

# Towards improved organisation of care

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## Impact paragraph

The present thesis aimed to develop a national cross-domain protocol compression therapy that guides healthcare professionals in optimizing compression therapy for patients with deep venous thrombosis (DVT) and chronic venous disease (CVD) without active venous leg ulcers.

### Societal relevance

#### *Patients, caregivers, and healthcare professionals*

The results of the current thesis directly impact compression therapy provided by involved healthcare professionals (general practitioners, internists, dermatologists, occupational therapists, medical stocking suppliers, and home care nurses) to patients in different phases of the process. First, the cross-domain protocol guides communication and collaboration among healthcare professionals and between the healthcare professional and the patient. In this way, it supports patients' (or informal caregivers') involvement in the decision-making process, which is supposed to be positively correlated with adherence to therapy, autonomy, and improved coordination of care.

Second, the cross-domain protocol provides recommendations to increase patients' self-reliance during initial compression therapy, the implementation of assistive devices, and long-term elastic compression stocking (ECS) therapy. Earlier, a discrete choice experiment involving 300 DVT patients showed that maintaining self-reliance in using the ECS was one of the major preferences for patients. This experiment indicated that patients accepted an increase in the risk of post-thrombotic syndrome of 29% if they could put on the ECS themselves<sup>1</sup>. Based on this study, we expect an increase in adherence to therapy, improved effectiveness of therapy, and a decrease in home care demands by maximally supporting patients' self-reliance. As home care nurses spend most of their time on providing assistance related to compression therapy, we suspect the latter to contribute to the system's future sustainability and deployment of home care.

Finally, the protocol creates awareness among healthcare professionals and provides recommendations for a tailored treatment duration for DVT patients based on the assessment of Villalta scores. This tailored strategy will result in a shortened ECS treatment duration for approximately 66% of patients that currently are treated for a prolonged period without additional benefits<sup>2</sup>.

#### *Health care insurance companies*

This thesis provides a detailed insight into the costs associated with compression therapy for DVT during the four consecutive phases. We showed that prescribing initial

compression therapy with a preference for a temporary compression hosiery, early consultation of occupational therapists to train patients on how to use assistive devices, and a tailored ECS treatment duration resulted in cost savings within three years after implementation for regions North-Holland location A and Limburg. With this strategy, we also expect a decrease in patients who develop the post-thrombotic syndrome and related costs.

#### *Scientific and economic relevance*

The thesis contributes to the sparse literature on compression therapy by showing what needs to be in place to optimize the organization of compression therapy and it highlights important targets to improve the system. We used a Functional Resonance Analysis Method (FRAM) and a realist evaluation to gain a deep insight into the realities of daily practice, including facilitators and barriers. This insight was used to create statements to improve compression therapy, which was presented to stakeholders from all disciplines and patients to gain a broad consensus of what ‘optimal organization of compression care’ means before the actual cross-domain protocol was developed. Afterwards, we showed that the three main improvement targets resulted in cost savings for most regions within three years after implementation. These insights were then combined to create the cross-domain protocol, which was assessed and refined by national stakeholders from the different health care professionals associations. We suggest this approach could also be relevant to researchers in other fields.

#### *Dissemination of knowledge and products*

Efforts have been made to share the findings made in this dissemination with the broader audience of health care professionals, patients, and researchers concerned with compression therapy. As described before, local and national stakeholders from all health care professional groups and patients were closely involved in all stages of this research project. During the development of the protocol, we maintained accessible contacts with different national associations for discussion and feedback (i.e. the Dutch federation of occupational therapists (Ergotherapie Nederland), the Dutch association for compression care (NVCZ), the Dutch association for general practitioners (NHG), the Dutch internists association (NIV), the association for dermatology and venereology (NVDV) and the Dutch association for formal caregivers and nurses (V&VN)).

These contacts introduced us to consecutive contacts; for example, we were approached by the project group ‘Zinnige Zorg’ from the Dutch health care institution. This project group was concerned with creating a report to improve care for patients with DVT and pulmonary embolism. By sharing results and providing mutual input for our projects, we disseminated our results to the Dutch health care institution. In the future, we intend to make the protocol easily approachable for all healthcare

professionals involved. For now, further implementation of the current protocol is designated to the professional associations and stakeholders as described in chapter 8.

To date, three articles are published in open-access, peer-reviewed journals (BMJ Open, Plos One and Frontiers in Cardiovascular Medicine), one chapter is published as a book chapter (chapter 'compression' by Minerva Medica Publisher available via Research Gate on request), two chapters have been submitted to international journals, and the cross-protocol is ready to be implemented. The dissertation as a whole is available through Maastricht University. Further to this, research performed as part of this thesis has been presented as three posters at the ISTH (International Society on Thrombosis and Haemostasis) congress (2021 and 2022). At a national level, we presented our results during three webinars to a group of medical stocking suppliers and skin therapists (n=60).

## References

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