



## OPEN LEARNING COURSE

### Medicines Shortages – Causation and Approaches to Improvements



Link to EAHP Statements:

Section 1 - Introductory Statements and Governance: Statements 1.1, 1.2, 1.3, 1.5

Section 2 - Selection, Procurement, and Distribution: Statements 2.1, 2.4, 2.5, 2.6

Section 3 - Production and Compounding: Statements 3.1, 3.2, 3.3, 3.4

Section 4 - Clinical Pharmacy Systems: Statements 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8

Section 5 - Patient Safety and Quality Assurance: Statement 5.1

Section 6 - Education and Research: Statements 6.2, 6.4

ACPE UAN: 0475-0000-19-036-H05-P. A knowledge activity

Click [here](#) <sup>[1]</sup> to download the ACPE description form

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## Abstract:

Medicine shortages (also referred to as drug shortages) have become a global phenomenon and are recognized to affect all health systems. It is a problem that has grown to become a crisis in terms of delivering patient care. For example, over 1400 products were reported to be in shortage in the Netherlands between 2004 to 2011. This concern is known to affect all countries in Europe and beyond including the USA, Canada, and Australia. Medicines affected by shortages include those used to treat cancer, infections, emergencies, cardiovascular conditions, anaesthetic products, neurology and many more. The major challenge is that the economic incentive system in place is aligned in such a way that participating stakeholders are motivated to maneuver themselves into a deadlock situation. A

critical issue today is that the key players do not collaborate sufficiently to guarantee a security of supply of essential medicines. What is needed is a system perspective to understand and loosen this deadlock situation as well as to create innovative incentives on a legal and regulatory level.

Shortages result in the suffering of individuals and negative consequences for an economy. An option to overcome shortage situations is to use a different medicine as a substitute. However, alternatives are not always feasible and available. When shortages arise, risk increases through substitution from other excipients, other concentrations, foreign language vials, or untranslated package leaflets. Such risks have not yet been quantified in a scientifically credible way. Thus, a decrease of the number of shortages as a result of the project will have a global economic and societal impact which is in the interest of careers, patients, public health, and of taxpayers.

Hospital pharmacists intend to contribute to how medicine shortage problems can be detected, reduced, or avoided respectively by employing a systemic ecosystems perspective taking into account strategic and quality issues along the supply chain. A collaborative community of relevant stakeholders is to be established to overcome these reasons.

**Click [HERE](#) <sup>[6]</sup> <sup>[7]</sup> to access the course!**

### Learning objectives:

At the end of the open learning course, participants should be able to:

- disclose and unravel restrictive legal, economic, or organizational frameworks and routines, erroneous incentives in the supply chain, conflicts of interest, and problematic cost-benefit ratios that serve to exacerbate or create shortages;
- elucidate and approach the supply chain-inherent problems at every step from raw material up to the patient's need and outcome;
- identify coping strategies;
- provide tools to escape with threats from supply chain disruption.

### Presentations:

- Hospital Pharmacists as troubleshooters
- An international bottom-up approach – analysis of causation of shortages
- The clinical needs
- Social and ethical aspects
- Simulation of a complex network – a Systems Dynamics

- Pragmatic coping strategies in Hospital Pharmacies
- Systematic attempts at a solution
- How clinical needs could be met
- Social and ethical framework and obligations to be met
- Workshop "Simulation Experimentation"
- Parallel workshops World Café Style

## Keywords:

Medicine shortages, global dimension, national patterns, hospital pharmacist's challenges, commonalities, improvement options, capacity building, global dimension, definitions, interests, positions, dependencies, hospital pharmacist's challenges, commonalities, improvement options, threats, risk factors and vulnerabilities, emergency medicines, life-saving medicines, risk of substitutions, outcomes, ethics, sociological situation, payability of treatments, social peace, system dynamics, foresight, future research, non-linear prediction, effective coping strategies, improvement options, cost – benefit, cost - effectiveness, interests, positions, (in-)dependence, BATNA, WATNA, survey, live-saving medicines, clinician's perspective, patient's perspective, harmonisation, economic levelling, high quality of public health, social framework, Vensim®, foresight, future research.

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## Links

[1] [https://www.eahp.eu/sites/default/files/medicines\\_shortages.pdf](https://www.eahp.eu/sites/default/files/medicines_shortages.pdf) [2] <http://www.eahp.eu/content/prof-dr-helena-jenzer-0> [3] <http://www.eahp.eu/content/nenad-miljkovic> [4] <http://www.eahp.eu/content/dr-tomasz-bochenek> [5] <http://www.eahp.eu/content/prof-dr-stefan-groesser> [6] [https://learning.bmj.com/learning/course-intro/biosimilars%20procurement.html?courseId=10064390&locale=en\\_GB](https://learning.bmj.com/learning/course-intro/biosimilars%20procurement.html?courseId=10064390&locale=en_GB) [7] <https://learning.bmj.com/learning/course-intro/biosimilars-brexit.html?courseId=10064266>