

# Single Unit Transfusion Guide – handout of information

## “Every **ONE** matters”

### INTRODUCTION:

Single unit transfusion is part of Patient Blood Management (PBM); an evidence based patient centred strategy to improve patient outcomes by minimising red blood cell transfusions.

In line with the national Patient Blood Management Guidelines: *“Where indicated, transfusion of a single unit of RBC, followed by clinical reassessment to determine the need for further transfusion, is appropriate.”*<sup>1,2</sup>

**If one unit of blood adequately improved the symptoms, then no further transfusion should occur.**

Single unit transfusion applies to stable, normovolaemic adult patients, in an inpatient setting, who do not have clinically significant bleeding.<sup>3</sup> Transfuse one unit at a time and only when clinically indicated, based on the need to relieve clinical signs and symptoms of anaemia.<sup>1,2</sup> Symptoms may include dyspnoea, tachycardia, chest pain, hypotension, increased heart rate and decreased oxygen saturation.<sup>4-6</sup>

### SITUATION:

It is important to ensure that practice aligns with the national Patient Blood Management Guidelines (*Module 2 – Perioperative, Module 3 - Medical and Module 4 - Critical Care*) which support single unit transfusion.<sup>1,2,7</sup> The National Blood Authority has produced a single unit transfusion guide and supporting resources to assist meeting the Patient Blood Management Guidelines and compliance with the National Safety and Quality in Health Care (NSQHS), Standard 7: Blood and Blood Products.<sup>8</sup>

Morbidity from transfusion has been shown to be dose dependent.<sup>9,10</sup> Two units are commonly prescribed when one unit may have met the clinical expectation and outcome of the transfusion. Each additional transfusion exposes patients to increased risk of an adverse event.<sup>11,12</sup>

### BACKGROUND:

Historically, two unit blood transfusions were common practice as a single unit was not considered sufficient to correct anaemia.<sup>13,14</sup> Transfusion was often habitual /cultural, according to haemoglobin and not based on evidence of benefit. Current evidence now demonstrates that increased morbidity, mortality and length of hospital stay may be associated with transfusion.<sup>9,10</sup>

### ASSESSMENT:

Blood transfusion is a live tissue transplant. Emerging evidence of harm from transfusion requires a precautionary approach to balance risk with benefit for **each unit**.<sup>11,12</sup> Single unit transfusions are appropriate in patients who do not have clinically significant bleeding and reduce risk.<sup>3,15,16</sup>

### RECOMMENDATION:

Obtain informed consent from the patient or responsible person/guardian prior to prescribing a red blood cell transfusion.

Ensure the safety and efficacy of red blood cell transfusion by confirming every unit transfused is an independent clinical decision where the expected benefit outweighs the risks and alternatives have been considered.

Where indicated, transfuse a single unit of red blood cells, then clinically reassess the patient to determine if further transfusion is required. Transfusion should not be based on haemoglobin level alone but should also be based on an assessment of the patient’s clinical status.<sup>1,2</sup>

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