

## SUPPLY CHAIN OF IRON CHELATORS FOR THALASSAEMIA IN MALAYSIA: AN OVERVIEW FOR PROCESS OPTIMISATION

ASRUL AKMAL SHAFIE<sup>1,2\*</sup>, NOOR SYAHIREEN MOHAMMED<sup>1,3</sup>, JACQUELINE WONG HUI YI<sup>1,4</sup>, IRWINDER KAUR CHHABRA<sup>1,5</sup> AND HISHAMSHAH MOHD IBRAHIM<sup>6,7</sup>

<sup>1</sup>Discipline of Social & Administrative Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, Pulau Pinang, Malaysia

<sup>2</sup>Institutional Planning and Strategic Centre, Universiti Sains Malaysia, Pulau Pinang, Malaysia

<sup>3</sup>Clinical Research Center, Hospital Sultanah Bahiyah, Kedah, Ministry of Health Malaysia, Malaysia

<sup>4</sup>Pharmacy Department, Hospital Kuala Lumpur, Kuala Lumpur, Ministry of Health Malaysia, Malaysia

<sup>5</sup>Pharmacy Department, Sabah Women and Children's Hospital, Sabah, Ministry of Health Malaysia, Malaysia

<sup>6</sup>Women and Children's Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

<sup>7</sup>Division of Research and Technical Support, Ministry of Health Malaysia, Putrajaya, Malaysia

**Published online:** 25 May 2022

**To cite this article:** SHAFIE, A. A., MOHAMMED, N. S., WONG, J. H. Y., CHHABRA, I. K. & MOHD IBRAHIM, H. (2022) Supply chain of iron chelators for thalassaemia in Malaysia: An overview for process optimisation, *Malaysian Journal of Pharmaceutical Sciences*, 20(1): 135–147, <https://doi.org/10.21315/mjps2022.20.1.10>

**To link to this article:** <https://doi.org/10.21315/mjps2022.20.1.10>

### ABSTRACT

*Iron chelating therapy (ICT) drugs are prescribed to transfusion dependent thalassaemia (TDT) patients to prevent iron overload complications. The high number of TDT patients in Malaysia strained the public healthcare resources. This paper aims to provide an insight on existing supply chain management of ICT medicines in Malaysia and to explore ways for a more efficient system. A rapid review of literatures was conducted in electronic databases (PubMed, Emerald, Scopus and ScienceDirect) and other relevant Malaysian government documents. Supply of ICT to thalassaemia patients is publicly funded but much availability of oral ICT is restricted due to financial consideration. ICT in Malaysia is supplied through central procurement but purchasing and inventory management are decentralised to each hospital. Vendor-managed inventory system is an ideal option to the inventory management practice in Malaysian public healthcare facilities as it could provide better efficiency and reduces inventory management costs.*

**Keywords:** Thalassaemia, Iron chelating therapy, Supply chain, Vendor-managed inventory

---

\*Corresponding author: [aakmal@usm.my](mailto:aakmal@usm.my)