



Participation in a Virtual Marketplace Decreases Drug Acquisition Cost and Waste

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ABSTRACT

The purpose of this project is to document actual costs savings on IV medications to the infusion pharmacy versus regular actual acquisition through a designated wholesaler when acquiring IV antibiotics via the virtual marketplace.

Our facility, located in Salt Lake City, UT is a free-standing outpatient infusion suite and home infusion provider. Our business model includes infusing anti-infective medications.

Our pharmacy works consistently with infectious disease prescribers. These physicians see the more severe and chronic infections requiring intravenous courses of therapy that continue for weeks, not days. Also, certain drug regimens are expected and anticipated by the pharmacy to mix and infuse following the prescribing practices of these physicians.

With this type of predictability, it becomes a simple matter of having an allocation of these IV antibiotics available for mixing when a new referral is received.

With minimal effort, we were able to calculate a reasonable quantity of inventory, with known short dating, to keep on the shelf and use before expiring. A comparison of pricing between the virtual marketplace inventory and primary wholesaler demonstrated a savings across all manufacturers and vial strengths between 70-80%.

INTRODUCTION

Every year millions of doses of IV antibiotic vials are destroyed when they pass their expiration date (1). Manufacturers want to avoid the cost associated with their disposal and will steeply discount product with less than one year expiration dating. There is a virtual marketplace provider connecting infusion pharmacies with pharmaceutical manufacturers to facilitate the sale of short dated inventory benefiting both the infusion pharmacy and the manufacturer.

METHODS AND MATERIALS

Our pharmacy, located in Salt Lake City, UT, is a free-standing outpatient infusion suite and home infusion pharmacy. We have two main core business models: 1) infusion of medications treating chronic diseases, and 2) infusing anti-infective medications in the suite and at home. Our facility works consistently with several infectious disease prescribers. These physicians see severe and chronic infections suggesting therapies that continue for weeks. These prescribers utilize certain drug regimens anticipated by the pharmacy. With this predictability, we stock an allocation of their regularly prescribed IV antibiotics.

We chose to test cost-saving measures with piperacillin-tazobactam. The virtual marketplace company website search function is easy to navigate. It displays all listings of piperacillin-tazobactam across all strengths, NDC listings, and most important, expiration dates. By observing expiration dates we can order a quantity sufficient for any length of therapy. Our first trial was conservative. We ordered piperacillin-tazobactam with an expiration window of 90 days covering 21 days of therapy for three patients with durations of 6 to 12 weeks.

Any change to the length of therapy or dose for these three patients could be absorbed into any new referral. We anticipated none of the piperacillin-tazobactam from this initial order to still be on the shelf after 30 days regardless of how the therapies went for the initial three patients. We anticipated and planned correctly.

RESULTS

With minimal effort, we calculated a reasonable quantity of piperacillin-tazobactam with known short dating to use up before the expiration date. All vials purchased from the virtual marketplace provider were administered before the expiration date listed on the vials. A price comparison between the virtual marketplace company inventory of piperacillin-tazobactam and our primary wholesaler demonstrated a savings across manufacturers and vial strengths between 70-80%. For patients on piperacillin-tazobactam, our pharmacy realized an additional financial increase of \$12.00-\$16.00 per day per patient using short-dated product. Using this strategy increased our profitability by simply monitoring one single antibiotic frequently used in our center.

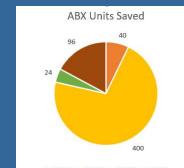


Figure 1: Vials not destroyed.

Days to Expiry
As low as: 49
Average: 264
Patient Usage: 100%

Figure 2: Lot date analysis



Photo: Piperacillin-Tazobactam Family

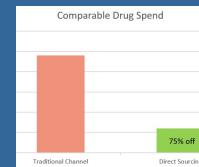


Figure 3: Financial impact.

DISCUSSION

Our experience purchasing from a virtual marketplace provider of short-dated product decreased our acquisition cost and did increase our profitability with looking at just one single frequently used product, piperacillin-tazobactam.

CONCLUSIONS

Our desire to reduce acquisition costs for one single IV antibiotic, piperacillin-tazobactam, resulted in a measurable financial benefit. Simple metric monitoring of the most frequently used IV antibiotics can result in substantial drug acquisition cost savings to any infusion pharmacy regardless of size. Our participation in the virtual marketplace has been justified on many levels. There has been consistent cost savings on acquisition of short dated IV antibiotics. Also, with our desire to be ecologically sensitive, using a virtual marketplace provider helped prevent 560 antibiotic vials from being destroyed and introduced into the environment.

REFERENCES

1. First Databank: <https://www.fdbhealth.com> February 2021