Evaluating the impact of a multidisciplinary team approach in the care of patients with intestinal failure

A pre- and post-implementation study in a tertiary IF center

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Description of the initiative

Intestinal failure (IF) is a severe organ failure condition in which the remaining small intestine is insufficient or inefficient to absorb adequate amounts of nutrients and/or fluids. To sustain life, patients require intravenous supplementation of nutrients and/or fluids, which is also known as parenteral support (PS). IF is a life-threatening condition and the need for PS comes with a substantial burden on both patient (including daily need and long hours of infusion, disturbed sleep pattern, liver disease, catheter-related problems such as infections, sepsis) and society (including high cost of PS and associated home-care). It is generally assumed that a multidisciplinary team (MDT) is crucial to optimize the care for patients with IF while reducing the burden of PS. However, robust and direct evidence supporting the benefits of MDT in IF management is currently lacking.

The University Hospitals of Leuven have a long-standing history in treating patients with IF using PS. Until recently, this was done without the involvement of a specialized MDT. In 2017, the Leuven Intestinal Failure and Transplantation (LIFT) center was established under the leadership of Professor Tim Vanuytsel, who is a gastroenterologist that received dedicated training in an advanced MDT IF center in the UK. Together with a team of abdominal- and transplantation surgeons, specialized nurses, dieticians, pharmacists and researchers, LIFT takes care of patients with IF.

Today, LIFT has grown into one of the youngest yet largest IF specialized centers in Europe, supported by an integrated MDT. Importantly, this unique evolution – from conventional care to MDT-guided care – offers an unprecedented opportunity to compare patient outcomes before and after the implementation of MDT care. We anticipate that our findings will provide critical benchmark evidence supporting the integration of MDTs in IF treatment across Europe and beyond.

Planned activities & deliverables

This project aims to evaluate the impact of the MDT approach at LIFT by collecting and analyzing retrospective and prospective data from the pre- and post-LIFT eras, as explained on Figure 1. Within 12 months, the catheter-related complications and hospitalizations will be described. Within 24 months, the full comparison will be finished.

Resources & enablers

No funding has been sought or achieved for this project. The granted 40,000 EUR will be used to hire a part-time PhD student (0,35 VTE for two years) who will perform the retrospective and prospective data collection and analyses.

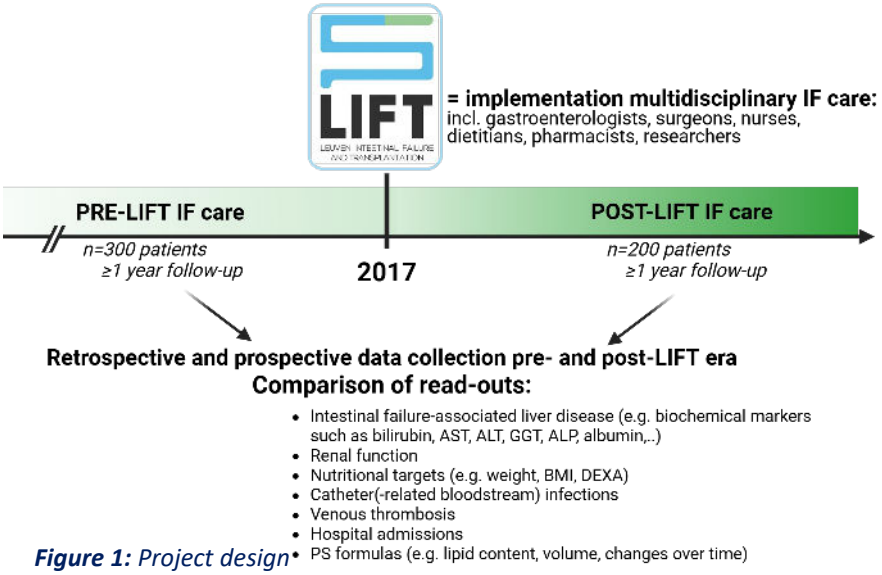


***Figure 1:** Project design*

Results/outcomes & expected impact

The unique comparative design of our project combined with the strong institutional and clinical foundation of the LIFT center makes this project highly innovative. This pre vs post comparison is not possible in the other large IF centers in Europe which have worked with an MDT since multiple decades. We believe that the outcomes of our project will be multifaceted and impactful. First, at institutional level, our findings will offer critical insights in the quality of our current IF care. This will allow us to identify potential areas for improvement and optimize our MDT approach. Second, this project will generate robust, real-world evidence on the value and power of an MDT in the care of IF. These insights will be relevant not only for our center, but also for other institutions considering the implementation of an MDT. We hypothesize that MDT care will lead to improved patient outcomes and reduced burden on society by fewer complications, shorter hospital stays, lower healthcare costs; and thereby, these findings have the potential to guide clinical practice and healthcare policy on a broader scale. Finally, although the project focuses on IF-specific outcomes, it also includes broader clinical endpoints (such as hospitalization rates, nutritional status) that are relevant across other chronic and complex diseases. Therefore, we believe that our results will have the potential to stimulate the implementation of MDT care beyond the field of IF.

Please tick to confirm the PEN letter of endorsement is attached.
Incomplete submissions will not be considered.