



## The Hong Kong Society of Haematology Annual Scientific Meeting 2024 Call for Abstracts

<b>Title</b>	Multidisciplinary approach to Transform Patient Blood Management into Culture and Practice: Experience of a Cluster-wide Endeavour
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<b>Abstract</b>	
<b>Introduction</b> <p>Patient blood management (PBM) is a patient-centred, evidence-based multidisciplinary approach and has been shown to improve patient outcome. Single unit transfusion (SUT) and restrictive transfusion strategy (RTS) are important PBM measures. The SUT rate in 2014 and RTS rate in 2019 were only 30% and 47.1-51% in New Territories West Cluster (NTWC) respectively.</p> <p>The potential under-recognition of iron deficiency (ID) in NTWC was highlighted by the fact that 53.8% of ID patients showed apparently-normal iron (Fe) profile (TSAT <math>\leq</math> 20% and ferritin within gender-specific reference range). Alternate-day regimen of oral Fe replacement has been shown to be more effective. However, only 2% of ID patients were given oral Fe of alternate days in NTWC.</p>	
<b>Objective</b> <p>Through PBM implementation in NTWC, we aim at</p> <ul style="list-style-type: none"><li>• Provision of easy access to blood product usage key performance indicators for PBM stakeholders</li><li>• Reduction of number of blood transfusion</li><li>• Improvement of SUT and RTS rate and Fe replacement rate in ID patients</li></ul>	
<b>Methodology</b> <p>A PBM subcommittee was established in September 2022 to promote the PBM implementation in NTWC and to review PBM parameters periodically for strategic navigation:</p> <ul style="list-style-type: none"><li>• The RTS rate from the Management Information Portal</li><li>• The SUT rate from the Clinical Data Analysis and Reporting System</li><li>• The blood product utilization rate from the Blood Bank System</li><li>• The ID patient identification via the Laboratory Information System</li></ul> <p>At departmental level, PBM projects were carried out to tackle ID through Fe replacement:</p> <ul style="list-style-type: none"><li>• Patients with menorrhagia in Departments of Accident and Emergency and Obstetrics and Gynaecology</li><li>• Oncological patients in Department of Clinical Oncology</li><li>• Patients undergoing colectomy in Department of Anesthesia and Operating Theatre Services</li><li>• Systemic modification in Fe profile request, oral Fe prescription interface and ID diagnostic information supplementation in ferritin report by Department of Medicine and Geriatrics</li></ul>	
<b>Result &amp; Outcome</b> <p>At cluster level, the transfusion rate of NTWC (3.3-4.2%) was consistently lower than that of Hospital Authority (3.8-4.6%) from 3Q21 to 2Q23. The SUT rate of NTWC has improved from 30% in 2014 to 50% in 2021. The RTS rate of NTWC improved from 47.1% in 1Q19 to 72.6% in 2Q23.</p> <p>At departmental level, PBM projects made a difference across various patient groups with ID. The mean reduction of packed cell required per head reduced from 2.02 to 1.19 (<math>p &lt; 0.05</math>) for patients with menorrhagia. Blood transfusion was fewer in overall oncological patients (<math>1.1 \pm 2.0</math> vs. <math>0.5 \pm 1.0</math>, <math>p &lt; 0.05</math>) and hospice patients (<math>1.3 \pm 2.1</math> vs. <math>0.6 \pm 1.0</math>, <math>p &lt; 0.05</math>) with PBM implementation. The number of patients with colectomy requiring transfusion reduced by 69% (<math>p &lt; 0.05</math>) with Fe replacement.</p> <p>A rising trend of Fe replacement in ID patients with apparently-normal Fe profile was shown with PBM measures (61.8% vs. 74.8%, <math>p = 0.108</math>). There was a significant increase in oral Fe prescription in alternate-day regimen (2% vs. 57%, <math>p &lt; 0.05</math>).</p>	

**Conclusion**

The success of PBM implementation lies in data-driven strategic planning and close collaboration among PBM stakeholders. By reinforcing the importance of SUT and RTS and precise recognition and treatment of ID, we hope to move beyond traditional transfusion to successful PBM implementation.