Lessons from Hurricane Maria
Risk Management and Recovery in a Global Supply Chain

Nicola Raycraft
James Teaff
Monthly Volume – All Hospital Codes

Monthly Volume – Maria Impacted Codes

Pre Maria
Before Sep 20, 2017

Monthly volume in units

#% = relative standard deviation (StdDev/Mean)
Pre Maria
Before Sep 20, 2017

Monthly Volume – 500+ Bed Hospital

Monthly Volume – 200 Bed Hospital

Monthly volume in units

16%

#% = relative standard deviation (StdDev/Mean)
Puerto Rico Challenges
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Hurricane-related power outages in Puerto Rico

Before Maria  Sept 28, eight days after landfall  Oct. 8, 18 days after landfall

San Juan (Pop 355k)
Caguas (Pop 134k)
Guayama (Pop 45k)
Monthly Volume – All Hospital Codes

Monthly Volume – Maria Impacted Codes

#% = relative standard deviation (StdDev/Mean)

Monthly volume in units
Timeline

- Initial Communication "Preventative Allocation on sets" Sept 28, 2017
- October 11, 2017 50mL and 100mL codes on Allocation
- Health Canada Multi-Stakeholder Meeting October 18, 2017
- Health Canada Approval of Alliston Minibag October 18, 2017
- Alliston Mini-Bag in-market November 23, 2017
- 100% Weekly Allocation January 4, 2018
- Normal Supply Saline February 5, 2018
- Normal Supply IV & Access March 1, 2018
Impact on 50mL and 100mL

Weekly Small Volume Parenteral Volume – 500+ Bed Hospital

#% = relative standard deviation (StdDev/Mean)
Back to Normal

Monthly Volume – All Codes

- Pre Maria: 8%
- Maria: 7%
- Post Maria: 4%

Monthly Volume – Maria Impacted Codes

- Pre Maria: 8%
- Maria: 14%
- Post Maria: 8%

#% = relative standard deviation (StdDev/Mean)
Back to Normal

Monthly Volume – 500+ Bed Hospital

16%

26%

Monthly Volume – 200 Bed Hospital

16%

33%

Post Maria
After Mar 1, 2018

#% = relative standard deviation (StdDev/Mean)
Lessons Learned

**Product Issues**
- Product/Manufacturing Site Redundancy
- Resilient Inventory

**Product Solution**
- Alliston produces a near-identical minibag to Puerto Rico
- Baxter Canada carries more inventory locally
- Proactive registration of substitutes from other plants

**Supply Chain**

**Product**
- Approved substitute list
- Inventory/SKU classification
  - Usage and clinical disruption
  - Clinical complexity to change
  - Sole source?
Lessons Learned

**Supply Chain**

**Process**
- Established Threat Management procedure
- Identifying Key stakeholders
- Allocation process
- Build contingency plan into RFP process, weighted criteria
- Supply management & disruption program
- VOR build into the process
- Identify key contacts, media, customers, Health Canada.
- Escalation process

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**Process**
- More Transparent, responsive and adaptable allocation
- Review Capacity and tools to inform customers quickly

**Process Solution**
- Dedicated Customer Care model
- Online platform (e-services) for quick customer reference and information
- E-catalog for cross-referencing
Thank You