Healthcare Organization Commitment

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APSS

Have you reviewed the Patient Safety Movement Foundation's Actionable Patient Safety Solutions (APSS)?
Yes

What Patient Safety Challenge does your Commitment address?
Challenge 3F - Drug shortages
Commitment Name
Drug Shortage Management and Risk Mitigation

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Commitment Details

Commitment Summary
UPMC will commit to continuing implementation of interdisciplinary, rapid response drug shortage management teams and will support development of technology solutions to improve drug shortage prevention and mitigation.

Action Plan
UPMC will focus on the Executive Summary Checklist in the following ways:

1. Senior Leaders recognize the negative impact of drug shortages on patient care
   - Chief Quality Officer: providing support and leadership for taskforce activities
   - Chief Supply Chain Officer: providing support and financial investment in building drug shortage technologies that incorporate Augmented Intelligence (AI) and Machine Learning (ML) to improve prevention, response, collaboration, and communication activities

2. Commit to monitor, prevent, and mitigate drug shortages as outlined by the National Quality Forum
   - Currently the UPMC system uses a centralized pharmacy supply warehouse and purchasing team to insulate inventory for UPMC and non-UPMC stakeholders, monitor supply availability changes, and identify demand signal shifts early in the supply chain. This process can be very manual and is managed with a dedicated team of buyers, quality analysts, pharmacists, inventory specialists, and souring professionals (central purchasing and warehousing team) through a shared Excel database and warehouse management system (WMS).
   - Daily warehouse inventory reports are shared throughout the UPMC system with pharmacy buyers to alert them to changing inventory status. Weekly shortage management meetings are held with the central purchasing and warehousing team to identify new or worsening shortages. This information is communicated via email summary to the UPMC system. Upon the first sign of worsening supply status, the central purchasing team will exhaust all avenues to ensure a steady supply of primary purchased products. If the primary products are unavailable, the team will explore procurement of direct substitutes.
   - Work on legislation to regulate kickbacks to Group Purchasing Organizations (GPO) from pharmaceutical companies
   - Partnership with a GPO can be extremely helpful in managing shortages. Many GPO contracts have clauses that require drug manufacturers to pay a penalty back to the healthcare provider if they are unable to supply contracted medicines. This is an important penalty that GPOs have been successful in including in contracts that would likely not exist if health systems were to negotiate directly with manufacturers.
   - GPOs can aggregate product demand to ensure that a manufacturer has the necessary market stability to invest and come to market with a generic drug. If manufacturers were required to negotiate with hundreds or thousands of health systems to manage market penetration and profit, it would be nearly impossible to support profitability.
   - The fees paid to and negotiated by GPOs are in large
part returned to the healthcare provider purchasing the pharmaceuticals via administrative shareback. Without these fees it would be extremely difficult for some healthcare systems to remain profitable with razor thin margins of 2% or less in many cases. The GPO that we participate with has started a company expressly designed to bring shortage-prone medications to the market. This GPO-built company has developed novel, highly committed, long-term contracts for shortage impacted products and has not required any capital investment in the management or operations of the company from the members that the GPO serves. We intend to work with this new company to ensure long-term, committed access to the shortage-impacted products that have been incorporated into the program.

Use an effective monitoring and screening system to rapidly identify and mitigate the effects of drug shortages

The future state of shortage monitoring and screening will incorporate the on-site development AI and ML in a large-scale cluster computing model to scan national, regional, and local demand signals to provide recommendations on baseline safety stock inventory levels for items routinely impacted by shortages and provide early warning of developing shortages in the market. The goal of the new technology is to enable clinicians and pharmacists to act early to conserve supply, prepare alternative therapies, and train impacted healthcare providers so that patient care can continue safely. Create a rapid response intervention based on the 2018 Managing Drug Product Shortages

Ad hoc management teams are assembled when shortages arise that central purchasing is not able to sufficiently mitigate with the purchase of primary or direct substitute products. These teams will meet daily, or weekly depending on the scope of the shortage. These teams may include: the central purchasing and warehousing teams mentioned above, System Pharmacy & Therapeutics Committee representation (pharmacists and physician), Pharmacy, Nursing, Physicians, Other Supply Chain, IT and Technical Support, Quality and Safety, Emergency Response. Review all drug shortages and their impact on patient safety biannually

Not currently in place. A future feature could be incorporated into the new AI Drug Shortage platform that would provide reporting back to UPMC senior leaders regarding the full scope of drug shortage-focused activities and allow for an evaluation of the success of drug shortage mitigation efforts. Use biannual review to create an improvement plan and as a learning opportunity

Currently improvement planning, and post-event reviews are occurring routinely with the drug shortage team and system stakeholders. These are not held for biannual review but are consistently updated and managed as the market adjusts.

**Impact Details**

**Lives Saved**

Tell us about your baseline level of harm:
N/A

Next, make a prediction (goal) from your baseline above for 1 year from today. We’ll give you the opportunity to update us next year on the actuals:
N/A
Methodology for Determining Lives Saved:
N/A