

# Stewardship of patient blood management in Shah Alam Hospital Malaysia: A cross-sectional study

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## ABSTRACT

**Introduction:** Patient Blood Management (PBM) programs provide optimal stewardship of limited blood resources using evidence-based practice by a multi-professional, multimodal, and individualized approach towards patient care (1-3). Shah Alam Hospital (HSAS) is a hospital under the directive of Ministry of Health was started in 2015 with a capacity of 450 beds. It is a district hospital with specialist services by providing services including general medicine and related specialties, general surgery, Obstetrics & Gynaecology (OBGYN), Paediatrics and others. Anaemia, including iron deficiency anaemia (IDA), and iron deficiency without anaemia are affecting the lives of billions of many otherwise relatively healthy people. It is estimated 1.95–2.36 billion people have been affected by anaemia and 1.24–1.46 billion are iron deficient (4-5). In surgical related, preoperative anaemia rates can reach 75% (6). Anaemia management as part of PBM strategies had been in place at HSAS by clinical champions. **Materials and Methods:** A cross-sectional analysis of data pertaining on Patient Blood Management in HSAS from 2019-2023. Descriptive analysis was carried out from gathered information. **Results:** Data gathered from full blood count (Hb<12.5g/dL) for 2023 has shown 51% of registered patients were anaemic with mean haemoglobin (Hb) of 10.1g/dL. Patients attended the clinic has higher haemoglobin (10.7 g/dL) compared to 9.6g/dL of admitted patients. Furthermore 646 (46%) out of 1859 full blood pictures (FBP) samples in 2023 were diagnosed with iron deficiency anaemia (IDA). Patients with IDA were treated either with oral iron or IV iron by general medical and obstetrics and gynaecology (OBGYN). There were increment in IV iron usage from 2019 to 2023. Erythropoietin was also prescribed for patient with chronic renal disease. Blood products request for patient's clinical used were reduced in 2023 compared to 2021 except for cryoprecipitate. **Conclusion:** Implementation of PBM is practically and evidently provide better point of care and safety measures towards patient's management. Expansion of PBM strategies in all clinical setting would give greater impact on patient care and cost effectiveness on health care systems.