

Geomapping of interprofessional diabetic footcare centers and networks in Switzerland

Astrid Czock^{1,2,3}, Alisha Khanna^{1,2}, Martin Berli^{1,4}, Bernard Chappuis^{1,3}, Axel Haine^{1,5}, Mario Malgaroli^{1,6}, Bettina Peter Riesch^{1,3}, Felix Waibel^{1,8}, Ilker Uckay^{1,7}

¹QualiCCare Working Group DFU, CH-Baden, ²QualiCCare, CH-Baden, ³Swiss Society of Endocrinology and Diabetology, ⁴Swiss Association of Wound care, ⁵Swiss Society of Angiology, ⁶Organization of Swiss Podiatrists, ⁷Swiss Society for Infectious Diseases, ⁸Swiss orthopedics

Introduction

Due to the complexity of diabetic foot syndromes (DFS), successful diagnosis and therapy require an early interprofessional treatment approach. The interprofessional working group on DFS (WG DFS) of the QualiCCare association prepared in 2020 a national practice guideline (DFS PG) and national indication-specific practice recommendations for the optimal care of infectious, angiopathic, and/or neuropathic diabetic foot ulcers, as well as Charcot arthropathy for Switzerland, based on the guidelines of the International Working Group on the Diabetic Foot (IWGDF) and current literature.

According to these guidelines, patients at medium risk must be treated by a local interprofessional network with DFS specialists. Patients at high risk must be immediately referred and treated by an interprofessional footcare team in an on-site center.

Recognition of interprofessional foot centers and/or networks is not regulated by law, but appropriate quality requirements and standards are necessary to ensure high-quality care for patients with DFS.

Other than in our neighboring countries Germany and France, no geomap of the locations of interprofessional footcare (IPF) centers or networks exists in Switzerland. As primary care providers should refer concerned patients in a timely manner, they need to know where the closest center is. Therefore, the WG DFS decided to create an electronic map. The geomaps from the German Diabetes Society (DDG) and URGO Medical in France were consulted and used as references for a Swiss-national mapping and the criteria of the DFS PG were used to prepare an initial survey in Switzerland.

Methods

In a first step, we conducted an initial analysis in 2023 to get an overview of the situation in Switzerland by conducting a survey using the criteria defined in the DFS PG. To access existing IPF centers and networks, the professional organizations represented in the WG DFS as well sent a Survey Monkey link to their members. Additionally, the hospital organization H+ allowed us to contact all their member hospitals. As we realized from the results, the definitions of the criteria were not sufficiently precise to be able to prepare a reliable geomapping. Therefore, in a second step, we consulted the DDG requirements and criteria the Swiss Society for Wound Treatment. In view of these references, the criteria of the DFS PG were reviewed, discussed and adapted during two meetings of a subgroup of the WG DFS comprising of a representative of the following specialties: angiology, diabetology, infectiology, orthopedics, podiatry and wound care. A validation of the adapted criteria was performed by the subgroup in writing shortly after the second meeting. In a third step, the plenary of the DFS WG were asked to give their written feedback regarding clarity and relevance to the proposed criteria. A fourth discussion and validation step was performed at a plenary meeting of the DFS WG. In a final step and as a preparation to the development of an electronic platform, the criteria catalogue were tested by selected members of the WG DFS by answering to the defined criteria.

Results

The 2023-online-survey gave a first impression regarding location and composition of IPF networks in Switzerland, revealing 74 centers and networks in the German-speaking and 51 in the French- and Italian-speaking regions. As the survey was self- and third party-reported, multiple mentioning and assigning to different levels occurred, indicating that the criteria needed to be more precisely defined for a reliable classification.

The WG DFS validated a criteria catalogue each for IPF centers and networks, respectively and prepared an application form for centers and networks to inscribe to be mapped on a future electronically accessible geomapping.

The interprofessional footcare center

1) Includes the following disciplines and professionals, of whom at least 3 can simultaneously care for DFS patients on-site:

- Diabetology
- Vascular surgery
- Surgery or orthopedics
- Infectiology
- Diagnostic angiology
- Interventional angiology or radiology or vascular surgery
- Orthopedic shoemaker
- Orthopedic technician
- Specialized wound care expert (recognized by SAFW)
- Podiatry HF

Note: The general practitioner or primary care physician will be informed.

2) The interprofessional foot center includes the following disciplines and professionals, of whom at least 3 can provide emergency care for DFS patients 24/7

- Diabetology
- Vascular surgery
- Surgery or orthopedics
- Infectiology
- Diagnostic angiology
- Interventional angiology or radiology or vascular surgery

3) Interprofessional case discussions on offloading, infectiology, angiology, and wound management are conducted involving at least two different medical specialties and at least one non-medical profession, either physically with the patient or online.

4) Written cooperation agreements with external service providers are available and can be viewed upon request. A contact person is designated.

5) The following interventions are feasible 24/7:

- Revascularization
- Infection therapy
- Diabetes therapy
- Debridement/Amputation
- Offloading

6) The procedure for relapse prevention and aftercare is ensured by the foot center.

- The treatment plan/recommendation will be documented and communicated to the general practitioner.
- Perfusion assessment will be conducted at least once a year, or more frequently depending on the intervention performed or new clinical aspects.
- Regular and timely reevaluation by orthopedic shoemakers/masters/technicians will be conducted.

7) Documentation/photo documentation is available for all professionals in the foot center.

Wound documentation at initial contact or following measures (e.g., debridement /amputation /revascularization /antibiotic therapy) should be systematic, structured, and objective, following intervals according to IWGDF guidelines.

8) Equipment of the foot center:

Acute hospitalization possible.

9) Guidelines adherence

Adherence to the «Practice Guideline for Optimal Treatment of Acute Diabetic Foot Syndrome and Foot Ulcer (DFS/DFU)» as well as to indication-specific practice recommendations (Charcot Foot / Peripheral Arterial Disease / Pressure Offloading / Diabetic Foot Infection) of the QualiCCare Working Group DFS.

10) The foot care team attends specialty-specific training on DFS.

Confirmations are available for review

Conclusion

The criteria will allow IP centers and networks to apply for official acknowledgement by the DFS WG in compliance to the Swiss PG and be displayed in the Swiss electronic map of level 3 DFS centers and level 2 DFS networks. Ultimately, we aim to streamline the management of DFS in Switzerland.

References

1. QualiCCare. Praxisleitfaden – zur optimalen Behandlung von akutem diabetischen Fussyndrom und Fussulkus (DFS/DFU). 2023
2. QualiCCare. Indikationsspezifische Praxisempfehlungen (Charcot Fuss, Druckentlastung, Diabetische Fussinfektion, Periphere Verschlusskrankheit). Available from: <https://qualiccare.ch/projekt/aktuelle-projekte/diabetisches-fussyndrom-triage-in-der-grundversorgung>.
3. Swiss interdisciplinary guidance on good practices for acute and complicated diabetic foot syndromes. Swiss Medical Weekly. 2021 Oct 25;151(43-44).
4. V DDG. Karte der DDG Fort- und Weiterbildungsstätten [Internet]. Deutsche Diabetes Gesellschaft e.V. [cited 2024 Jun 24]. Available from: <https://www.ddg.info/qualifizierung/ fuer-gesundheitsfachkraefte/karte-der-ddg-weiterbildungsstaetten>
5. Recensement des unités multidisciplinaires de prévention et soins du pied diabétique Avec la participation du groupe thématique “pied diabétique” de la SFD [Internet]. [cited 2024 Jun 24]. Available from: <https://urgomedical.fr/wp-content/uploads/2023/03/URGO-Annuaire-BUP-2022-VF.pdf>
6. Bindschedler P, Kohler E, Signer M, Wüthrich J, Rouden C. Anforderungskatalog zur Anerkennung von Wundambulanten als Teil eines Wundzentrums Erstellt durch folgende Mitglieder des Vorstands der SAFW [Internet]. 2021 [cited 2024 Jun 24]. Available from: https://www.safw.ch/images/pdf/SAFW_Anerkennung_Wundzentren_Anforderungskatalog_2021.pdf

This project was made possible and financed by QualiCCare. None of the authors declared a conflict of interests.

Contact

Dr. rer. nat. Astrid Czock | czock@qualiccare.ch

Prof. Dr. med. Ilker Uckay | Ilker.Uckay@balgrist.ch