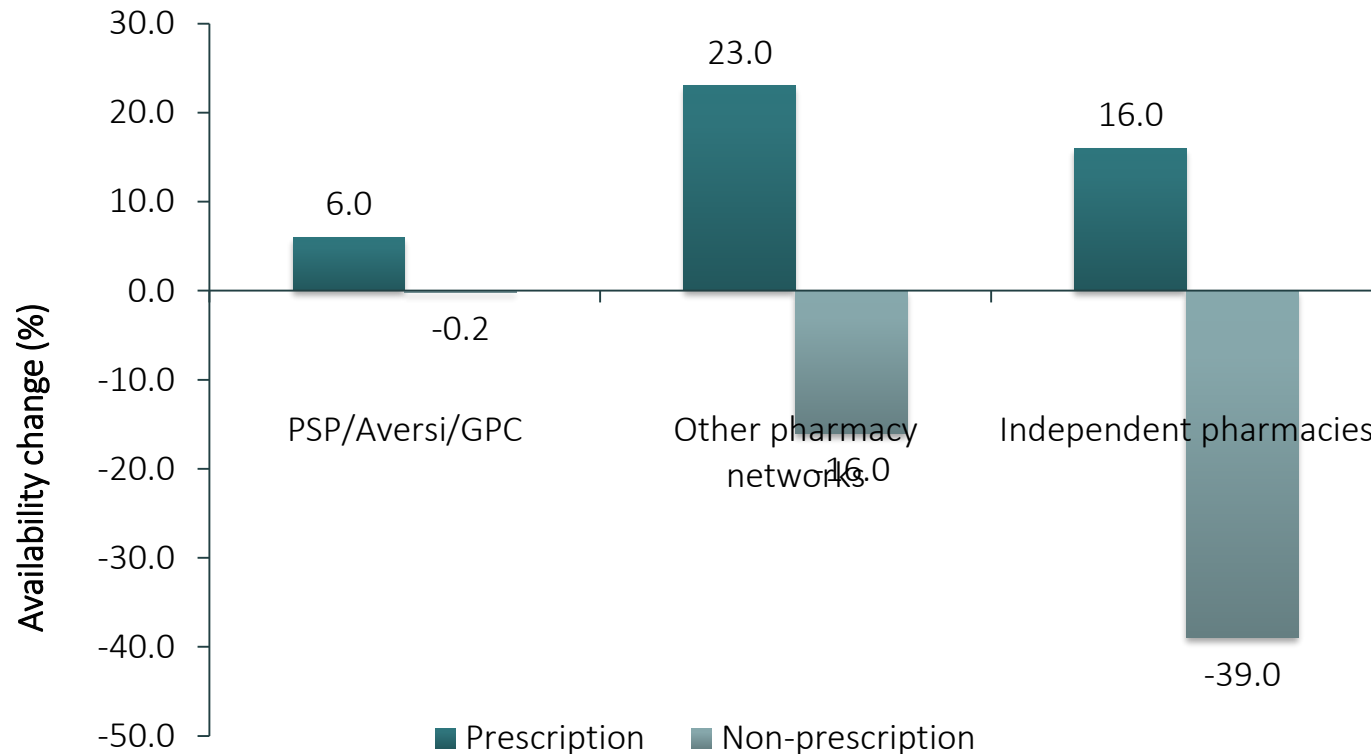
## OB Median Availability change (%) by Prescription Requirement and Type of Pharmacy (2009 vs.2016)



- OB availability subject to prescription unequally increased in 2016 in all types of pharmacies compared to 2012. Incremental improvement is observed in PSP/Aversis/GPC network.
- OBs not requiring prescription decreased in all types of pharmacies in 2016 relative to 2012. availability particularly worsened in PSP/Aversis/GPC network.



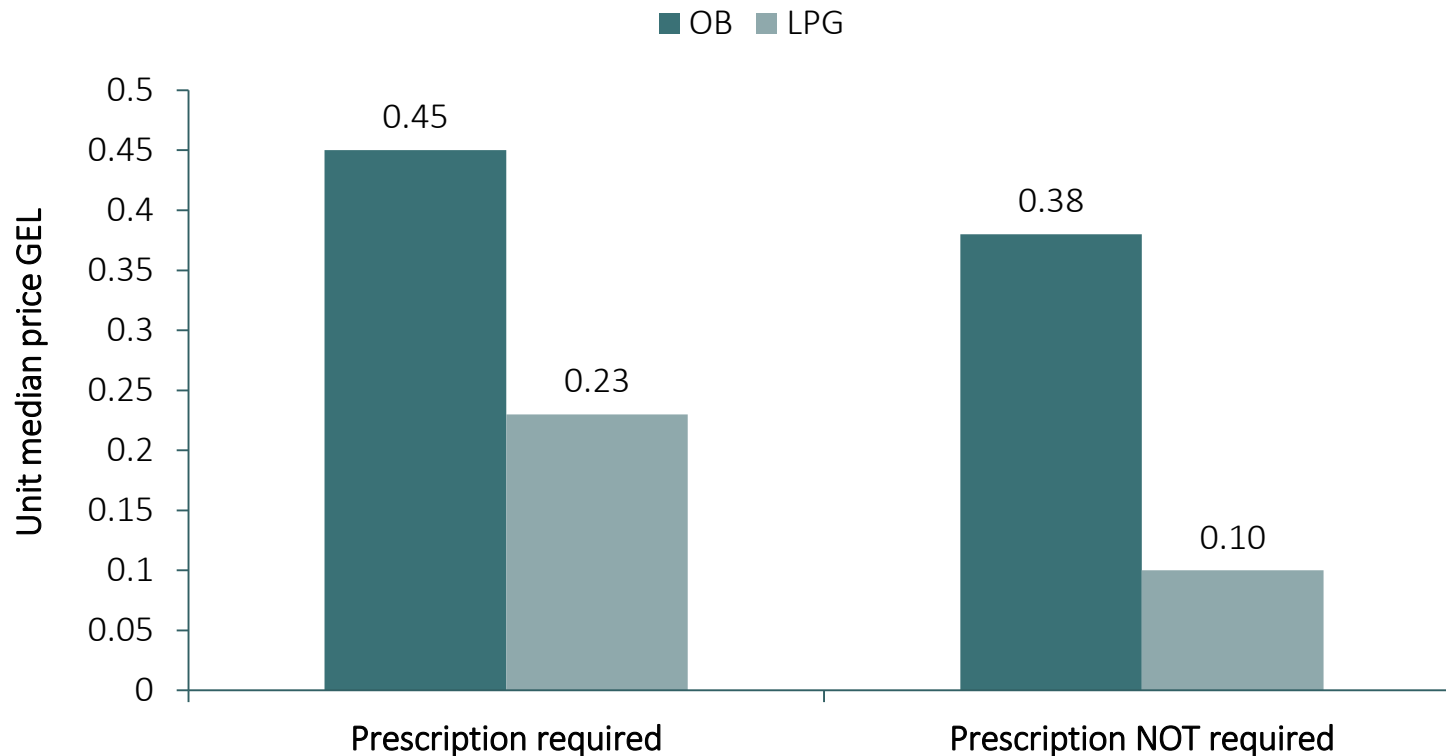
## LPG median availability change (%) by prescription type and Type of Pharmacy, 2012 vs. 2016



- In 2016, LPG availability deteriorated in all pharmacies irrespective of prescription requirements.



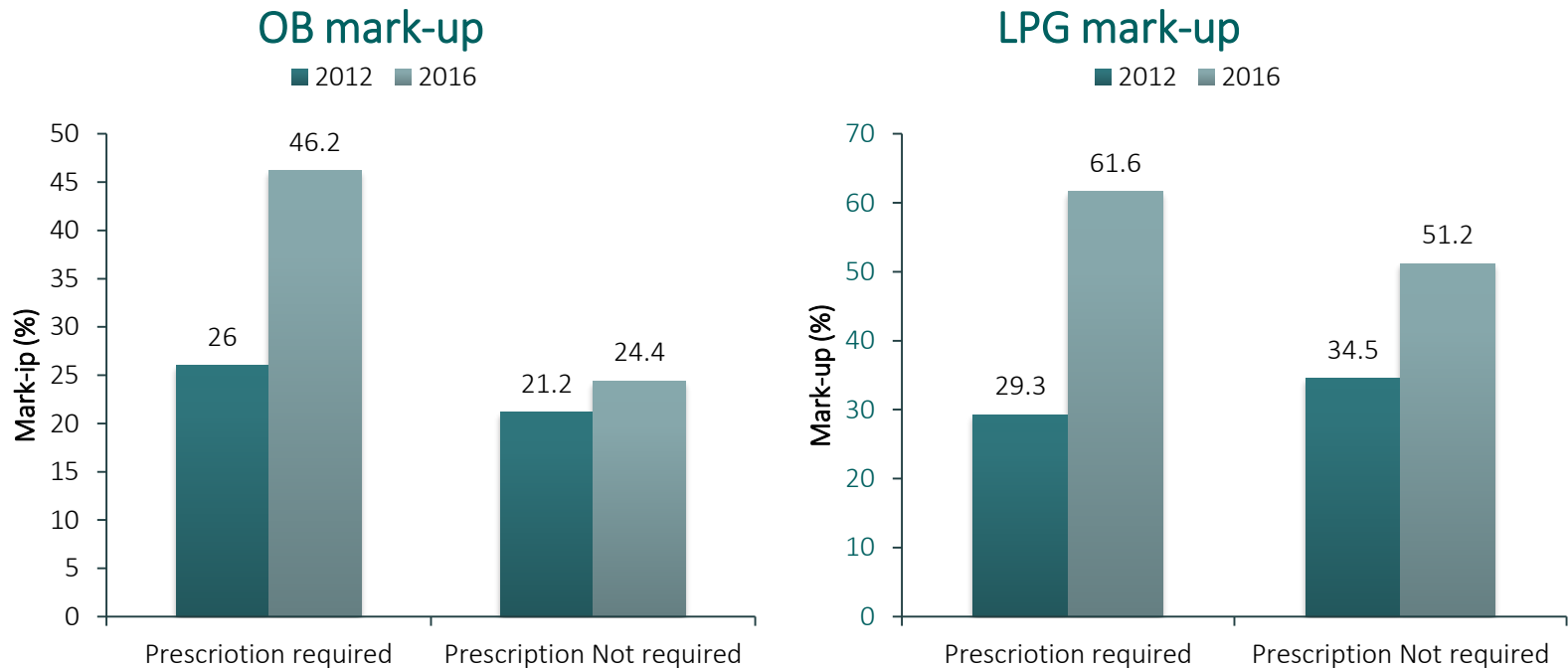
## OB/LPG Unit Median Price by Prescription Requirement in 2016



- Prescription OBs and LPGs are more expensive compared to non-prescription medicines.
- LPG Price difference is 2 times higher for prescription LPGs compared to non-prescription LPGs.



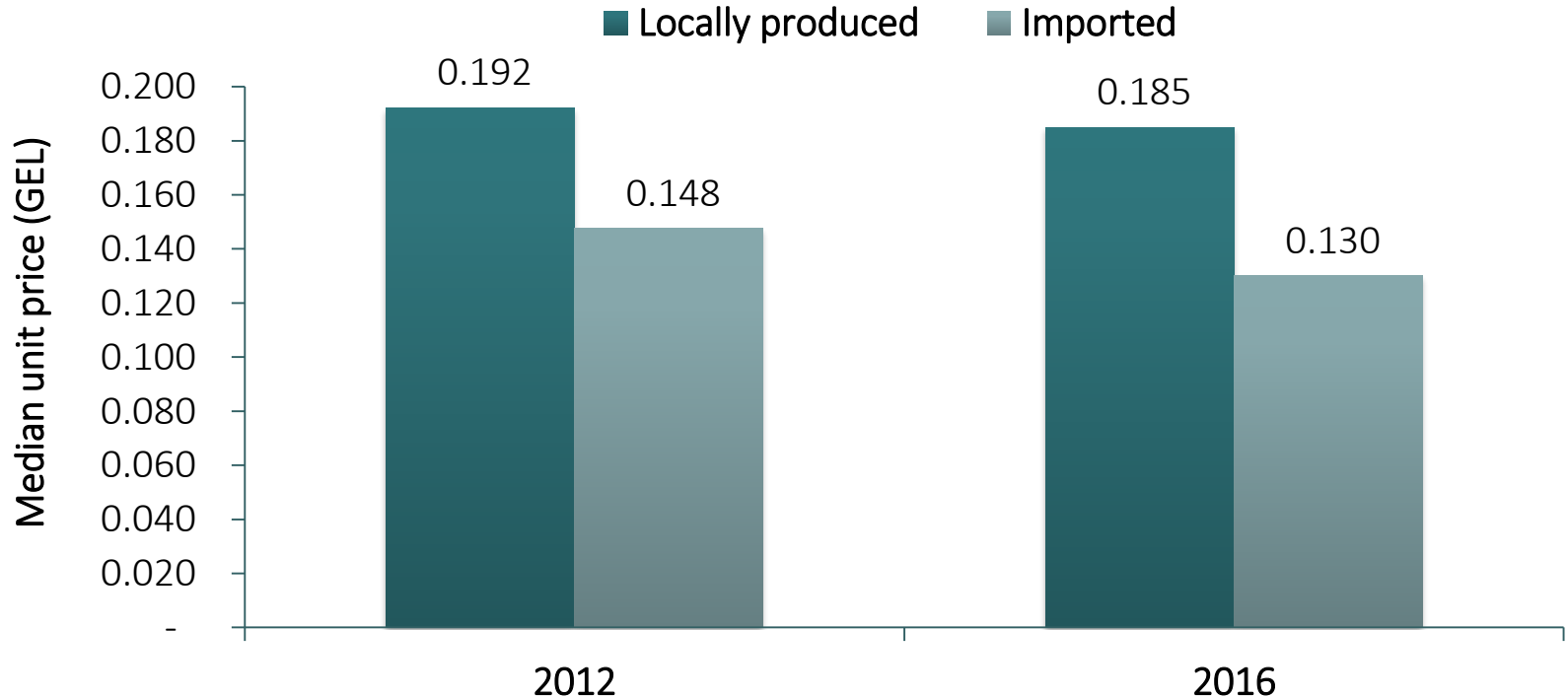
# OB/LPG mark-ups by prescription requirement, 2012-2016



- Mark-ups increased in 2016 relative to 2012 for both, prescription and non-prescription OBs and LPGs. For prescription LPGs mark-up increased by 17% in 2016 compared to 2012, and by 3% for OBs.
- Mark-ups for non-prescription OBs increased by 20% and LPGs by 32% in 2016 compared to 2012.



## LPG unit median price difference by imported and locally produced LPGs in 2012 and 2016



- Median unit price for locally produced LPGs is higher to imported ones.
- However median unit prices decreased slightly in 2016, compared to 2012, but locally produced LPGs yet remain more expensive than imported LPGs.

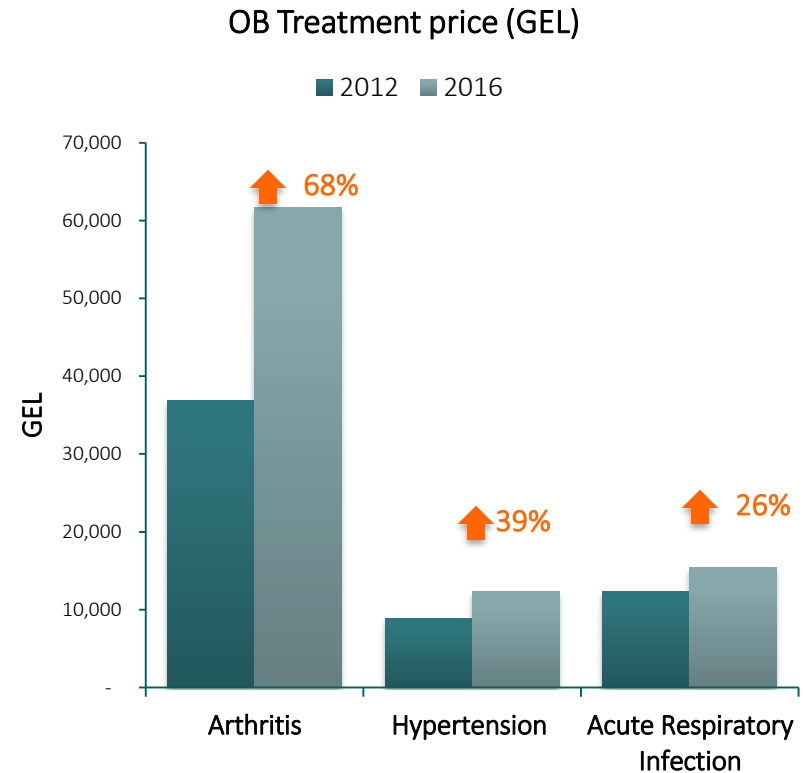
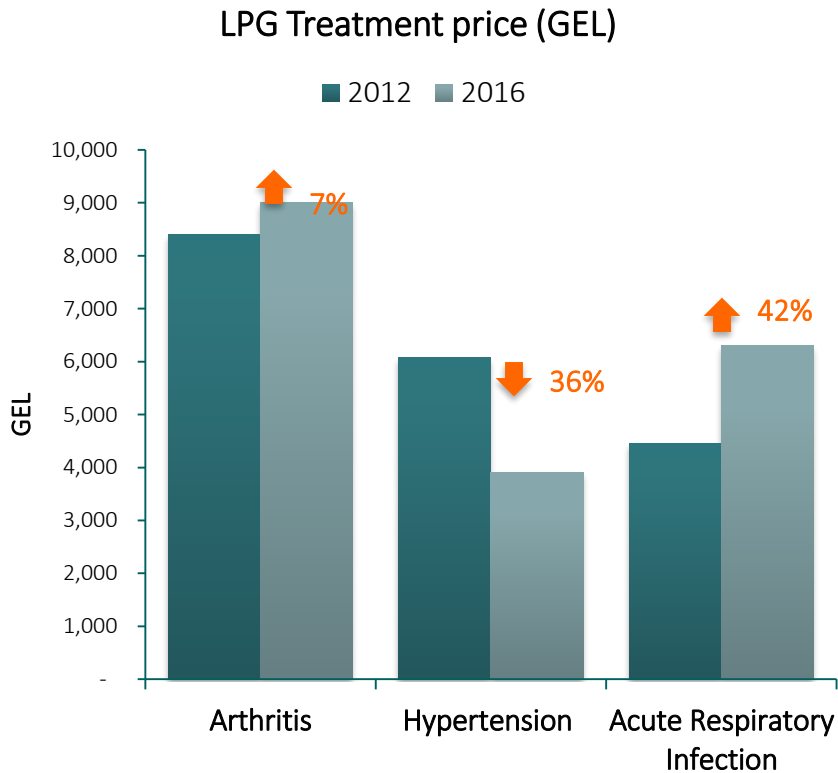


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# V. Standard Treatment Price



# Impact of OB/LPG price change on treating 1000 patients in 2012 and 2016



- Standard treatment price for both, OB and LPG treatment, increased in 2016 compared to 2012, except for LPG treatment of Hypertension.



## LPG Treatment savings for 1000 patients in 2012 and 2016

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Standard Treatment	2012			2016		
	OB	LPG	LPG treatment savings	OB	LPG	LPG treatment savings
Arthritis	36,828	8,400	(28,428)	61,710	9,000	(52,710)
Hypertension	8,850	6,072	(2,778)	12,321	3,900	(8,421)
Acute Respiratory Infection	12,285	4,442	(7,844)	15,435	6,300	(9,135)
<b>TOTAL</b>	<b>57,963</b>	<b>18,914</b>	<b>(39,050)</b>	<b>89,466</b>	<b>19,200</b>	<b>(70,266)</b>

- Price increase in 2016 resulted in 1.5 times upsurge of standard OB treatment price
- Treatment with LPGs offers greater financial benefits and savings



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# RESEARCH METHODOLOGY



# RESEARCH TEAM

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- Tamar Gotsadze, MD, PhD / Lead Expert
- Natia Rukhadze, MS / Principle Investigator
- Natia Shengelia, MD / Researcher
- George Gotsadze, MD, PhD / Senior Advisor
- Surveyors (17 qualified and experienced data collectors)



# OVERVIEW OF THE METHODOLOGY (1)

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## Methodology

- WHO standard methodology on “Measuring Medicine Prices, Availability, Affordability and Price Components”

Link:

[http://www.who.int/medicines/areas/access/OMS\\_Medicine\\_prices.pdf](http://www.who.int/medicines/areas/access/OMS_Medicine_prices.pdf)

## List of survey medicines

- Total of 49 medicines (OBs with LPGs) were included in the final list
- List of survey medicines include:
  - Global and Regional core lists (13 and 11 respectively) - provided in the WHO standard methodology
  - Medicines of local interest (the most demanded and sold drugs) - 25 medicines



## OVERVIEW OF THE METHODOLOGY (2)

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Survey regions *(the same regions as in previous 3 rounds were included in the sample)*

- **Tbilisi** (main Urban center, Capital City)
- **Batumi** (another important major urban center)
- **4 more survey regions** (randomly selected from the available list) - Imereti, Kakheti, Kvemo Kartli, Samegrelo.

Types of sampled pharmacies

- PSP/Aversi/GPC – The biggest pharmacy networks
- Other pharmacy networks – Pharmadepo, Pharmacenter and other small networks
- Independent pharmacies

Survey period - January – February, 2016



# DISTRIBUTION OF SURVEY SAMPLE

Survey Locations	n	%
Tbilisi	57	35,6
Adjara	15	9,4
Kakheti	16	10,0
Samegrelo	22	13,8
Kvemo Kartli	23	14,4
Imereti	27	16,9
Pharmacy Type		
PSP/Aversi/GPC	40	25,0
Other pharmacy Networks	24	15,0
Independent Pharmacies	96	60,0
Sampled vs. back-up pharmacies		
Sampled pharmacy	128	80,0
Back-up pharmacy	32	20,0
Total # of surveyed pharmacies	160	100,0