A DEFINITION OF CRITICAL CARE RETRIEVAL IN THE SOUTH AFRICAN CONTEXT

Working Group for Critical Care Retrieval of the Emergency Care Society of South Africa

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INTRODUCTION

South Africa has relatively few intensive care unit (ICU) beds and medical specialists, especially in peri-urban and rural areas.[1-2] A South African national audit of critical care resources described a total of 4168 private and public ICU beds predominantly situated in the Gauteng, KwaZulu-Natal and Western Cape provinces with the remaining six provinces only having less than 300 ICU beds per province.[2] This means that the transfer of these critically ill or injured patients to facilities that are more appropriately resourced to manage their conditions, occurs commonly within the South African context. Currently, these transfers are undertaken by advanced life support prehospital practitioners, without additional postgraduate training.[3,4]

The need for additional training and standard-setting for prehospital practitioners who undertake these transfers have previously been described by the Critical Care Retrieval Working Group (CCRWG).[5] One of the first steps in this standard-setting is to distinguish between the transfer of a patient from one facility to another (interfacility transfer, IFT) and the transfer of a highly dependent, critical care patient (critical care retrieval, CCR) as this will allow for appropriate resource allocation.

Formal regulations that do not specify aspects such as practitioner training, experience and minimum equipment standards for dedicated CCR programmes in South Africa are insufficient.[6] Internationally, CCR programmes comply with established standards and adhere to programme or service specific regulations. However, the existing legislation and regulations differ in each service, region or country and would not always be feasible in the South African context.[6-7]

Currently, there is no universally accepted international or South African definition for CCR. The Oxford Specialist Handbook of Retrieval Medicine describes retrieval medicine as 'the inter-hospital transfer of critically ill patients using specialised clinical staff, transport platforms and equipment'.[8] A definition for CCR will provide a foundation to establish a purpose, structure, and scope for CCR within South Africa. Literature, which predominantly focuses on the paediatric CCR patient population, has identified various important key elements that facilitate safe patient transfers.[9] These elements include the CCR medical crew selection and team composition, the equipment as well as the mode of transport, which is coordinated by a medical control officer.[9] The evidence for safe, advanced life support pre-hospital practitioner CCR predominantly consists of observational studies and discussions focusing on adverse event reduction.[10]

The purpose of this paper is to describe the development of and state the definition of CCR within the South African context.

DEFINITION DEVELOPMENT PROCESS

A literature search was performed to determine the key aspects of CCR definitions elsewhere. An initial draft definition was circulated to the CCRWG for commentary. Comments were collated, and the second round of commentary was undertaken. Finally, a consensus meeting was held using video-conferencing to finalise the definition presented herein. After that, the definition was circulated to key role-players in emergency and critical care, both locally and internationally for endorsement. The definition as it is presented has been endorsed by the Emergency Care Society of South Africa (ECSSA), the Critical Care Society of Southern Africa (CCSSA) and the International Board for Specialty Certification (IBSC).

The definition of CCR is multifactorial, and the safe execution of high acuity transfers cannot merely be reduced to the act of transportation. Further to this, literature has identified that

patient safety can only be improved with the development of dedicated CCR teams functioning as part of an integrated system of care, rather than individuals acting in isolation.[9–11]

For this reason, our definition of CCR outlines five equally important aspects (Fig. 1), namely: patient population, case selection, dedicated CCR crew, dedicated CCR equipment, quality management and training. Each of these aspects forms focus areas of ongoing research by the CCRWG. This is further expanded to provide an extended, narrative definition for CCR. It is essential to remember that CCR is still in its infancy in South Africa. Many questions remain to what the best approach to these retrievals are, both locally and internationally.[3,4] However, it is our firm belief that standard-setting is an essential first step.[5]

CRITICAL CARE RETRIEVAL: A DEFINITION

CCR is the stabilisation and transport of a critically ill or injured patient from a facility where the healthcare requirements of the patient outweigh the diagnostic or treatment abilities, and expertise available, to an appropriate facility where these are available.[3]

It is acknowledged that defining the term ‘critically ill or injured’ is problematic for a variety of reasons. Therefore, a CCR should have specialised criteria to match the patient population to the CCR resources. This should be facilitated through a specialised coordinating centre with medical expertise that can evaluate the merits of every case based on clinical and logistical criteria.[9]

A CCR crew member is a healthcare provider that has specific skill, knowledge and expertise matched to the patient population that is being transported.[12] These crew members should be in a full-time CCR post and should have additional training within the domains of critical care transport. It is essential to bear in mind that this team may be extended to include other medical or technical professionals by assessing the requirements for each case individually.[12]

CCR may occur via road ambulance, rotor wing or fixed wing aircraft. Regardless of the mode of transport, these ambulances and aircraft should have dedicated specialised equipment.[13] Notwithstanding consumables and medications, equipment should include at minimum intensive monitoring, ventilation and medication delivery devices. However, neonatal retrieval would extend these requirements.[12]

A further hallmark of a CCR service is a dedication to continued professional development, ongoing training and certification. It further speaks of robust clinical governance and a quality audit system that allows for dialogue between receiving facilities, their specialists and CCR teams.[12] Finally, the system should be responsive to patient safety concerns and proactively prevent adverse events.[14]

CONCLUSION

Still a nascent field, numerous questions remain unanswered as to the best approach for CCR development in South Africa. Defining what CCR is, is a necessary departure point for further research endeavours towards developing a core curriculum and practice standards. Furthermore, the CCRWG seeks to define the service requirements for the South African patient population and context.

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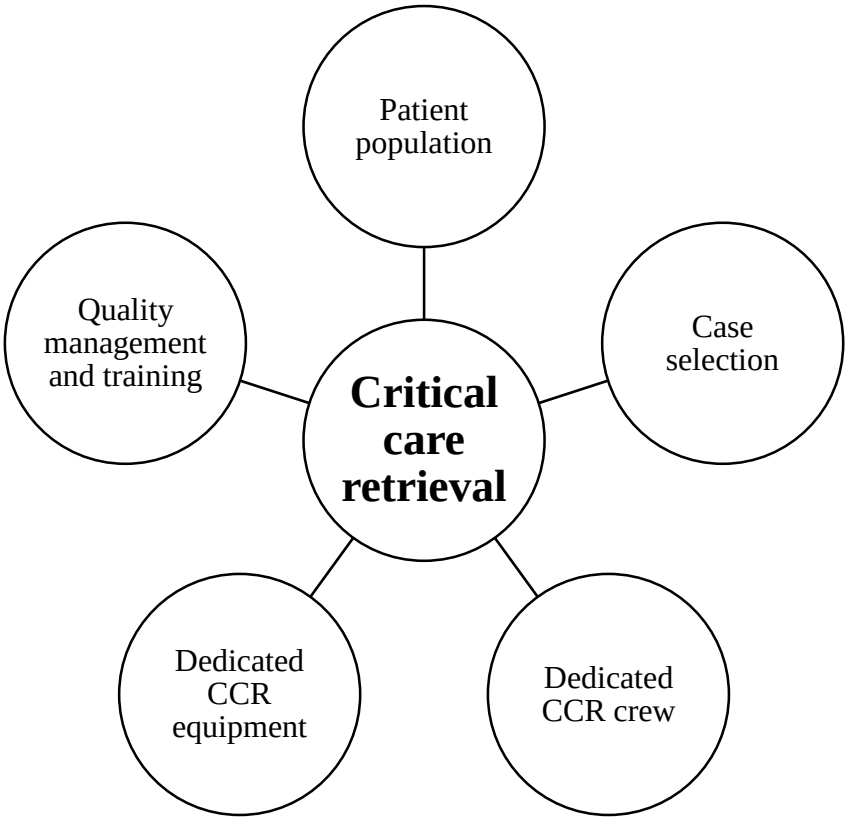

Fig. 1: Framework for defining critical care retrieval.