

Work Package 7 – Implementation Guidelines

	Antwerp	Fulda	Groningen	Neubrandenburg	St. Pölten
Approved days total	32	32	32	49	17

Lead: Luzia Valentini, Neubrandenburg

Objectives

WP7 developed detailed implementation guidelines with respect to the specifics of the unified framework Dietetic Care Process (DCP) established in O2 and used in the clinical cases in O3. Implementation guidelines are disseminated as international publications on the results of the in-depth examination of selected DCP steps (topic 1 and 2) or the DCP itself (topic 3) to provide reproducible and sustainable solutions for the dietetic practice.

Implementation

WP7 started by developing agreements for the authorship of all implementation guidelines that were developed within the IMPECD project, both in WP7 as well as for dissemination activities. The authorship agreements were developed and finalized in cooperation with the leading partner St. Pölten and approved by the consortium in January 2016.

Originally we planned to develop all WP7 implementation guidelines successively, starting with topic 1 (nutritional assessment), followed by topic 2 (monitoring and evaluation) and completed by topic 3 (DCP). However, due to the interdependence of the three topics as well as an unforeseeable high amount of discussions to align the content, we eventually decided to work on all three topics in parallel.

To support an effective work flow, core groups of authors were assigned for each topic in November 2016. All core groups consisted of the first, second and senior author of the respective guidelines. Consortium members with previous international writing experience were preferably chosen as core group members. The list of co-authors was completed according to the author agreements, resulting in a maximum of three co-authors per partner and guideline. Draft versions were discussed with the WP leader. Each author group was responsible to comment on the interim and final drafts sent by the core group to the consortium (see Milestone 9b, 10b and 11b). The core group was responsible for revising and finalizing the guidelines for submission in an international peer reviewed journal (see Milestone 9c, 10c and 11c) and for revising them according to the reviewer comments.

All consortium members actively participated in WP7 as (co)author of the least one international guideline.

Results

We succeeded in publishing two of the three international guidelines open access by the end of the project and to compile a pre-final draft of the third guideline, which will be submitted to an international journal in December 2018. All three international guidelines are written in the English language

One guideline is already published in the German language, other publications in the German and Dutch language are agreed in the consortium and will follow in the year 2019.

For detailed information see “specifics on the three guidelines” at the of this report.

Achievements

We achieved

- to publish one guideline in the highest ranking European clinical nutrition journal providing best possible conditions for broad acceptance and dissemination
- in all three guidelines to provide novel content highly relevant for the field of dietetics, specifically for unified training of dietetic students in Europe
- to activate consortium members with little or no international publication experience to lead or contribute to international publications which may stimulate their publication activities in future, which we think important.

Challenges

- We underestimated the amount of inconsistencies and gaps in the description and understanding of the DCP steps and models in the existing literature when our project started – both on the national and international level. It necessitated unexpected high amounts of discussions during the first project years in WP2-WP5 with further discussions and attunements in the core groups of each guideline. It markedly delayed the guideline’s development but led to in-depth and sustaining results for the field of dietetics. We also identified the need to work in parallel on all topics to exchange new insights immediately and to create consistent information in the implementation guidelines
- The second challenge concerned mainly guideline 1 – nutrition assessment. During 2016 and 2017 three in-depth and detailed text books on nutrition assessment in dietetics were released almost simultaneously, one from the American Academy of Nutrition and Dietetics (AND)¹, one endorsed by the European Federation of Associations of Dietitians (EFAD)² and the last published by the German Society of Dietitians (VDD)³. They were generally welcomed but nullified the initial plan to generate such content. Therefore, the working group on topic 1 needed a lot of discussion within their core group as well as within the consortium to find a suitable alternative topic. This process lead to a 2-year delay in the project delivery

¹ Charney P, Malone A (eds). Academy of Nutrition and Dietetics Pocket Guide to Nutrition Assessment., 3 rd revised edition. Academy of Nutrition and Dietetics: Chicago (Illinois), 2016

² Wierdsma N, Kruijenga H, Stratton R. Dietetic Pocket Guide, VU University Press: Amsterdam (NL), 2017

³ German Association of Dietitians. VDD-Leitlinie für die Ernährungstherapie und das prozessgeleitete Handeln in der Diätetik (Band 2). Grundlagen zu Körpergröße, Körpergewicht, Körperzusammensetzung und Handkraft für Erwachsene. Pabst Science Publisher: Lengerich (Germany), 2017

Original description of work as reported in the project proposal:

07/A1- Implementation Guideline 1

Nutrition assessment taking into account O2, O3, O4, O5 (M 7-15)

- definition of nutrition assessment
- description of assessment tools
- benefits, limitation and application range of each assessment tool

07/A2- Implementation Guideline 2

Nutrition monitoring and evaluation taking into account O2, O3, O4, O5: (M 14- 23)

- description, benefits, limitations and application range of monitoring parameters
- recommendations for monitoring schedules
- description, benefits, limitations and application range of evaluation parameters
- recommendations for evaluation parameters to prove efficacy of dietetic treatments

07/A3- Implementation Guideline 3

The unified framework of the DCP taking into account of O2, O3, O4, O5: (M 25-35)

- detailed presentation of the consolidated framework DCP
- introduction of a consolidated proposal for terminology in dietetics

Milestones in WP7: Planned versus actual delivery

Table 1: Milestones in 07/A1

Nr.	Milestones in 07/A1	planned	finished
9a	Results „Nutrition assessment“ of O2 available	3/2016	1/2017
9b	Final draft of implementation guideline available	4/2016	7/2018
9c	Submission in international peer reviewed journal	9/2016	Expected 12/2018
9d	Final version for national publications available	11/2016	Expected 6/2019
9e	Implementation Guideline - Nutrition assessment finished	11/2016	Expected 6 /2019

Table 2: Milestones in O7/A2

Nr.	Milestones in O7/A2	planned	finished
10a	Results „Nutrition monitoring and evaluation“ of O2 available	10/2016	1/2017
10b	Final draft of implementation guideline available	12/2016	7/2017
10c	Submission for international peer reviewed journal	5/2017	2/2018
10d	Final version for national publications available	8/2017	9/2018
10 e	Implementation Guideline - Nutrition monitoring and evaluation finished	8/2017	9/2018

Table 3: Milestones in O7/A3

Nr.	Milestones in O7/A3	planned	finished
11a	Results “unified framework DCP “ of O2 available	9/2017	7/2017
11b	Final draft of implementation guideline available	12/2017	1/2018
11c	Submission for international peer reviewed journal	5/2018	1/2018
11d	Final version for national publications available	8/2018	9/2018
11 e	Implementation Guideline - The unified framework of the DCP is launched	8/2018	9/2018

Specific report on the three implementation guidelines

Fact sheet on topic 2 guideline paper: Nutrition Assessment

As described above, topic 1 was specifically challenging, as three international well received textbooks on nutrition assessment were published during 2016 and 2017 making the originally plans redundant and not suitable for international publication. The author group searched for remaining open gaps and identified the unclear documentation and use of psychological and literacy factors in dietetic interventions as novel, relevant and worthwhile topic. Still, the described challenges led to a delay of 2 years and pre-final draft version is currently available. Planned submission to an international journal is December 2018

Table 4: Fact sheet on disseminating implementation guideline topic 1

Title	Nutrition assessment in process-driven, personalized dietetic intervention – the importance of assessing psychological and literacy factors to improve behavioral change and outcome: Results of the EU-sponsored IMPECD project
Core group	Kathrin Kohlenberg-Müller (Fulda), Alexandra Kolm (St. Pölten), Andrea Werkmann (Groningen) Alyanne Barkmeier (Groningen) Sara Ramminger (Neubrandenburg) Luzia Valentini (Neubrandenburg)
Full authors	Kathrin Kohlenberg-Müller, Sara Ramminger, Alexandra Kolm, Alyanne Barkmeijer, Christina Gast, Marleen Adam, Bente Le Bruyn, Shelly Rachman-Elbaum, Andrea Werkman, Renate Heine-Bröring, Koen Vanherle, Elisabeth Höld, Daniela Wewerka-Kreimel, Luzia Valentini
Intended journal	Clinical Nutrition;
Journal website	https://www.journals.elsevier.com/clinical-nutrition/
Impact factor 2017	5.476
Submission date	December 2018 (expected)
Acceptance date	June 2019 (expected)
Abstract (draft version)	Background & aims: Although up-to-date definitions for nutrition assessment from professional societies in Clinical Nutrition and Dietetic Associations integrate psychological factors, it is not clear nor documented what psychological or literacy aspects are to be assessed by dietetic professionals. Since behavioral modification is linked to effective dietetic interventions, assessing psychological and literacy factors might be beneficial to improve dietetic efficacy and outcome. We identified motivation, cognitive status, depression symptoms, fatigue symptoms, emotional distress and anxiety as major psychological factors and health or nutrition literacy as literacy factors. The aims of the following report were to summarize the existing knowledge on the role and importance of baseline assessment of psychological and literacy factors, to illustrate existing tools and to identify research gaps. Methods: The present work is part of the EU-funded project IMPECD (“Improvement of Education and Competences in Dietetics”,

	<p>www.impecd.eu). The project aims to improve the clarity and consistency in education and training of future dietitians.</p> <p>Results: Results for motivation or readiness of change assessed during nutrition assessment are not consistently positively associated with outcome and the added value of assessing them at baseline is still unclear. However, depressive symptoms, emotional distress, and anxiety negatively affect eating and physical activity and limit the efficacy of the dietetic intervention</p> <p>Conclusion: Indisputably, baseline assessment of psychological and literacy aspects is important to increase the therapeutic efficiency of personalized dietetic interventions. Documentation of baseline behavior characteristics lead to increased visibility of the personalized dietetic intervention. More research on assessing behavioral-environmental aspects in dietetic interventions, especially which components belong to the assessment of behavior and which methods are the best to use, is key to a better health care.</p>
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Fact sheet on topic 2 guideline paper: Monitoring and Evaluation

Topic 2 dealt with the in-depth evaluation of monitoring and evaluation in all dietetic care settings and showed that taxonomy and terminology in dietetics so far were much more inconsistent than expected. The newly developed model offers clear instructions for the definition and use of monitoring and evaluation indicators in dietetic setting and introduced “impact” to cover the macrolevel evaluation, such as economic efficacy. The model was already well-received at national scientific meetings and will be integrated into the curricula of all 5 partner HEIs. The guideline paper has been accepted by Clinical Nutrition, the highest ranking peer-reviewed European journal in Clinical Nutrition and the organ of the European Society of Clinical Nutrition and Metabolism (ESPEN).

Table 5: Fact sheet on topic 2 guideline paper:

Title	Proposed standard model and consistent terminology for Monitoring and Outcome Evaluation in different Dietetic Care settings: Results from the EU-sponsored IMPECD project
Core group	Koen Vanherle (Antwerp), Andrea Werkman (Groningen), Luzia Valentini (Neubrandenburg)
Full authors	Koen Vanherle; Andrea Werkman; Eline Baete; Alyanne Barkmeijer; Alexandra Kolm; Christina Gast; Sara Ramminger; Elisabeth Höld; Kathrin Kohlenberg-Müller; Sabine Ohlrich-Hahn; Maaïke Roemeling- Walters; Daniela Wewerka-Kreimel; Marleen Adam; Luzia Valentini
International journal	Clinical Nutrition;
Journal website	https://www.journals.elsevier.com/clinical-nutrition/
Impact factor 2017	5.476
Submission date	31.1. 2018
Acceptance date	31.8.2018
URL to full text	https://www.clinicalnutritionjournal.com/article/S0261-5614(18)32436-1/pdf

DOI	https://doi.org/10.1016/j.clnu.2018.08.040
Abstract	<p>Background & Aims: Dietetic interventions contribute to certain health objectives and other outcomes, but are mostly part of a multimodal and multidisciplinary approach what makes evaluating the actual effects of dietitians involvement rather complex. Systematic monitoring and outcome evaluation (M&OE) could provide routine data to prove the effectiveness of dietetic interventions but are not very well established yet in all dietetic settings.</p> <p>Methods: A comprehensive framework for M&OE in dietetics was developed by dietetic experts from five European higher education institutes for dietetics in the course of the EU sponsored project "Improvement of Education and Competences in Dietetics (IMPECD)".</p> <p>Results: Firstly, clear definitions on M&OE are proposed to facilitate the use of consistent terminology, with a specific emphasis on the term "impact" covering macro-level outcomes such as cost-effectiveness. Secondly, the Dietetic Care Process (DCP) was merged into a logic model to demonstrate the position of M&OE in relation to intervention planning and implementation, in both group and individual settings. Thirdly, selecting the appropriate indicators is indispensable to monitor and evaluate outcomes, and requires a high level of dietitians' critical reasoning. A categorized overview of indicators is provided to support this process. Lastly, the consortium developed a checklist to give dietitians a handle on what elements could be included in their M&OE plan and trigger them to perform M&OE in practice.</p> <p>Conclusions: Innovative M&OE models may help dietitians to demonstrate their effectiveness in improving clinical outcomes and justify their role in health care.</p>

Fact sheet on topic 3 guideline paper: DCP

The topic 3 guideline paper was not focused as initially planned on presenting the consolidated framework DCP, but instead focused on the sound comparison of existing DCP models in 16 European countries. Through this comparison we could conclude that there are some differences in the number of steps and wordings, but in general, there were more similarities than differences. This is pivotal knowledge to finalize and strengthen the IMPECD DCP, which will serve as unified model for didactic purposes in the 5 partner HEIs first and will be continuously distributed through the syllabus (WP6), the MOOC (WP1). The present guideline 3 is being published in the most acknowledged dietetic journal in German-speaking countries. The journal offers bilingual publication in the German and the English language. The English version is published open access and available through Web of Science.

Table 6: Fact sheet on topic 3 guideline paper

Title	Process Models in Dietetic Care – A Comparison between Models in Europe Prozessmodelle in der Diätetik – ein europäischer Vergleich
Core group	Daniel Buchholz (former part of partner Neubrandenburg),

	Alexandra Kolm (St. Pölten) Andrea Werkman (Groningen),
Full authors	D. Buchholz, A. Kolm, K. Vanherle, M. Adam, K. Kohlenberg-Müller, M.E. Roemeling-Walters, D. Wewerka-Kreimel, C. Gast, K. Lange, S. Ohlrich-Hahn, S. Rachman-Elbaum, E. Baete, R. Heine-Bröring, E. Höld, A. Werkman
International journal	Ernaehrungsumschau
Journal website	https://www.ernaehrungs-umschau.de/
Impact factor 2017	0,29
Submission date	31.1.2018
Acceptance date	17.7.2018
URL to full text	https://bit.ly/2PvMF4f (shortened link)
DOI	10.4455/eu.2018.034
Abstract	<p>Using a dietetic care process (DCP) can lead to improved application of evidence-based guidelines and critical thinking in dietetics. One aim of the project Improvement of Education and Competences in Dietetics (IMPECD) is to develop a unified DCP for international educational purposes. Therefore, a comparison of European DCPs was needed.</p> <p>A concise literature search and semi-structured interviews with experts representing the full EFAD (European Federation of the Associations of Dietitians) member states were conducted from June to October 2017.</p> <p>16 out of 23 EFAD member states responded (70%) from which 13 indicated to use a DCP. Eight different DCPs were found, with four to six core steps and three graphical representations. In one country the use of a dietetic process is indicated by law.</p> <p>The DCPs have more similarities than differences as they follow the same principals. Differences in language or form may not limit the improvement in collaboration and international exchange in dietetic practice. These results provide a good basis for the development of a unified DCP for educational purposes.</p>