



## Background

Drug shortages are an increasing problem for hospitals in Germany. The management is timeconsuming and might endanger safety of drug therapy. Therefore, it is essential to take precautions to deal with upcoming shortages in advance.

## Aim

Development of an algorithm to create an essential drug list in consideration of logistic and clinical aspects.

## Method

- 1) Classification of the hospital formulary (oral medication, parenteral medication, medicinal products, dietetics).
- 2) Prioritizing generated classification for parenteral and oral drugs.
- 3) Assessing drug consumption for each drug by year, quarter and month.
- 4) Extending selective inventory control (ABC-XYZ-Analysis).
- 5) Defining a step-by-step decision tree considering local clinical pathways and logistics (Fig. 1).
- 6) Use algorithm to define essential drugs
- 7) Combine essential drugs with ABC-XYZ-Analysis

## Result

- ✓ Detection of essential drugs
- ✓ Risk evaluation for each drug
  - pre-define alternative therapies
- ✓ Possibility to re-evaluate
  - order cycle
  - inventory

## Limitations

- Time consuming process
- Possibility to oversee special needs in some indications
- Compounding in case of shortage not considered in decision tree

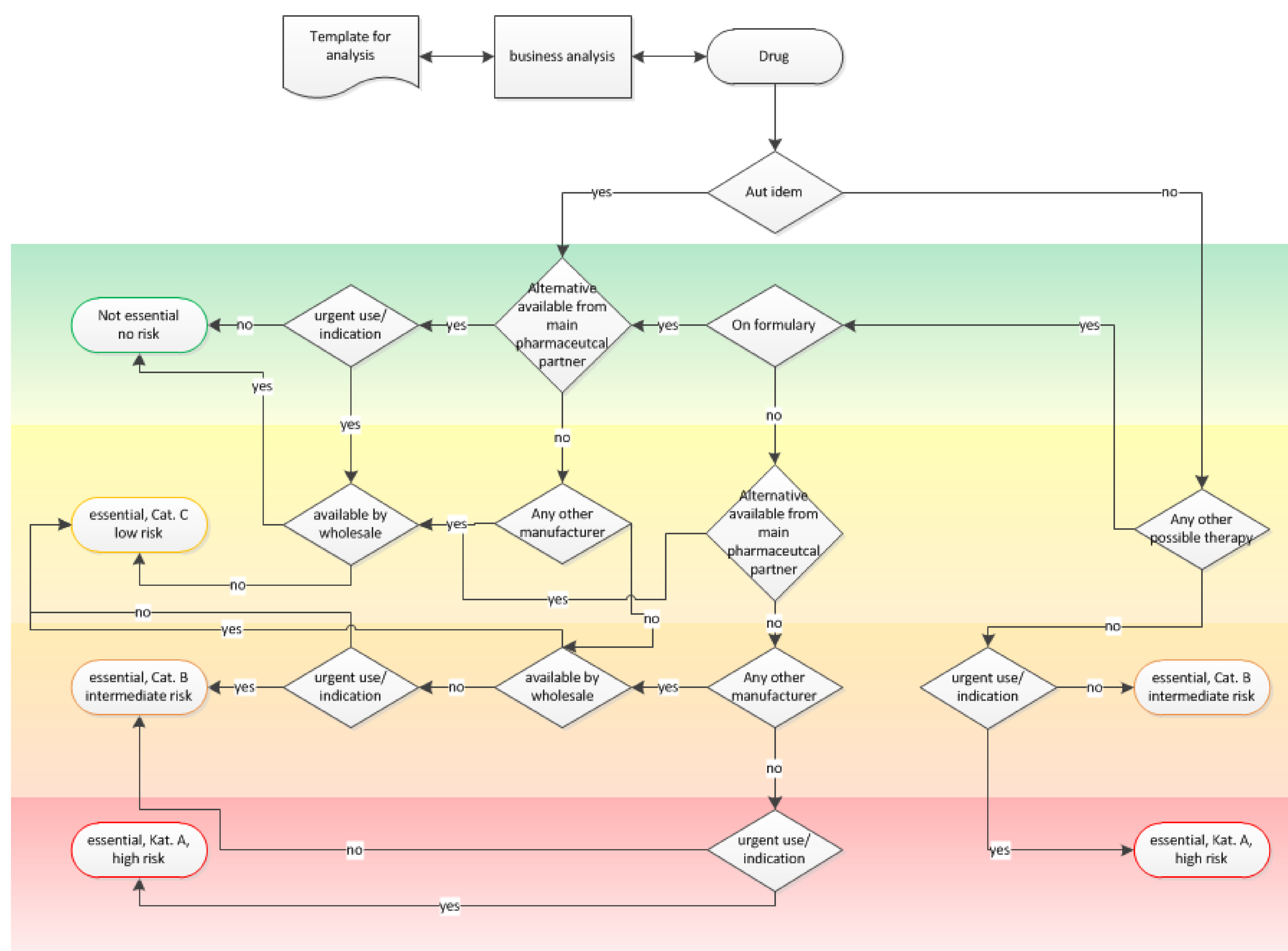


Fig. 1

## Conclusion

- An essential drug list is very helpful for dealing with drug shortages.
- External validation is necessary.