

# European consensus for the assessment of good practices on Diabetes



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## Acknowledgments

Ms. Marina Maggini and Ms. Jelka Zaletel leaders of the JA-CHRODIS work package (WP 7) on Diabetes and Ms. Valentina Strammiello for their contribution to the Delphi process.

The experts' panel in the Delphi on *Diabetes* were:

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## Intended use of this publication

The content of this publication is the result of a consensus process among experts from a variety of domains and profiles. The criteria and indicators agreed under this consensus process are meant to be used as a whole, not being recommended the selection of a subset of criteria and categories for a purpose different to which they were agreed for (i.e. assessment of practices involving chronic patients under a peer review process). Be aware that other uses may compromise the reliability of the instrument and are out of the scope of the CHRODIS project.

## Introduction

The Joint action on Chronic Disease and Addressing Healthy Ageing across the life cycle (JA-Chrodis) is a collaboration across the EU that brings together over 60 associated and collaborating partners from national and regional departments of health and research institutions, and other stakeholders from 26 Member States during a three-year initiative (2014-2016). This project is led by the by the Spanish Ministry of Health, Social Services and Equity with the Health Institute Carlos III, and in the coordination of JA-CHRODIS collaborates the European Innovation Partnership on Active and Healthy Aging (EIP AHA) alongside other stakeholders and European initiatives.

Its aim is to promote and facilitate a process of exchange and transfer of good practices between European countries and regions, addressing chronic conditions, with a specific focus on health promotion and primary prevention of chronic conditions, organizations dealing with multimorbid patients, patient's empowerment and diabetes.

Also, JA-CHRODIS is developing a 'Platform for Knowledge Exchange' (PKE), where decision-makers, caregivers, patients, and researchers across the EU can find and share the best knowledge and practice on chronic diseases. The platform includes a criteria agreed by experts across the EU and an online tool to allow users to evaluate practices, interventions and policies using assessment criteria established by JA-CHRODIS.

The CHRODIS Delphi consultation gathered an expert panel to decide on the suitability and priority of a series of criteria to assess whether an intervention -policy, strategy, programme/service, as well as processes and practices- can be regarded as 'good practice' in the field of diabetes.

## Methodology

A RAND modified Delphi method was used to decide on the suitability and priority of a series of criteria to assess whether an intervention can be regarded as 'good practice', focused on diabetes.

This Delphi method has combined the use of questionnaires to elicit responses in a systematic manner over two online rounds consultation using a web-based questionnaire, followed by a final face to face structured meeting process, to gather information from the experts. In both online rounds, experts were also invited to add any criterion or driver they thought relevant and missing. The number of participants was restricted to a maximum of 30 and a minimum of 15, allowing for eventual drop offs.

The methodology used to elaborate the first web-based questionnaire was as follow: Firstly, criteria (i.e., broad domains) from WP7 Diabetes Indicators and also Delphi 1 (*"Health promotion and primary prevention of chronic disease"*), Delphi 2 (*"Organizational interventions focused on dealing with chronic patients with multiple conditions"*) and Delphi 3 (*"Patient's empowerment interventions with chronic conditions"*) were mapped out and redundancies collapsed or rephrased.

Then, all categories agreed in WP7 as diabetes indicators and categories from Delphi 1 to 3 were retrieved and checked out for overlapping concepts. In case of overlapping, categories from WP7 prevailed upon the alternatives from other Delphi. Those categories without overlapping were kept as such. Then, remaining categories were grouped by similarity of concepts and assigned to a specific criterion.

Finally, a semantic and cluster analysis was carried out by criterion in order to monitor any potential information losses.

Since Diabetes is a case study for CHRODIS JA, the questionnaire played a double role. On the one hand, it should allow a decision on those high-priority criteria and categories for the evaluation of practices on Diabetes; on the other hand, it should be useful to test whether the criteria and categories from the other Delphi are high-priority for the assessment of practices on Diabetes. For this reason, it was opted for a more inclusive approach including also those criteria and categories agreed in the three previous Delphi that have not had a matching in WP7 indicators.

The main bodies of information for the Delphi 1 to 3 were made up of the conceptual models, assessment tools and procedures identified in Europe and beyond for evaluation of good practice in chronic conditions. The complete list of sources and summary of evidence documents containing the details of the sources used in the elaboration of the questionnaire on diabetes, are displayed in annex 1 and annex 2.

- **Online Round 1 (R1)**

The online questionnaire included all items in the exhaustive list extracted from the review. The questionnaire was organized into 10 thematic drivers including a total of 71 items clustered.

In the first online round, experts were asked to judge how priority each category was to assess a practice on diabetes, using a Likert scale (1 low-priority to 9= high priority). They assigned a score on a proposed scale -the higher the value, the higher the priority. In this round they were able to suggest additional criteria. The scale was divided into 3 brackets for this analysis: scores 1 to 3 were interpreted as 'low priority', scores 4 to 6 'median priority' and scores 7 to 9 'high priority' (fig 1).

In order to establish the degree of priority and agreement, the median and the distribution of votes for each score was examined. When the median and the votes fitted within the same bracket, it was concluded that there was an agreement among the experts about that particular category. Categories with high priority (median = 7 to 9) and high level of agreement (median +/- 1) passed onto the face to face meeting for further discussion; agreement on low and medium priority led to drop the category (fig 1). Categories falling in the range of high priority but with low level of agreement were eventually re-prioritized in the second round (fig 2).

Figure1: answers range and possibilities of agreement

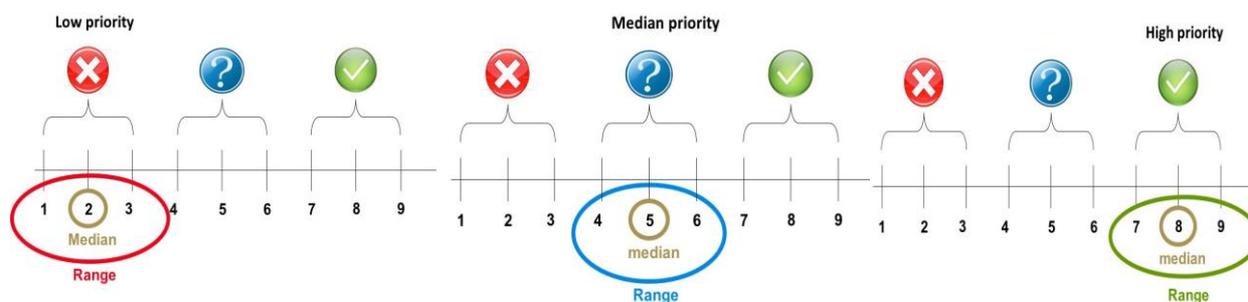
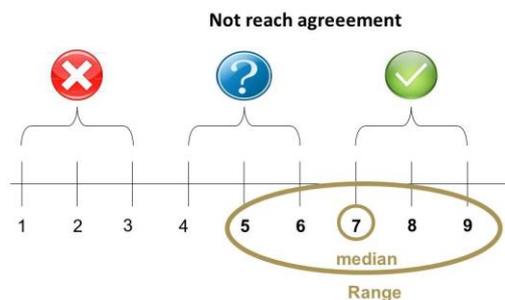


Figure 2: answers rate that did not reach agreement



- **Online Round 2 (R2)**

The categories, which the experts had not reached agreement in the first round, were presented again this time, alongside with the median and range of variation of experts' marks in the previous round. In light of this information, panellists were asked to rate again each item according to the proposed priority scale (from 1=low priority to 9=high priority).

Likewise the first round, the median as well as the distribution of votes per score, were examined to determine whether experts agreed on the level of priority (1-3 low priority; 4-6 median priority; 7-9 high priority).

To give a sense of the relative priority assigned to each item, the individual values of expert's marks were summed up to build a category score. Criteria were also ranked according to the average score across the category they gathered.

- **Face to face**

For the face to face meeting, a trained facilitator conducted the discussions following a structured consensus methodology. Two rapporteurs provided support in recording voting processes and modifications in phrasing and allocation accorded by experts' consensus. In addition, sessions were tape-recorded (with experts' consent) to enable an accurate account for discussions.

Each retained criteria and the categories clustered under it were presented following the order in the questionnaire.

Priority-setting and weighting criteria took place in two stages: In the first step criteria and categories were presented one at a time and at this stage, merging, rephrasing and reallocating of categories across criteria were allowed.

Once consensus on the formulation of categories and criterion reached, experts proceeded to weight categories on a scale of 100. Whenever group discussions did not yield consensus about weights distribution among categories, experts individual voting was called to allocate the 100 points using ballots. The final weight for each category was calculated averaging total points by the number of voters (dividing total points by number of experts and multiplying by 100, so the sum of categories' weight within a criterion was always 100).

In the second stage panellists' discussions were steered to obtain relative weights for the criteria consolidated in the previous stage. The weight given to a particular criterion was built on the concept of how the criterion was defined throughout its categories, and irrespectively of the number of categories (*i.e.*, more categories did not mean more importance but a more nuanced definition of this criterion).

The group discussion about the relative importance of the criteria was followed by experts' individual rating using ballots. The criteria relative weight was also rated in a 100 points scale. To determine the relative weight finally allocated to each criterion, experts' votes were processed to obtain the average score per criterion (total sum of points divided by the number of voters and multiply by 100).

## Results

- **Online Round 1 (R1)**

Round 1 was launched in March 21st 2016 and closed on April 11<sup>th</sup> 2016. The initial number of European experts invited to join the panel was **28**. **All of them** actually completed the questionnaire in the first round: men=16 (57,2%) and women=12 (42,9%), the age-range included 3,6 % within 25-34 years old, 21,5 % ages 35-44, 35,8 % ages 45-54, 32,2 % ages 55-65 and 7,2 % >65 years old.

They came from different countries in Europe (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Norway, Portugal, Romania, Slovenia, Spain, and United Kingdom); covering a variety of health system models as well as diverse individual expertise (academic, clinician, policy, advocate etc.). Their common feature was holding knowledge and experience in the field of diabetes.

In this first round, from the initially **seventy-one** categories presented in the questionnaire, agreement among the experts was reached about **fifty** categories as high priority (7-9 score) for assessing practices and, thus, they passed to the face to face meeting for further discussion (table 1); In about **eight** categories were considered as median priority among you, therefore they were discarded (table 2). The remaining **thirteen** categories, that did not reach agreement, pass on to the second round for reassessment by the experts, this time in light of the median and range of the valuations assigned by their colleagues in the first round (table 3).

**Table 1.** High priority categories for interventions' assessment obtained from first online round

Criterion-ID	Criterion	Category -ID	Category
1	Comprehensiveness of the intervention	1	A comprehensive assessment of relevant interventions was carried out (or accounted for if it already existed) (i.e. efficacy, cost-effectiveness, quality, safety, etc.)
		3	The intervention has a comprehensive approach to diabetes addressing relevant contextual indicators (i.e. prevalence of diabetes in the population, percentage of the population physically inactive, prevalence of overweight, obesity and abdominal obesity in population, prevalence of population following national recommendations on nutrition, etc.).

Criterion-ID	Criterion	Category-ID	Category
		5	Validated risk assessment tools are available during the intervention to stratify patients by their individual risk profile.
2	Care intervention design	7	The design is appropriate and builds upon relevant data, theory, context, evidence, previous practice including pilot studies.
		8	The design thoroughly describes the practice in terms of purpose, SMART objectives, methods (e.g., recruitment, location of intervention, concrete activities, and timeframe (sequence, frequency and duration)).
		9	There were a clear inclusion and exclusion criteria regarding program participation, including an estimated number and profile of the patients targeted by the intervention.
		10	In design, relevant dimensions of equity are adequately taken into consideration and are targeted (i.e. gender, socioeconomic status, ethnicity, rural-urban area, vulnerable groups).
		12	The intervention was designed to foster discussion and agreement with patients about their care plans (including goal-setting).
		13	Follow up of mutually agreed care plans was specifically addressed in the design of the intervention.
		14	Problems related to poly-pharmacy were taken into account.
		15	Clinical pathways are defined for the intervention.
		16	Structure and content of the intervention has been defined and established at individual level including specific targets and a follow-up plan.
		18	A theoretical basis of the program exists and includes a description of the method, description of activities within a chain of causation and time frame, and a description of interactions between key stakeholders and processes.
		19	The following elements of the program are described and theoretically justified in terms of frequency, intensity, duration, selection and recruitment method, location (setting).
22	The intervention includes an adequate estimation of the human resources, material and budget requirements in clear relation with committed tasks.		
3	Ethical considerations	23	The intervention is implemented equitably (i.e. proportional to needs).
		24	The intervention's objectives and strategy are transparent to the target population and stakeholders involved.
		25	Potential burdens of the intervention (i.e. psychosocial, affordability, accessibility, etc.) are addressed and the benefit -burden balance are fairly balanced.
		26	Patients' and/or carers' rights to be informed, to decide about their care, participation and issues regarding confidentiality, were respected and enhanced.

Criterion-ID	Criterion	Category -ID	Category
4	Governance and project management	27	There was a defined strategy to align staff incentives and motivation with the intervention objectives.
		28	The intervention included organizational elements, identifying the necessary actions to remove legal, managerial, and financial or skill barriers.
		29	The intervention integrated different information and communication technologies (e.g. accessible channels of communication, dedicated software etc.)
		30	Information technology systems supporting the implementation of screening are available to health care provider level.
		32	There was a defined policy to ensure acceptability of information technologies among users (professionals and patients), to enable their involvement in the process of change.
		33	The best available evidence (guidelines, protocols, etc.) was easily available for health professionals.
		35	Multidisciplinary approach for interventions is supported by the health care provider.
		36	Medical record system supports the intervention.
		39	There was a clear description of the patients, carers and professionals' specific role and their contribution was appropriately planned, supported and resourced.
		40	There was an efficient leadership and clear commitment to the intervention from the participating organizations.

Criterion-ID	Criterion	Category -ID	Category
5	Interaction with care delivery system	42	The intervention was integrated or fully interacting with the regular care delivery system.
		43	In health promotion interventions for diabetes, health care providers collaborate with other stakeholders.
		44	The intervention creates ownership among the target group and several stakeholders considering multidisciplinary, multi-/inter-sectorial, partnerships and alliances, if appropriate.
		45	The intervention considers creating effective linkages with all relevant parts of the health and care system.
		46	The intervention enhances and supports the patients and/or carers' ability to effectively interact with the health and care system.
6	Education and training	47	Prevention strategies, adapted to different levels of risk, are included in the education of the health care professionals.

Criterion-ID	Criterion	Category-ID	Category
		49	Trainers/educators are adequately qualified in terms of knowledge, techniques and approaches they use.
		50	An education program is in place to empower patients with diabetes to strengthen their health literacy, self-management, health promotion and prevention of diabetes complications, stress management...).
7	Patient empowerment	51	The intervention achieves meaningful participation of the target population (during design and implementation) developing its strengths, resources and autonomy (e.g. assets-based and/or salutogenic approach).
		52	The intervention actively promotes patient empowerment by using appropriate mechanisms (e.g. self-management support, shared decision making, education-information or value clarification).
		53	The intervention considered all stakeholders' * needs in terms of enhancing/acquiring the right skills, knowledge and behaviour to promote patient empowerment (*patients, carers, health and care professionals, policy makers, etc.).
		54	Organizational structures supporting patients' empowerment were clearly defined and described (i.e. responsibility assignments, flows of communication and work and accountabilities).
		56	The professionals involved are trained and competent to support individual's self-management (e.g. through professional development programs to promote patient empowerment).

Criterion-ID	Criterion	Category-ID	Category
8	Evaluation	58	Evaluation took into account social and economic aspects from both patient and formal and informal caregiver's perspectives.
		59	Evaluation outcomes were linked to the stated goals and objectives.
		60	Evaluation outcomes were shared among stakeholders and linked to actions to foster continuous learning and improvement.
		61	Outcomes assessment enabled performance-based contracts.
		62	There is a defined and appropriate evaluation framework assessing structure, process and outcomes considering, e.g.: the use of validated tools and/or the results of evaluation are linked to actions to reshape the implementation accordingly and/or the intervention is assessed for efficiency (cost versus outcome).
		63	There is a defined monitoring process to assess the outcomes of the interventions (i.e. proportion of high-risk individuals achieving clinically significant changes in risk factors at 1 year follow-up, proportion of planned

Criterion-ID	Criterion	Category-ID	Category
			intervention visits completed over 1 year, proportion of persons with diabetes with parameters under/above a defined target; mortality rate from cardiovascular event, quality of life, etc.)
9	Sustainability	64	The sustainability strategy considered a range of contextual factors (e.g. health and social policies, innovation, cultural trends and general economy).
		65	There is broad support for the intervention amongst those who implement it.
		67	The continuation of the project has been ensured through institutional anchoring and/or ownership by the relevant stakeholders or communities.
10	Scalability and transferability	69	Potential impact on the population targeted (if scaled up) is assessed.

**Table 2.** Discarded categories for interventions' assessment obtained in the first online round

Criterion-ID	Criterion	Category-ID	Category
1	Comprehensiveness of the intervention	2	The intervention is aligned with a policy plan implemented at the institutional, local, national and international level.
		4	Risk-profiling protocol to identify levels of risk has been evaluated at national level (risk-stratification).
		6	The intervention placed a specific role/function for caregivers, involving them in care support infrastructure for patients when appropriate, and the patient agrees.
2	Care intervention design	11	Target population is defined on the basis of needs assessment including strengths and other characteristics (e.g. motivation, readiness for change, awareness, interpersonal relationships and support, cultural/spiritual/religious and community involvement, etc.).
		17	The coverage of the program is explicitly declared (e.g. local, regional or national level).
		20	There is a detailed description of care setting (location: in/out-patient, health care provider) or social environment (e.g. through group sessions).
4	Governance and project management	37	There is a clear description of the health care organizations (i.e. governmental body, insurer, primary care organizations, hospitals, etc.) and/or relevant stakeholders (i.e. patient's associations, diabetes specialized care associations, NGOs, etc.) who planned and initiated the intervention.
7	Patient empowerment and participation	55	Leadership of the intervention is effective in exhibiting commitment to patients' empowerment and is both credible and effective.

**Table 3.** Categories that did not reach agreement in the first online round

Criterion -ID	Criterion	Criterion -ID	Category
1	Comprehensiveness of the intervention	5	Validated risk assessment tools are available during the intervention to stratify patients by their individual risk profile.
2	Care intervention design	12	The intervention was designed to foster discussion and agreement with patients about their care plans (including goal-setting).
		21	All relevant stakeholders (patients, carers, professionals, community groups, statutory bodies, etc.) were considered and key stakeholders identified.
4	Governance and project management	31	The information generated by the intervention was systematically recorded and is accessible to professionals and patients, and where appropriate embedded in existing information systems.
		34	Organizational structures are clearly defined and described (i.e. responsibility assignments, flows of communication and work and accountabilities).
		38	Training needs of the health professionals are assessed and taken into account in the development of the program/intervention.
		41	All team members involved had appropriate capacities, experience, training and support to accomplish their tasks.
6	Education and training	48	Educational and training programs are evidence-based and fully described in terms of content and format, considering individual needs and learning styles (e.g. description of didactical principles, scheduling and number of sessions, etc.)
8	Evaluation	57	There was a baseline multidisciplinary assessment for all the relevant outcomes and processes.
9	Sustainability	66	There is broad support for the intervention amongst the intended target populations.
		68	Human and financial resources for the long term future of the project have been identified and action has been taken to secure them.
10	Scalability and transferability	70	There is a specific knowledge transfer strategy in place (evidence into practice).
		71	There is an analysis of requirements for potential scalability and transferability.

- **Online Round 2 (R2)**

Round 2 was launched in April 18<sup>th</sup> 2016 and closed on April 25<sup>th</sup> 2016. The 28 numbers of European experts who completed the first online round were again invited to join the second round panel and **26** of them completed the second round questionnaire: men=14 (53,9 %) and women=12 (46,2 %), the age-range included 3,8 % within 25-34 years old, 23,07 % ages 35-44, 38,4 % ages 45-54, 30,7 % ages 55-65 and 3,8 % >65 years old.

They came from different countries in Europe (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Norway, Portugal, Romania, Slovenia, Spain, and United Kingdom); covering a variety of health system models as well as diverse individual expertise (academic, clinician, policy, advocate etc.). Their common feature was holding knowledge and experience in the field of diabetes.

In relation to the **thirteen** categories in which the panel reached not agreement in the first round, only **two** were deemed priority with high level of agreement and retained for discussion at the face to face meeting (table 4).

**Table 4.** Criteria and categories assessed as high priority in the second online round

Criterion-ID	Criterion	Category-ID	Category
5	Comprehensiveness of the intervention	5	Validated risk assessment tools are available during the intervention to stratify patients by their individual risk profile.
12	Care intervention design	12	The intervention was designed to foster discussion and agreement with patients about their care plans (including goal-setting).

The other **eleven** categories were considered median and low priority; therefore they were discarded from the list (table 5).

**Table 5.** Criteria and categories discarded in the second online round

Criterion-ID	Criterion	Category-ID	Category
2	Care intervention design	21	All relevant stakeholders (patients, carers, professionals, community groups, statutory bodies, etc.) were considered and key stakeholders identified.
4	Governance and project management	31	The information generated by the intervention was systematically recorded and is accessible to professionals and patients, and where appropriate embedded in existing information systems.

Criterion-ID	Criterion	Category-ID	Category
		34	Organizational structures are clearly defined and described (i.e. responsibility assignments, flows of communication and work and accountabilities).
		38	Training needs of the health professionals are assessed and taken into account in the development of the program/intervention.
		41	All team members involved had appropriate capacities, experience, training and support to accomplish their tasks.
6	Education and training	48	Educational and training programs are evidence-based and fully described in terms of content and format, considering individual needs and learning styles (e.g. description of didactical principles, scheduling and number of sessions, etc.)
8	Evaluation	57	There was a baseline multidisciplinary assessment for all the relevant outcomes and processes.
9	Sustainability	66	There is broad support for the intervention amongst the intended target populations.
		68	Human and financial resources for the long term future of the project have been identified and action has been taken to secure them.
10	Scalability and transferability	70	There is a specific knowledge transfer strategy in place (evidence into practice).
		71	There is an analysis of requirements for potential scalability and transferability.

The **fifty** categories agreed as high priority in the previous round, and the **two** assigned as priority in this second round were kept for discussion at the face to face meeting. The scores obtained for each category and the corresponding criterion are summarised in table 6.

**Table 6:** Priority criteria and categories for intervention's assessment ordered by their average priority weight scores obtained from the second round.

Note: Category coloured in pink corresponds to no consensus categories obtained in round one and subsequently selected as priority in the second round ranked.

Criterion-ID	Criterion	Category-ID	Criterion	Priority weight
6	Education and training	47	Prevention strategies, adapted to different levels of risk, are included in the education of the health care professionals.	238
		49	Trainers/educators are adequately qualified in terms of knowledge, techniques and approaches they use.	241
				237

Criterion-ID	Criterion	Category-ID	Criterion	Priority weight	
		50	An education program is in place to empower patients with diabetes to strengthen their health literacy, self-management, health promotion and prevention of diabetes complications, stress management...).	232	
7	Patient empowerment and participation	51	The intervention achieves meaningful participation of the target population (during design and implementation) developing its strengths, resources and autonomy (e.g. assets-based and/or salutogenic approach).	234	227
		52	The intervention actively promotes patient empowerment by using appropriate mechanisms (e.g. self-management support, shared decision making, education-information or value clarification).	243	
		53	The intervention considered all stakeholders' * needs in terms of enhancing/acquiring the right skills, knowledge and behaviour to promote patient empowerment (*patients, carers, health and care professionals, policy makers, etc.).	211	
		54	Organizational structures supporting patients' empowerment were clearly defined and described (i.e. responsibility assignments, flows of communication and work and accountabilities).	215	
		56	The professionals involved are trained and competent to support individual's self-management (e.g. through professional development programs to promote patient empowerment).	231	
3	Ethical considerations	23	The intervention is implemented equitably (i.e. proportional to needs).	215	224
		24	The intervention's objectives and strategy are transparent to the target population and stakeholders involved.	226	
		25	Potential burdens of the intervention (i.e. psychosocial, affordability, accessibility, etc.) are addressed and the benefit -burden balance are fairly balanced.	218	
		26	Patients' and/or carers' rights to be informed, to decide about their care, participation and issues regarding confidentiality, were respected and enhanced	236	
8	Evaluation	58	Evaluation took into account social and economic aspects from both patient and formal and informal caregiver's perspectives.	206	223
		59	Evaluation outcomes were linked to the stated goals and objectives.	241	
		60	Evaluation outcomes were shared among stakeholders and linked to actions to foster continuous learning and improvement.	237	
		61	Outcomes assessment enabled performance-based contracts.	200	
		62	There is a defined and appropriate evaluation framework assessing structure, process and outcomes considering, e.g.: the use of validated tools and/or the results of evaluation are linked to actions to reshape the implementation accordingly and/or the intervention is	220	

Criterion-ID	Criterion	Category-ID	Criterion	Priority weight
			assessed for efficiency (cost versus outcome).	
		63	There is a defined monitoring process to assess the outcomes of the interventions (i.e. proportion of high-risk individuals achieving clinically significant changes in risk factors at 1 year follow-up, proportion of planned intervention visits completed over 1 year, proportion of persons with diabetes with parameters under/above a defined target; mortality rate from cardiovascular event, quality of life, etc.).	234
5	Interaction with the health and care delivery system	42	The intervention was integrated or fully interacting with the regular care delivery system.	216
		43	In health promotion interventions for diabetes, health care providers collaborate with other stakeholders.	229
		44	The intervention creates ownership among the target group and several stakeholders considering multidisciplinary, multi-/inter-sectorial, partnerships and alliances, if appropriate.	210
		45	The intervention considers creating effective linkages with all relevant parts of the health and care system.	217
		46	The intervention enhances and supports the patients and/or carers' ability to effectively interact with the health and care system.	221
9	Sustainability	64	The sustainability strategy considered a range of contextual factors (e.g. health and social policies, innovation, cultural trends and general economy).	204
		65	There is broad support for the intervention amongst those who implement it.	231
		67	The continuation of the project has been ensured through institutional anchoring and/or ownership by the relevant stakeholders or communities.	223

Criterion-ID	Criterion	Category-ID	Criterion	Priority weight
2	Care intervention design	7	The design is appropriate and builds upon relevant data, theory, context, evidence, previous practice including pilot studies.	234
		8	The design thoroughly describes the practice in terms of purpose, SMART objectives, methods (e.g., recruitment, location of intervention, concrete activities, and timeframe (sequence, frequency and duration)).	225

Criterion-ID	Criterion	Category-ID	Criterion	Priority weight	
		9	There were a clear inclusion and exclusion criteria regarding program participation, including an estimated number and profile of the patients targeted by the intervention.	202	
		10	In design, relevant dimensions of equity are adequately taken into consideration and are targeted (i.e. gender, socioeconomic status, ethnicity, rural-urban area, vulnerable groups).	220	
		12	The intervention was designed to foster discussion and agreement with patients about their care plans (including goal-setting).	211	
		13	Follow up of mutually agreed care plans was specifically addressed in the design of the intervention.	213	
		14	Problems related to poly-pharmacy were taken into account.	209	
		15	Clinical pathways are defined for the intervention.	213	
		16	Structure and content of the intervention has been defined and established at individual level including specific targets and a follow-up plan.	205	
		18	A theoretical basis of the program exists and includes a description of the method, description of activities within a chain of causation and time frame, and a description of interactions between key stakeholders and processes.	209	
		19	The following elements of the program are described and theoretically justified in terms of frequency, intensity, duration, selection and recruitment method, location (setting).	208	
		22	The intervention includes an adequate estimation of the human resources, material and budget requirements in clear relation with committed tasks.	217	
4	Governance and project management	27	There was a defined strategy to align staff incentives and motivation with the intervention objectives.	195	214
		28	The intervention included organizational elements, identifying the necessary actions to remove legal, managerial, and financial or skill barriers.	208	
		29	The intervention integrated different information and communication technologies (e.g. accessible channels of communication, dedicated software etc).	190	
		30	Information technology systems supporting the implementation of screening are available to health care provider level.	213	
		32	There was a defined policy to ensure acceptability of information technologies among users (professionals and patients), to enable their involvement in the process of change.	205	
		33	The best available evidence (guidelines, protocols, etc.) was easily available for health professionals.	225	
		35	Multidisciplinary approach for interventions is supported by the health care provider	228	

Criterion-ID	Criterion	Category-ID	Criterion	Priority weight	
		36	Medical record system supports the intervention.	224	
		39	There was a clear description of the patients, carers and professionals' specific role and their contribution was appropriately planned, supported and resourced.	222	
		40	There was an efficient leadership and clear commitment to the intervention from the participating organizations.	227	
1	Comprehensive ness of the intervention	1	A comprehensive assessment of relevant interventions was carried out (or accounted for if it already existed) (i.e. efficacy, cost-effectiveness, quality, safety, etc.)	215	213
		3	The intervention has a comprehensive approach to diabetes addressing relevant contextual indicators (i.e. prevalence of diabetes in the population, percentage of the population physically inactive, prevalence of overweight, obesity and abdominal obesity in population, prevalence of population following national recommendations on nutrition, etc.).	218	
		5	Validated risk assessment tools are available during the intervention to stratify patients by their individual risk profile.	206	
10	Scalability and Transferability	69	Potential impact on the population targeted (if scaled up) is assessed.	213	213

- **Comments provided by the experts**

In both first and second round, experts were invited to add any driver they thought relevant or missing. They were also encouraged to provide comments to individual items, drivers, or the general model. Though no additional items were suggested during this process, experts' comments proved very informative as to how they were facing their task and the conceptual difficulties they identified in the process.

One of the main concerns gathered from those comments is relate to the risk assessment to determine, whether a comprehensive diabetes management practice, that included risk stratification to identify patients in the greatest need of intervention, allows better systematic allocation of resources to optimize the function and value of each provider and obtain better health outcomes:

*["The value of risk assessment depends on the ability to change the intervention accordingly. When it comes to prevention, the recommended intervention is mostly the same, independent on the risk factors- or degree"].*

*["When we are dealing with interventions in general, I think it is important to be able to assess the participants' risk profile (type of "risk" depending on the intervention in question)"]*

Another topic of importance for the experts is the information and communication systems and technologies. Even agreed that it enables access to information, facilitate the relation to different levels of social and health care and the management of the diabetes, patients remain cautious about their accessibility due to the confidentiality of the information managed:

*["As a patients' association, we remain very distrustful and cautious about the accessibility of the information recorded in systems. We consider it needs a high level protection"]*

It is also emphasised the extent the information system is needed

*["Information technology systems supporting the implementation of screening are available to health care provider level" is important only if the intervention/program is related to screening in health care]*

Some others questioned the difficulties encompassed when trying to integrated different information and communication technologies:

*["So if the one to adapt/adopt the intervention doesn't have the same technology he cannot use it?"]*

However, despite the difficulties, it is suggested the potential benefits for health care provider to have access to information technology systems for quality improvement:

*["The electronic clinical record also offers to the health care professional the possibility to check their own indicators ....."]*

Patients access to information and resources are also present in the expert's comments. It is pointed out that the best evidence must be available not only to health care professionals but also to other actors:

*["....and for the stakeholders as associations recognized by the Public Health Authorities"]*

Also, in any multidisciplinary approach to the intervention, the patient must also be fully involved:

*["..... and the "patient expert" trained to support others patients in managing their living with diabetes"]*

Despite that it is addressed that practice must enhance and support the patient in order to facilitate its interaction with the health and care system, not always happens and it is seen as an improvement area for health professionals and the system:

*["I think that patient's side must be improved. Besides to be more present the building phase of this strategies also on their assessment and evaluation"]*.

The reliance on health policy as the main drive to achieve good practices and have a good impact, is an issue that has been also addressed in previous Delphi by other experts. However, it is questioned that a practice may not necessarily develop to national level to have impact:

*["Interventions that are developed and implemented at local levels only, may have bigger impact than national policies"]*

Another concern expressed had to do with the practice care setting, due to the different health care organization, stakeholders and governance:

*["Care settings and what they represent differ greatly from country to country. What is a specialist task one place might be delivered in primary care in another country"]*

*["...many depend a lot on the type of program/intervention in question and on the type of health care organization."]*

*["Again, this may vary according to local settings. Some places nutritionists or physical activity specialists are available, while others only have the clinicians and maybe a nurse. If the latter apply, they might benefit the integration of the intervention in their practice as well"]*.

Finally, Evaluation, Sustainability and Scalability, areas addressed as very important for strategic clinical policy making, are questioned for being considered a necessary requirement to be a good practice:

*["...some interventions may be best practice even if not having fully undertaken a full cycle of evaluation, sustainability or scalability"]*.

Sustainability are linked to resources rather to the quality of practice itself (whether it is or not good, its impact on the population, or if the practice can take root into the organization etc.)

*["For example, a local best practice may then seize due to lack of funds or prioritisation, irrespective of how good or best practice it was"]*.

All these concerns were addressed and dealt with during discussions at the face to face meeting.

- **Face to face**

The expert meeting to refine and prioritize criteria to assess interventions on diabetes took place on 12<sup>th</sup> and 13<sup>th</sup> May 2016 in Brussels.

**Sixteen** out of the twenty six experts that completed the 2<sup>nd</sup> round were able to attend. They were 8 women and 8 men. The range of countries represented (Austria, Finland, France, Germany, Greece, Ireland, Italy, Norway, Romania, Slovenia, Spain, and United Kingdom) still showed a good sample of the variety of health systems in Europe. The range in expertise was also covered with academic, clinician, advocate, patient’s associations and policy representatives.

In order to ease discussions at the meeting, the initial 10 criteria obtained in the second online round (table 6) were further elaborated by the CHRODIS Delphi Team to identify redundancies. Thus, a proposal for merging criteria and reallocating categories was presented to the expert panel and thoroughly discussed at the meeting. The experts finally agreed on 9 criteria made up of 39 categories and weighted categories composing each criterion as well as the final list of criteria. Table 6 shows the final list of categories, criteria and their weights agreed by the expert panel.

The following paragraphs provide details on the decisions made by the panel to achieve this final output on the basis of the results obtained from the 2 online rounds (reflected in table 6).

During the face to face discussion the experts on the panel agreed in several general considerations: using the word “practice”, instead of “intervention” because it was perceived as more appropriate and inclusive; also, they agreed on using the term “target population” rather than “patients”, for widening the potential scope of the practices.

**Criterion 1:** “*Comprehensiveness of the intervention*”. The word intervention was changed in all the categories. The criterion 1 was renamed as “**Comprehensiveness of the practice**”.

Category 1 was rephrased as follows:

*“The practice has considered relevance evidence on effectiveness, cost-effectiveness, quality, safety, etc.”*

Category 3 was rephrased into:

*“The practice has considered the main contextual indicators\*.”* (Experts suggested that some indicators should be refined, by providing examples, in their presentation in the CHRODIS platform for knowledge exchange, using the aids reserved for clarification on the form for describing the practice.)

Category 5 was also rephrased into:

*“The practice has considered the underlying risk of the target population (i.e. validated tools to individual risk assessment).”*

**Criterion 2:** “Care intervention design” was renamed to “**Practice design**”.

Categories 39 was decided to be partially included in this criterion coming from criterion 4 “Governance and project management”.

Category 39 was rephrased into:

*“There was a clear description of the role of the target population, carers and professional.”*

Category 7, 10 and 22 were kept without changes.

Category 8 was rephrased into:

*“The practice’s aims, objectives and methods were clearly specified.”*

Category 9 was also rephrased into:

*“There was a clear description of the target population (i.e., inclusion and exclusion criteria and the estimated number of participants).”*

Categories 12, 13 and 16 were decided to be combined into a single one:

*“The structure, organization and content of the practice was defined and established together with the target population.”* The experts commented on adding some example regarding the ‘target population’, e.g. community, patient's groups, patients.

Categories 14, 15, 18 and 19 were discarded as they were considered already included in other categories, within the Criterion, by the majority of the experts.

On **Criterion 3: “Ethical considerations”**, Category 25 was rephrased into:

*“Potential burdens of the practice (i.e. psychosocial, affordability, accessibility, etc.) are addressed and there is a balance between benefits and burden.”*

Category 26 was also rephrased into:

*“Target population rights to be informed, to decide about the care, participation and issues regarding confidentiality were respected and enhanced.”*

**Criterion 4:** “Governance and project management” was renamed as “**Governance**”.

The experts decided to include Category 44 from Criterion 5: “Interaction with the health care delivery system” in this Criterion, as it was originally presented.

Categories 29, 30 and 36 were merged resulting in:

*“The practice is supported by different information and communication technologies (e.g. medical records system, dedicated software supporting the implementation of screening,*

*social media, etc.)*” as all of them acknowledge the support of information and communication technologies to the practice.

Category 33 was rephrased into:

*“The best evidence and documentation supporting the practice (e.g., guidelines, protocols, etc.) was easily available for relevant stakeholders (e.g., professionals and target population).”*

Category 35 was also rephrased into:

*“Multidisciplinary approach for practices is supported by the appropriate stakeholders (e.g. professional associations, institutions, etc.)”*

Main concepts of Category 39 were kept but rephrased into:

*“The contribution of the target population, carers and professionals was appropriately planned, supported and resourced.”*

Category 40 was simplified into:

*“The practice offers a model of efficient leadership.”*

Categories 27 and 28 were kept as initially presented.

**Criterion 5:** “Interaction with the health and care delivery system” was renamed as **“Interaction with regular and relevant systems”**, in order to acknowledge the implementation of practices across other systems i.e. social care or educational systems.

Category 42 was rephrased into:

*“The practice was integrated or fully interacting with the regular care and/or further relevant systems.”*

Category 43 was discarded as experts agreed it was included among other categories.

Category 45 was also rephrased into:

*“The practice enables effective linkages across all relevant decision makers and stakeholders.”*

Category 46 was also rephrased into:

*“The practice enhances and supports the target populations’ ability to effectively interact with the regular, relevant systems\*. (\*relevant systems: health and care systems, educational system, etc.)”*

**Criterion 6: “Education and training”**.

Category 56 from Criterion 7 “Patient empowerment and participation” was included here and merged with category 47 resulting in:

*“Relevant professionals and experts are trained to support target population empowerment.”*

Category 49 was rephrased into:

*“Trainers/educators are adequately qualified in terms of knowledge, techniques and approaches.”*

Category 50 was also rephrased into:

*“Educational elements are included in the practice to promote the empowerment of the target population (e.g., strengthen their health literacy, self-management, stress management, etc.)”*

**Criterion 7: “Patient empowerment and participation”** was renamed as **“Target population empowerment”**.

Category 51 was discarded as experts considered it was included in Category 53 and this was rephrased into:

*“The practice considered all stakeholders’\* needs in terms of enhancing/acquiring the right skills, knowledge and behaviour to promote target population empowerment (\*target population, carers, health and care professionals, policy makers, etc.)”*

Category 52 was rephrased into:

*“The practice actively promotes target population empowerment by using appropriate mechanisms (e.g. self-management support, shared decision making, education-information or value clarification, active participation in the planning process, and in professional training).”*

Category 54 was discarded as experts considered it included in the merged categories 12, 13 and 16, in Criterion 2 “Practice design”.

Category 56 was also discarded as experts considered it included in Category 50 on “Education and training”.

**Criterion 8: “Evaluation”** was kept as originally presented.

Categories 58 and 59 were kept as initially presented.

Categories 60 and 61 were merged and rephrased into:

*“Evaluation outcomes and monitoring were shared among relevant stakeholders.”*

Category 62 was rephrased into:

*“The evaluation outcomes were linked to action to foster continuous learning and/or improvement and/or to reshape the practice.”*

Category 63 was discarded as it was considered included in the merging of categories 60 and 61.

**Criterion 9:** “Sustainability” and **Criterion 10:** “Scalability and transferability” were considered by experts to be under a unique Criterion. The new Criterion was renamed “**Sustainability and Scalability**”.

Category 64 was rephrased into:

*“The sustainability strategy considered a range of contextual factors (e.g. health and social policies, innovation, cultural trends and general economy, epidemiological trends).”*

Category 67 was also rephrased into:

*“The continuation of the practice has been ensured through institutional anchoring\* and/or ownership by the relevant stakeholders or communities. (\*anchoring would entail devoted resources, budget, etc.)”*

Finally, Category 65 and 69 were kept as originally presented.

Once the work on new specification was completed, and categories in each criterion were weighted, experts weighed the 9 criteria by distributing 100 points among them. The highest weight was assigned to the criterion: “Practice design” (14% of the total score of a practice), while the criteria with the lowest score (8% of total score each) were: “Sustainability and Scalability. Category and criteria weights are detailed in table 7.

**Table 7.** Final set of weighted criteria and categories recommended for evaluating diabetes interventions.

<b>DIABETES</b>			
<i>NEW Criteria name</i>	<i>Criteria Weight</i>	<i>Categories</i>	<i>Category Weight</i>
<b>Comprehensiveness of the practice</b>	11	The practice has considered relevant evidence on effectiveness, cost-effectiveness, quality, safety, etc.	38
		The practice has considered the main contextual indicators*.	33
		The practice has considered the underlying risks of the target population (i.e. Validated tools to individual risk assessment).	29
Total must equal 100			100
<b>Practice design</b>	14	The design builds upon relevant data, theory, context, evidence, previous practice including pilot studies.	18
		The practice's aims, objectives and methods were clearly specified.	19
		There were a clear description of the target population (i.e.. exclusion and inclusion criteria and the estimated number of participants).	13
		In design, relevant dimensions of equity are adequately taken into consideration and are targeted (i.e. gender, socioeconomic status, ethnicity, rural-urban area, vulnerable groups).	11
		The structure, organization and content of the practice was defined and established together with the target population.	14
		The practice includes an adequate estimation of the human resources, material and budget requirements in relation to the committed tasks.	13
		There was a clear description of the role of the target population, carers and professionals.	12
Total must equal 100			100
<b>Ethical considerations</b>	11	The practice is implemented equitably* (i.e. proportional to needs).	25
		The practice's objectives and strategy are transparent to the target population and stakeholders involved.	25
		Potential burdens of the practice (i.e. psychosocial, affordability, accessibility, etc.) are addressed and there is a balance between benefit and burden.	25
		Target population rights to be informed, to decide about their care, participation and issues regarding confidentiality, were respected and enhanced.	25
Total must equal 100			100
<b>Governance</b>	10	There was a defined strategy to align staff incentives and motivation with the practice objectives.	10
		The practice included organizational elements, identifying the necessary actions to remove legal, managerial, and financial or skill barriers.	15
		The best evidence and documentation supporting the practice (guidelines, protocols, etc.) was easily available for relevant stakeholders (e.g. professionals and target populations).	10
		Multidisciplinary approach for practices is supported by the appropriate stakeholders (e.g. professionals associations, institutions etc.).	10
		The contribution of the target population, carers and professionals was appropriately planned, supported and resourced.	13
		The practice offers a model of efficient leadership.	13

		The practice creates ownership among the target population and several stakeholders considering multidisciplinary, multi-/inter-sectorial, partnerships and alliances, if appropriate.	11
		The practice is supported by different information and communication technologies (e.g. medical record system, dedicated software supporting the implementation of screening, social media etc.).	10
		There was a defined policy to ensure acceptability of information technologies among users (professionals and target population) i.e., enable their involvement in the process of change.	8
Total must equal 100			100
<b>Interaction with regular and relevant systems</b>	9	The practice was integrated or fully interacting with the regular health, care and/or further relevant systems.	42
		The practice enables effective linkages across all relevant decision makers and stakeholders.	30
		The practice enhances and supports the target populations' ability to effectively interact with the regular, relevant systems*.	28
Total must equal 100			100
<b>Education and training</b>	11	Relevant professionals and experts are trained to support target population empowerment.	30
		Trainers/educators are qualified in terms of knowledge, techniques and approaches.	30
		Educational elements are included in the practice to promote the empowerment of the target population (e.g. strengthen their health literacy, self-management, stress management....etc. ).	40
Total must equal 100			100
<b>Target population empowerment</b>	13	The practice actively promotes target population empowerment by using appropriate mechanisms (e.g. self-management support, shared decision making, education-information or value clarification, active participation in the planning process and in professional training).	50
		The practice considered all stakeholders' * needs in terms of enhancing/acquiring the right skills, knowledge and behaviour to promote target population empowerment (* target population, carers, health and care professionals, policy makers, etc.).	50
Total must equal 100			100
<b>Evaluation</b>	13	Evaluation took into account social and economic aspects from both target population and formal and informal caregivers perspectives.	18
		Evaluation outcomes were linked to the stated goals and objectives.	25
		Evaluation outcomes and monitoring were shared among relevant stakeholders.	26
		The evaluation outcomes were linked to action to foster continuous learning and/or improvement and/or to reshape the practice.	31
Total must equal 100			100
<b>Sustainability and scalability</b>	8	The sustainability strategy considered a range of contextual factors (e.g. Health and social policies, innovation, cultural trends and general economy, epidemiological trends).	28
		There is broad support for the practice amongst those who implemented it.	20
		The continuation of the practice has been ensured through institutional anchoring* and/or ownership by the relevant stakeholders or communities.	32

		Potential impact on the population targeted (if scaled up) is assessed.	20
<b>Total:</b>	100		100

## ANNEX 1: List of Sources

- **CRITERIA AND CATEGORIES TO ASSESS GOOD PRACTICES FROM DELPHI 1 TO 3**

- INTERIM REPORT 1: Delphi Panel on interventions in the area of health promotion and primary prevention of chronic diseases [Access: [http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-1-report\\_27-nov15\\_HPPP.pdf](http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-1-report_27-nov15_HPPP.pdf)].
- INTERIM REPORT 2: Delphi Panel in the area of organizational interventions focused on dealing with chronic patients with multiple conditions [[http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-2-report\\_multimorbid.pdf](http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-2-report_multimorbid.pdf)].
- INTERIM REPORT 3: Delphi Panel in the area of patient's empowerment interventions with chronic conditions [[http://www.chrodis.eu/wp-content/uploads/2016/03/Delphi-3-report\\_EMPOWERMENT.pdf](http://www.chrodis.eu/wp-content/uploads/2016/03/Delphi-3-report_EMPOWERMENT.pdf)].

- **DOCUMENTS FROM WP7**

- Indicators on the quality of care for people with type 2 diabetes
- Quality indicators for health promotion interventions targeting people with type 2 diabetes
- Quality indicators for diabetes prevention programs in health-care targeted at people at high risk
- Quality indicators for education and health professionals training programs for people with type 2 diabetes

## ANNEX 2: Summary of Evidence

The main bodies of information for the Delphi 1 to 3 are made up of the conceptual models, assessment tools and procedures identified in Europe and beyond for evaluation of good practice in chronic conditions

For the synthesis of evidence please check *Annex 2: Summary of evidence* in the following reports:

- INTERIM REPORT 1: Delphi Panel on interventions in the area of health promotion and primary prevention of chronic diseases ([http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-1-report\\_27-nov15\\_HPPP.pdf](http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-1-report_27-nov15_HPPP.pdf)).
- INTERIM REPORT 2: Delphi Panel in the area of organizational interventions focused on dealing with chronic patients with multiple conditions ([http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-2-report\\_multimorbid.pdf](http://www.chrodis.eu/wp-content/uploads/2015/12/Delphi-2-report_multimorbid.pdf)).
- INTERIM REPORT 3: Delphi Panel in the area of patient's empowerment interventions with chronic conditions ([http://www.chrodis.eu/wp-content/uploads/2016/03/Delphi-3-report\\_EMPOWERMENT.pdf](http://www.chrodis.eu/wp-content/uploads/2016/03/Delphi-3-report_EMPOWERMENT.pdf))