Clinician's Commentary on Schoo et al.¹

Canada has been at the forefront of advances in the field of solid organ transplantation (SOT) for decades. The major focus of research has largely been on improving surgical techniques, optimizing organ preservation, and perfecting immunosuppression medications.

Transplantation, however, remains resource intensive and hence costly. Health care centres across the nation are constantly being challenged to reduce costs while still improving outcomes. Perioperative and postoperative factors such as long hospital stays and early readmission rates can drive the cost of care for transplant patients into brackets that burden the system.² It is therefore imperative that transplant programmes look for ways to optimize outcomes while minimizing costs.

Deconditioning and functional impairment are prevalent across all organ groups for patients awaiting organ transplantation. This baseline functional impairment typically worsens immediately after transplant surgery. The article by Schoo and colleagues¹ highlights the fact that although some transplant programmes address the physical rehabilitation wishes and needs of SOT patients, many do not. The Canadian health care system prides itself on providing comprehensive, accessible, and universal care to all people, but there is currently a great deal of variability in how, and even whether, rehabilitation programmes are offered to transplant patients across the country.

Schoo and colleagues¹ study explained that patients were interested in exercise programmes but were not always able to access these dedicated resources. When exercise programmes were offered to patients after transplantation, 95% of attendees reported physical and psychological benefits. Many patients were also interested in exercise advice or supervised therapy leading up to transplant surgery, but in most cases, these services were not available. The phrase “lung envy” was coined by one liver transplant patient, who envied the daily physiotherapy sessions offered only to the lung transplant candidates at her hospital. In most cases, the issue is due to limited access to rehabilitation professionals. Institutions may not have enough objective evidence of the long-term benefits of rehabilitation programs to justify their potential costs.

Schoo and colleagues¹ study made reference to a survey that exposed the fact that exercise rehabilitation programmes were not universally available at all transplant centres in Canada.³ This discrepancy in access to therapy is striking. There are major differences in exercise expectations and rehabilitation protocols from one transplant centre to another. Although one programme might have both preoperative and postoperative access to physiotherapists and supervised exercise sessions, others may have no associated rehabilitation professionals at all. Some programmes offer physical therapy to just their heart and lung patients, whereas other programmes include it for liver patients as well. For kidney transplant patients, exercise programmes are almost nonexistent. An abundance of valid research has confirmed the utility and benefit of exercise for patients in renal failure,⁴ but only 10% of kidney transplant centres have programmes to offer.

Schoo and colleagues¹ stated that a lack of physician referral was a barrier to patients exercising. A successful rehabilitation programme requires physician buy-in. If specialists do not pro-

mote exercise, patients will not consider it a priority for their care. New research on frailty is emerging for almost all organ groups,^{5–7} providing objective evidence that frailty is a modifiable risk factor.

Another barrier the study described was the issue of perceived benefit. Patients are just not aware that exercise is worthwhile, and they do not fully understand its benefits at different stages of their illness. As with cardiac rehabilitation programmes, which are now much more widely accepted than they were 20 years ago, patients need education and encouragement from the health care team to consider the option and participate. The timeliness of this education is paramount. When a patient is being assessed for acceptance onto a transplant list, transplant coordinators and medical specialists have the opportunity to discuss activity and exercise expectations. When further intervention is required, a physical therapist or rehabilitation professional should be available for consultation. Preparing for organ transplantation by optimizing physical capacity should be as necessary for transplant candidates as smoking cessation and medication adherence.

After transplant surgery, patients learn about many new routines, including medication protocols, diet, and wound care. Those initial stages of recovery provide the optimal time to introduce a graded physical activity programme. Providing access to physiotherapy both preoperatively and postoperatively allows patients time to try exercise, realize its benefits, and learn about future progression.

Optimizing physical fitness throughout the transplant process provides clinical benefits to patients, reduces the length of hospitalizations, and ultimately reduces costs. Canada should set the bar high and establish a uniform protocol for all its transplant programmes. Physical activity and exercise rehabilitation is of great benefit during all stages of transplantation, and Canadian practice guidelines should reflect that. Further studies by Schoo and colleagues and others will ideally provide the evidence needed to support the inclusion of rehabilitation professionals in all transplant programmes and ultimately help to develop universal physiotherapy access for SOT patients across the country.

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