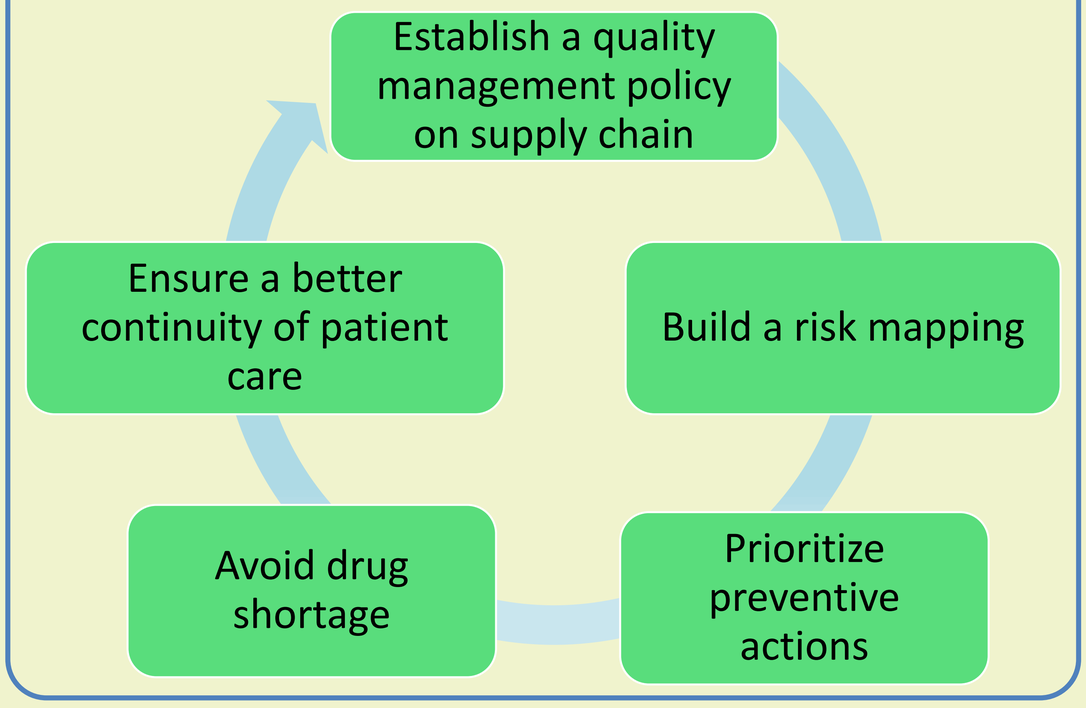
MEDICINE SUPPLY CHAIN OF A CENTRAL PHARMACY : RISK MAPPING OF SHORTAGE

F. Charra[1], A. Dubromel[1], X. Bourge[1], A. Meunier[1], F. Locher[1], L. Derain[1].
[1] Hospices Civils de Lyon, Pharmacie Centrale, Lyon, France

Objectives

The **purpose** of this work is to build a risk mapping of shortage to ensure a better continuity in patient care



Methods

Failure modes and effects analysis methods

- Working group created :
  2 Pharmacists - 1 Pharmacy student - 1 Logistics engineer - Pharmacy technicians
- Supply chain analysis :
  All steps from order to storage process
- Potential failures analysis :
  5 causes of failures : Material – Milieu – Methods – Machine – Man power
- Criticality of potential failures rated :
  Severity (sev) and frequency (frq) rates to determinate the gross criticality (gc)
  Mastered level (ml) of control to determinate the net criticality (nc)
- Priority actions identified :
  Each cause rated over 100 on gross criticality

Frequency : based on error history analysis	
1	Once a year or less
3	Several times a year
5	Several times a month
10	Several times a week

Severity : based on patient's issues	
1	Acceptable
5	To monitor
10	Unacceptable

Master level of control	
1	Knowledge of a written procedure, applied and regularly assessed
3	Application of written procedure
5	Non-existent or not applied procedure, depends on the operator, note secured
10	Non-existent procedure

Results

We identified 15 risks and 28 causes, 5 causes were prioritized

Activity	Step	Risk	Cause	Risk effect on activity	Sev	Frq	GC	Mastering device	ML	NC
Order	Order tracking	Lack of reminder	Non executed reminder on supplier for order not received after 5 days	Delay in supply until stock out	10	10	100	Daily check of order in progress	10	1000
	Order picking	Lack of ordering	Missed order due to poor estimation of drug consumption	Stock out	10	3	30	Drug information in the order software	10	300
		Ordering error	Insufficient quantity ordered due to lack of consumption information (ex : new drug)	Not enough stock before next order	10	3	30	Master our order data in our warehouse management system	10	300
		Lack of ordering	Missed order due to stock issues	Drug on security stock not ordered : stock out	10	3	30	Inventory Analysis of missing	5	150
Reception	Verification of drug supply	Reception error	Wrong quantity received	Stock out or problem of storage area	10	3	30	Process of order reception	5	150

Discussion - Conclusions

The weak points identified on our supply chain lead to review order process and training to improve patient care.
The next step will be to extend it to the delivery of the pharmacy of the 5 hospital sites supplied and considerate financial and juridical aspects of each risk.