GENERIC INJECTABLE SHORTAGES AND TRENDS IN AVERAGE SALES PRICE IN THE UNITED STATES

BACKGROUND

Drug shortage as defined by US stakeholders

Generic injectable drugs constitute majority of US drug shortages

Supply, demand, and price relationship

Limited data on price trends for generic injectable drugs on shortage

Information potentially useful for pharmacy budget management

Average Sales Price (ASP) +6%

OBJECTIVE

To examine trends in
Quarterly Average Sales Price (Q-ASP)
among generic injectable drugs recently on shortage in the US
METHODS

Study Design & Data Sources

- Descriptive study
- Data Sources:
  - ASHP Resolved Drug Shortage website (ASHP-RDF)
  - CMS Part B Drug Pricing files (CMS-DPF)
- Time frame: Jan 2006 to Jul 2015

- Shortage began after Jan. 2006
- Shortage resolution between Jan. 2010 and July 2015
- Shortage duration ≥ 6 months
- Excluded vaccines

Confirmed Medicare Part B Reimbursement by

METHODS

Study Variables

Classified by use in clinical practice

ASHP-RDF Website

CMS-DFP

6 month intervals

Shortage Duration

Reason for Shortage

# of Manufacturers

Terminology

1

2

3

4

5

*Q-ASP was adjusted to 2015 USD using Medical Care Component of CPI

METHODS

Analyses

Descriptive summary statistics calculated

Av.% change in Q-ASPs calculated per 6 month shortage interval

Av. % changes in Q-ASPs examined descriptively

Over shortage duration | In 12 months preceding shortage onset
RESULTS

29

Generic injectable drugs in sample

Mean shortage duration
2.29 years
(SD = 1.26 years)

Most common shortage reasons*

- Manufacturing delays (65.6%)
- Product discontinuation (37.9%)
- Increased demand (31.0%)

*Totals may exceed 100% since shortage reasons were not mutually exclusive for each drug

RESULTS

Average % Change in Q-ASP During Shortage and Pre-shortage Intervals*

Average % Change in Q-ASP

-1.5 -1 -0.5 0 0.5 1 1.5 2 2.5 3 3.5 4 4.5

Time (Years)

Q-ASP adjusted to 2015 USD using Medical Care Component of CPI
RESULTS

Distribution of % Change in Q-ASP at End of Shortage Duration

Number of Generic Injectables

% Change in Q-ASP at End of Shortage Duration

RESULTS

Average % Change in Q-ASP over Shortage Duration by Therapeutic Area

Therapeutic Area

Average % Change in Q-ASP
RESULTS

Average % Change in Q-ASP over Shortage Duration by Drug Source Group

LIMITATIONS

Small sample size
Self-reported data
Influence of demand on pricing not examined
CONCLUSIONS

On average Q-ASP increased as shortage lengthened

Highest inflection at 4 years

Average price increase higher for single vs. multiple sourced drugs

Findings useful in anticipating price fluctuations and planning pharmacy budgets

REFERENCES


DISCLOSURES

• Research was funded by Novartis Pharmaceuticals Corporation (NPC)
• PH is an employee of University of Maryland
• DR is an employee of Rutgers University providing services to NPC
• At time of study, AV was an employee of Jefferson College of Population Health providing services to NPC
• At time of study, EO was an employee of Rutgers University providing services to NPC