

WP3 Final Evaluation Report D034



Joint Action Health Workforce
Planning and Forecasting

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Joint Action Health Workforce
Planning and Forecasting

DELIVERABLE D034 – Version 07

FINAL EVALUATION REPORT

WP3

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The Joint Action on Health Workforce Planning and Forecasting

The Joint Action on Health Workforce Planning and Forecasting (JAEUHWF) was a three-year programme running from April 2013 to June 2016, bringing together partners representing countries, regions and interest groups from across Europe and beyond, including also non-EU countries and international organisations. It is supported by the European Commission under the framework of the European Action Plan for the Health Workforce, which highlights the risk of critical shortages in health professionals in the near future.

The main objective of the Joint Action on Health Workforce Planning and Forecasting was to provide a platform for collaboration and exchange between partners, so as to better prepare Europe's future health workforce. The Joint Action aimed at improving the capacity for health workforce (HWF) planning and forecasting, by supporting collaboration and exchange between Member States and by providing state-of-the-art knowledge on quantitative and qualitative planning. By participating in the Joint Action, competent national authorities and partners are expected to increase their knowledge, improve their tools, and succeed in achieving a higher effectiveness in workforce planning processes. The outcomes of the Joint Action, among other things, should contribute to the development of a sufficient number of health professionals, and contribute to minimising the gaps between the need for and the supply of health professionals equipped with the right skills, as well as facilitate forecasting the impact of healthcare engineering policies and the re-designing of educational capacity for the future.

The Joint Action was implemented by means of seven Work Packages (WP). Three of them were horizontal and four were core WPs. WP3, as one of the horizontal WPs, was responsible for the evaluation of the Joint Action.

This deliverable is the final evaluation report, which is based on the evaluation reports produced by Work Package 3 (WP3) between April 1, 2013 and June 30, 2016. The aim of the final evaluation report is to summarize the main findings, to assess the achievement of the objectives of the Grant Agreement,¹ to draw conclusions, and to give recommendations for future Joint Action evaluations based on the process, output and outcome evaluations. This deliverable was approved by the Executive Board of the Joint Action on Health Workforce Planning & Forecasting on June 29th, 2016.

¹ Grant Agreement, Annex 1b. Joint Action on European Health Workforce Planning and Forecasting. 2013.

Contributors and Acknowledgements

The preparation of this deliverable was led by WP3 leader, Doctor Marjukka Vallimies-Patomäki, from the Ministry of Social Affairs and Health, Finland and work package co-leader Mr. Andrew Xuereb, from the Ministry for Energy and Health, Malta. In addition, responsible authors in the deliverable were Professor Johanna Lammintakanen, Researcher Alisa Puustinen, Researcher Minna Joensuu and Researcher Anneli Hujala, all representing the University of Eastern Finland.

We are grateful to all work package leaders - Zuzana Matlonova (WP2), Zoltán Aszalós (WP4), Rossana Ugenti (WP5), Matt Edwards (WP6) and Todorka Kostadinova (WP7) - and all their team members, for their fruitful and constant collaboration in all stages of the evaluation process.

We would like to extend our thanks to all partners engaged in the Joint Action. We would like to specifically thank Programme Manager Michel van Hoegaerden, Project Manager Tina Jacob, Project Officer Maria D'Eugenio, Project Officer Damien Rebella and former Project Manager Lieve Jorens, all representing the Belgian Federal Public Service of Health, Food Chain Safety and Environment - coordinator of the Joint Action - for their leadership and support.

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FINAL EVALUATION REPORT

Executive Summary

This final evaluation report gives a summary of the evaluation activities and their results based on the evaluation reports produced by Work Package 3 (WP3) between April 1, 2013 and June 30, 2016. The overall aim of the evaluation was to verify whether the Joint Action was being implemented as planned and whether it reached the objectives defined in the Grant Agreement.

The evaluation covered process, output and outcome evaluations. The specific objectives of the evaluation were:

- 1) Via process evaluation, to assess if the JAEUHWF progressed according to the original plan and was implemented in compliance with the rules.
- 2) Via the output evaluation, to assess if the work packages delivered the outputs according to the schedule and if the content and quality of the deliverables met the goals set in the Grant Agreement.
- 3) Via the outcome evaluation, to define the lessons learned and recommendations as well as to assess what kind of outcomes in health workforce planning and forecasting in Europe could be attributed to the Joint Action efforts.

The process evaluation applied the review process of the formal reports of the JAEUHWF. The output evaluation applied the review process of the deliverables. Structured check-lists were used in both cases. In addition, reviews from the Expert Reference Groups were collected via semi-structured electronic questionnaires for the output evaluation. The outcome evaluation was executed by means of Focus Groups interviews.

The final evaluation report summarizes the findings, conclusions and recommendations of three internal process evaluation reports, nine internal output evaluation reports, five Expert Reference Groups reports and a Focus Group report (Chapters 3-6). In addition, the final evaluation report sums up the final conclusions of JAEUHWF and the lessons learned from the evaluation process (Chapter 8) as well as providing an overall assessment of the achievement of the six specific objectives of the Grant Agreement of JAEUHWF² (chapter 7).

In conclusion, JAEUHWF was progressing as planned, and deliverables were of good quality and useful in terms of HWF planning and forecasting. JAEUHWF provided a lot of potential to contribute in policy dialogue on both national and EU-levels. Improving the national

² Grant Agreement, Annex 1a. Joint Action on European Health Workforce Planning and Forecasting. 2013.

level data collection brings added value to managing HWF and mobility. The achievement of the specific objectives of the Grant Agreement is summarized in Table 1 below.

Table 1. The achievement of the specific objectives of the Grant Agreement

1. Better understanding of terminology used in health workforce planning	Completed
2. Better monitoring of the HWF by access to timely data and updated information on mobility and migration trends in the EU on stock and flow data on the HWF in the EU	Completed
3. Guidelines on quantitative HWF planning methodology and increased quantitative planning capacity	Completed
4. Guidelines of qualitative HWF planning methodology and increased qualitative planning capacity	Completed
5. An estimation of future skills and competencies needed in the health workforce in Europe	*Partly completed
6. A platform of cooperation to find possible solutions for the expected shortage in the health workforce, to consolidate the experience of the JA and to have a higher impact from HWF planning and forecasts on policy decision-making	*Partly completed

*These deliverables were evaluated when work was still in progress. Comments from the evaluation team and focus groups were taken on board and considered complete.

In future, there is a need to integrate both qualitative and quantitative planning methodologies, and the models should focus on multi-professional planning. The basic assumption of a constant increase in HWF might not be feasible, and thereby a broader scope for HWF policies is needed. An important challenge is also to ensure capacity building for HWF planning and forecasting.

Clustering or partnership with countries, sharing experiences and web portals were assessed to be good methods for implementation. To foster implementation, the JAEUHWF results and the produced materials should be continuously updated. Furthermore, existing structures and extensive collaboration based on clear responsibilities and experts' participation should be utilized. These experts should have an institutional background and official commitment.

The political nature of the HWF issue has not been fully recognized, and the political importance of the issue was appraised to increase in the near future. Thus, HWF planning and forecasting needs to be high on the political agenda in the Member States and in the EU in general. This has to be supported by a clear message on the importance of HWF, while evidence and support are needed for policy-makers to tackle the HWF issue.

Based on lessons learned from the evaluation, it is encouraged to use a systematic framework and a diversity of methods and tools based on the evaluation theory and

literature on the subject. The evaluation team greatly benefits from a mixture of expertise in both the evaluation practice and the subject in question.

The approach of developmental evaluation enables the evaluation team to contribute to the quality assurance of the deliverables during the progress of the project. Use of external experts in the output and outcome evaluation is encouraged. This must be foreseen in the resources and budget. In addition, ample time for the evaluation should be included in the planning and timing of the project, as constant delays in the delivery of the outputs compromise the feasibility of the evaluation and affect the progression of the work. The outcome evaluation gives benefit regarding the potential future impact of any project.

Introduction

The evaluation of the Joint Action on European Health Workforce Planning and Forecasting (JAEUHWF) was conducted by Work Package 3 (WP3). The overall aim of the evaluation was to verify whether the Joint Action was implemented as planned and achieved the defined objectives. The evaluation was based on the Evaluation Strategy³ provided by WP3 and approved by the Executive Board # 1 on 27 September 2013. The evaluation strategy provided an overview and the basic principles of the evaluation. The basic framework for the evaluation was defined by the Project Policy⁴ and the Evaluation Guidelines.⁵ The evaluation followed the principles of programme evaluation being both summative and formative in nature (see e.g. Vedung 1997; Owen & Rogers 1999). The target audience of the evaluation was project management and WPs, as well as policymakers, funders, stakeholders, the public and the evaluators of future Joint Actions.

The Evaluation Strategy⁶ defined the final evaluation report as follows:

‘The final evaluation report includes the description and assessment of the implementation and achievements of the objectives as well as evaluation of the Joint Action’s possible added value in terms of the impact on sustainability of the Joint Action.’

The Final Evaluation Report covers process, output and outcome evaluations during the entire JAEUHWF period. The report is based on the three internal process evaluation reports done during the Joint Action period, nine internal output evaluation reports of each individual deliverable, five reports of external output evaluation done by the Expert Reference Groups and a report of the external outcome evaluation by Focus Groups. Some of the results were presented in the Interim Evaluation Report (D032) covering the first 21 months of the JAEUHWF period.

This report first presents an overview of the evaluation design and the methods used. In the second chapter, some special features of real-time programme evaluation are highlighted, focusing on the progressing nature of the role of evaluation during the Joint Action. The main body of the text focuses on the summary and conclusions of the evaluation of the Joint Action concluded by the end of June 2016.

³ Evaluation Strategy for the Joint Action on European Health Workforce Planning and Forecasting. 2013. WP3, D031.

⁴ Project Policy. Joint Action on European Health Workforce Planning and Forecasting 2013.

⁵ Evaluation Guidelines. Joint Action on European Health Workforce Planning and Forecasting 2013.

⁶ Evaluation Strategy for the Joint Action on European Health Workforce Planning and Forecasting. 2013. WP3, D031.

1. Evaluation Design and Methodology

The evaluation was an integral part of the Joint Action (JA) process. The overall aim of the evaluation of the EU Joint Action on Health Workforce Planning and Forecasting was to verify whether the JA has been implemented as planned and achieved the defined objectives with quality. The evaluation design covered the process, outputs and outcomes of the Joint Action (Figure 1).

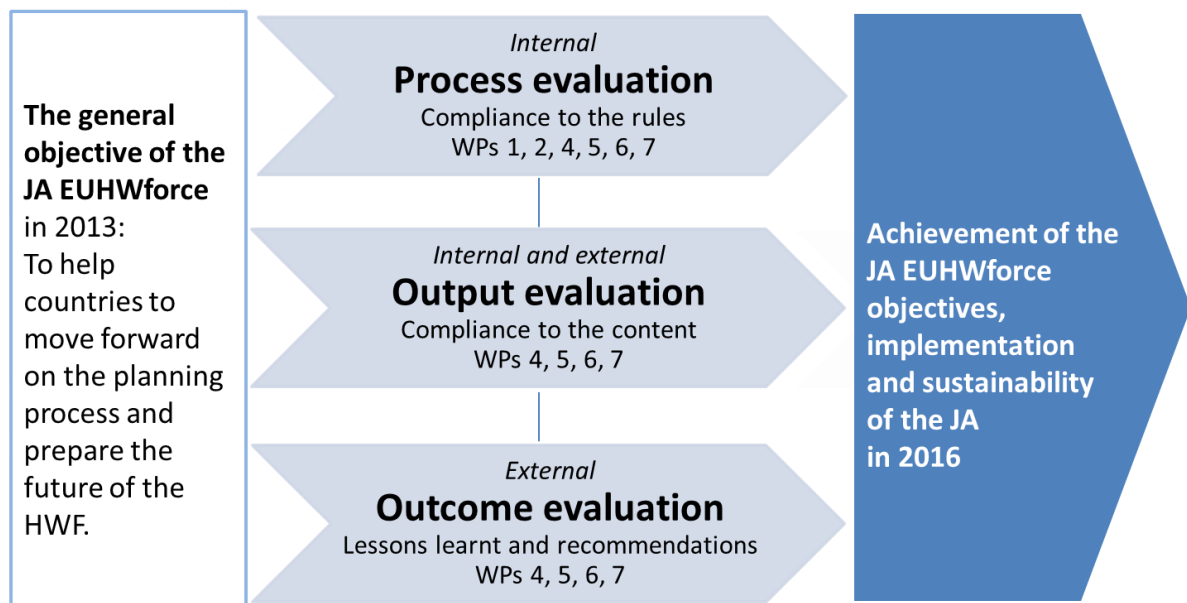


Figure 1. Overview of the evaluation process

The general objective of the JAEUHWF was to help countries to move forward on the planning process and to prepare the future of the HWF by creating a platform for collaboration and exchange between Member States (MS). This will support MSs and Europe in their capacity to take effective and sustainable measures to address the supply and demand for the health workforce. Specific objectives identified in the Grant Agreement⁷ were as follows:

- (1) better understanding of terminology used in health workforce planning
- (2) better monitoring of the HWF by access to timely data and updated information on the stock and flow data on the HWF in the EU
- (3) guidelines on quantitative HWF planning methodology and increased quantitative planning capacity

⁷ Grant Agreement, Annex 1a. Joint Action for European Health Workforce Planning and Forecasting. 2013.

- (4) guidelines on qualitative HWF planning methodology and increased qualitative planning capacity
- (5) estimation of future skills and competencies needed in the health workforce
- (6) a platform of cooperation to consolidate the experience of the JA and to have a higher impact of the HWF planning and forecasts on policy decision-making.

The Grant Agreement (GA) Annex 1a (13-21) outlined several process, output and outcome indicators related to the above-mentioned objectives. However, during the Joint Action, these indicators appeared not to be appropriate as such for the purposes of the evaluation and they were amended according to the particular needs of the different work packages and individual deliverables. Achievement of the objectives was evaluated based on the designed evaluation tools for the process, output and outcome evaluations respectively, as presented in Table 3 and described in more detail in subsequent Chapters 3 to 6. The summary of the achievement of the objectives is presented in Chapter 7.

The task of the evaluation was to assess both the process of the JAEUHWF and the merit, worth and value of outputs and outcomes of the Joint Action, which are intended to play a role in the future practical action situations in health workforce planning and forecasting in Europe. The specific evaluation objectives were:

- 1) In terms of compliance to the rules, to assess if the JAEUHWF was progressing according to the original plan. (Process evaluation)
- 2) In terms of compliance to the content and quality, to assess if the work packages were delivering the outputs according to the schedule and if the quality of the deliverables met the goals set in the Grant Agreement. (Output evaluation)
- 3) In terms of defining the lessons learned and recommendations, to assess what kind of outcomes from health workforce planning and forecasting in Europe could be attributed to the Joint Action efforts. (Outcome evaluation)

WP3 was responsible for the ongoing assessment of the JAEUHWF progress as well as its effects and outcomes. WP3 acted as an internal evaluation team, in close collaboration with all other work packages, both judging the overall effectiveness and goal-attainment of the Joint Action, the accountability aspect, and as a change agent and co-developer⁸ in the process, i.e. developmental evaluation (see e.g. Owen & Rogers 1999; Quinn Patton 2002 & 2011; Robson 2000). External experts were used in expert reference groups for the output evaluation of selected core deliverables. The outcome evaluation was based on focus group interviews with a heterogeneous combination of both Joint Action associated and collaborating partners and external experts representing the academia, international and professional organizations and policy-makers. Table 2 provides an overview of the

⁸ The role of the evaluation will be elaborated in Chapter 2.

output and outcome evaluation, presented by deliverables. (See Foss Hansen (2005) for more on choosing evaluation methods.)

Table 2. Overview of the deliverables and their evaluation

Deliverable	Output evaluation		Outcome evaluation
	Internal WP3 evaluation	Expert Reference Group	Focus Group
D041 Report on Terminology Mapping	X		
D042 Report on Mobility Data in the EU	X	X	X
D043 Report on Health Workforce Planning Data	X		
D051 Minimum Planning Data Requirements	X		
D052 Handbook on Planning Methodologies		X	X ⁹
D053 Web Portal on Health Workforce Planning Methodologies		X ¹⁰	
D054 Report on WP5 Pilot Study Experiences ¹¹			
D061 User's Guidelines on Estimating Future Needs	X		
D062 Report on Future Skills and Competencies	X	X	X
D063 Web Content on Horizon Scanning		X ¹²	
D064 Report on WP6 Pilot Study Experiences			
D071 Sustainability Strategy	X		
D072 List of Experts (Network of Experts)	X		X
D073/74 ¹³ Technical Recommendations and Recommendations Towards Policy Making	X		X

The basic guidelines for the evaluation were defined in the Evaluation Strategy D031. However, some adjustments were made to the evaluation tools because of agreed changes to the objectives of the JAEUHWF and to the specific objectives of the deliverables. In addition, the target and focus of the evaluation were elaborated during the process. The evaluation was also a learning process for the evaluators. The learning experiences

⁹ D052 Handbook on Planning Methodologies.

¹⁰ Evaluated as part of D024 Website.

¹¹ Due to late delivery could not be evaluated.

¹² Evaluated as part of D024 Website.

¹³ Two separate deliverables, D073 and D074, merged into one deliverable.

resulted in several changes to both the evaluation methods and tools (e.g. see 3.1). Finally, changes to the time schedule of the deliverables required the evaluation team to adapt the implementation of the evaluation with flexibility.

Evaluation tools were created by WP3 and accepted in the work package leader meetings during the Joint Action. The tools for the internal process evaluation and internal output evaluation were in the form of structured checklists, including agreed criteria for reviewing each topic. The checklists were modified to meet the needs of each specific evaluation. The tools used in the external output evaluation were semi-structured questionnaires for expert reference groups. The external outcome evaluation was done in the form of focus group interviews on four selected deliverables, one for each core work package. The outcome evaluation was proactively focused towards predicting the potential future, since the long-term outcomes of ongoing projects cannot be evaluated during the projects. The focus, materials, methods and tools used in the Joint Action are summarized in Table 3.

Table 3. Overview of focus, materials, methods and tools of evaluation

	Process	Output		Outcome
Focus	Progress of the JAEUHWF	Quality of the deliverables at different stages	Quality of the deliverables at the end of the JAEUHWF	Sustainable future of the Health Workforce Planning and Forecasting
Materials	Process evaluation reports I, II and III (based on e.g. WP-leader meeting minutes, Executive Board meeting minutes, risk and issues registers by WPs and stage plans by WPs)	Output evaluation reports of deliverables (D041, D042, D043, D051, D061, D062, D071, D072, D073/74)	Expert Reference Group reports on D052, D042, D062 and D024 (incl. D053 and D063)	Focus Groups Interviews and report on D042, D052, D062 and D072/73/74
Methods	Review process of the formal reports by WP3 Evaluation Team	Review process of the deliverables by WP3 Evaluation Team	Assessment of selected deliverables by Expert Reference Groups including experts from different fields	Focus Groups interviews with external and internal experts
Tools	Structured checklists designed by WP3	Structured checklists designed by WP3 for each deliverable	Semi-structured electronic questionnaires, designed by WP3	Semi-structured interview themes designed by WP3

2. Role of Evaluation as Part of the Joint Action

Originally, the evaluation incorporated aspects from both summative and formative evaluation. Summative evaluation monitored the goal attainment and formative evaluation took place during the project's implementation, with the aim of improving the project's design and performance (e.g. Vedung 1997; Owen & Rogers 1999). By doing this, the evaluation was also used while developing and changing the course of the Joint Action, when a need was detected (e.g. Robson 2000).

During the course of the project, the role of the evaluation team as a purely objective external evaluator¹⁴ shifted towards a more developmental orientation. There was a need to take a more active part also in the making of the deliverables, since core work packages acknowledged they would benefit from more timely feedback on their work also during the process and not only after the deliverables have been produced. The original role of an 'outside observer' reviewing mostly the quality of the outputs and delivery (summative evaluation) was gradually replaced by the role of a team member among the other work packages, asking evaluative questions, providing input based on assessment of the deliverables and supporting the process management (Owen & Rogers 1999, Quinn Patton 2011).

It can be stated that the evaluation process in itself, with the different phases of providing pre-evaluation feedback, organizing expert reference groups and reviewing the deliverables, became more important than the actual results of the evaluation. This is often characteristic of dynamic, lengthy and diverse programmes and projects involving many stake- and shareholders alongside a diversity in the tasks and targets (e.g. Anzoise & Sardo 2016; Ling 2012; Niiranen & Puustinen 2012).

For the evaluation team, however, this dynamic movement of the project and of the evaluation work itself also posed some challenges. The change in the role of the evaluation team from summative evaluation towards developmental evaluation would have needed to be discussed more openly among the participants of the project. Some uncertainty in the expectations of the core work packages and project management towards the evaluation was evident during the project, and at times, it caused ambiguity in the evaluation practices. The planned evaluation tools and methods were not always suitable as such for fulfilling the changing needs and expectations of JAEUHWf. A real-time development-oriented evaluation would need to stay flexible in its methods and tools, although the Evaluation Strategy and Grant Agreement provided constraints for opportunities to amend

¹⁴ See Objectivity Statement of the WP3, 24 October 2013.

the original plans. On the other hand, a structured evaluation based on the Evaluation Strategy also kept the evaluation on course, despite the inevitable changes and delays in the progress of the deliverables that occurred during dynamic processes, such as the Joint Action.

For future purposes in similar projects, it would be advisable to take the developmental evaluation as the starting point in the evaluation planning. In doing so, the dynamic, changing nature of projects would be better aligned with the evaluation resources, methods and tools. Developmental evaluation can simultaneously encompass features of summative, formative and process evaluations, but leaves some leeway in using also more innovative methods than a pure assessment of predefined evaluation indicators (e.g. Quinn Patton 2011).

3. Process Evaluation

3.1 Description of the Process Evaluation Method

The internal process evaluation was performed by WP3 in terms of compliance to the rules of the JA Management and EU project management standards. It was complementary to WP1’s own monitoring. Quality Assurance was in place by utilizing external auditors as the revisers of the Joint Action. The process evaluation introduced an internal view on whether the structures of the JAEUHWF were implemented and the WPs progressed in accordance with the work plans of the JA and the WPs. The materials, method and evaluation tools used in the process evaluations are described in Table 4.

Table 4. Elements of the process evaluation

Materials	Evaluation method	Evaluation tool
WP-leader meeting minutes, Executive Board meeting minutes, risk and issues registers by WPs and stage plans by WPs	Review process of the formal reports conducted by WP3	Structured check-lists designed by WP3, based on criteria agreed with the WP leaders and the Management Office

During the Joint Action, three process evaluations were made by the WP3 evaluation team: Process Evaluation 1, which ran until the end of November 2013, Process Evaluation II, which ran until the end of June 2014, and Process Evaluation III, which ran until the end of September 2015.

In the Process Evaluation I, Progress Reports, Stage Plans and Risks & Issues Registers were appraised in depth. The evaluation tools used in Process Evaluation I were very detailed, addressing the issues of implementing the process management tools (Risk and Issues Registers, Progress Reports and Stage Plans). For Process Evaluation II, the tools were modified to fit the progressive nature of the Joint Action and to better capture the dynamic nature of the work in progress of all the Work Packages (WP). Process Evaluations II and III were then conducted by using a set of structured evaluation tools from three perspectives: 1) General progress of the Joint Action, 2) Progress of the core work packages and deliverables and 3) Follow-up on Risks & Issues. General progress addressed issues such as budget and expenditure, working days, travel, subcontracting and communication, coverage and stakeholders. Progress of the WPs and deliverables covered the activities carried out and the timing of the deliverables. The follow-up on risks and issues consisted of identification and assessment of risks, corrective actions and implementation, follow-up and reporting of actions.

3.2 Results of the Process Evaluations

Process Evaluation I focused on assessing the usability of risks and issues registers and the application of stage plans by all work packages. It was concluded that work packages were filling in the templates according to the plans at the early stage of the project. Procedures on how to handle the risks and issues were deemed to be clear. However, WP3 requested WPLs to pay attention to correctly categorising and defining the risks and issues in order to enable monitoring, for example, mitigation actions. WP3 raised two concerns at the first process evaluation: 1) the amount of time that filling in the registers takes from the WP leaders and 2) whether some work was being done in duplicate, particularly in the case of stage plans. This issue was raised again during the second process evaluation.

Process Evaluation II focused on monitoring the use of project management tools and the progress of the Joint Action. It was conducted using an evaluation tool in the form of a structured check-list, provided by the WP3, consisting of 19 items from the three perspectives mentioned above, namely the general progress of the Joint Action, the progress of the core work packages and deliverables, and the follow-up on Risks & Issues. Based on the second process evaluation, it became evident that there had been continuous delays in the delivery of the outputs. However, all the delays were discussed in the EB and change requests by WPs were respectively approved by the EB. WP3 recommended that WPs should pay careful attention to the timely delivery of the outputs. The findings of the Process Evaluation II are summarized in Figure 2.

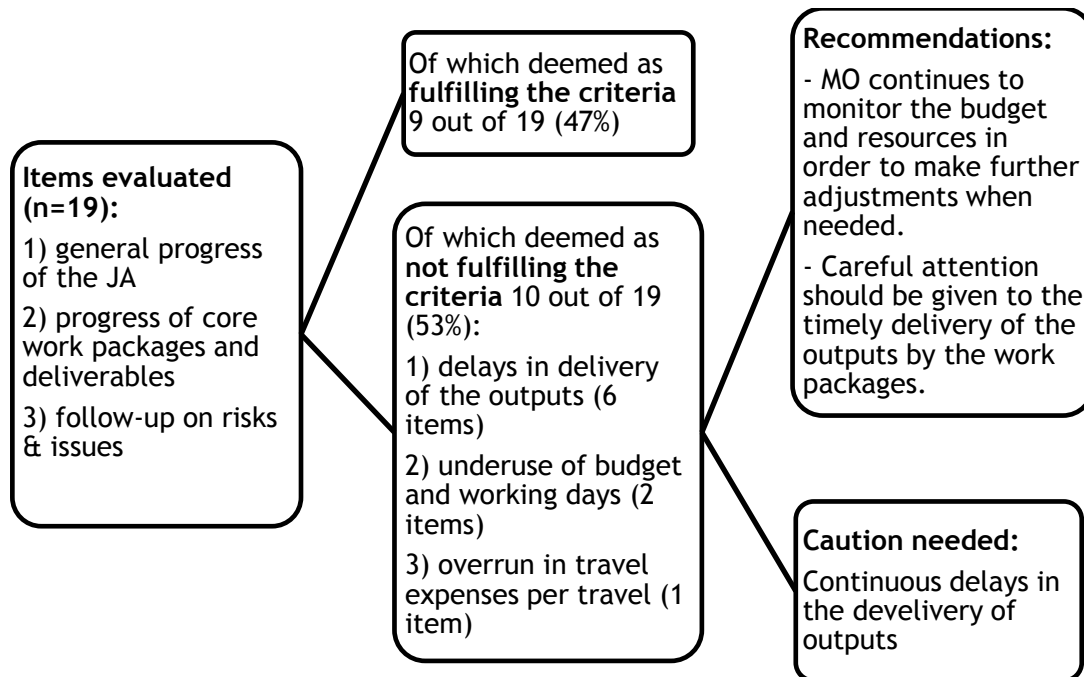


Figure 2. Summary of process evaluation II

Process Evaluation III (progress up to September 2015) followed the principles set out in Process Evaluation II in that it continued the monitoring of 1) the general progress of the Joint Action, 2) the progress of individual work packages in comparison to goals set in the Grant agreement and finally 3) the follow-up on risks and issues. The evaluation tool consisted of 28 items covering these three issues.

Results of the third Process Evaluation again raised severe concerns about the timely delivery of all the Joint Action outputs, i.e. deliverables by core work packages. Delays in delivery by the core work packages hindered and jeopardized the work of the horizontal work packages, particularly that of work packages 2 and 7, which concentrated on dissemination of the Joint Action results and sustainability of the Joint Action efforts. The risk was acknowledged by all the parties in the Joint Action. Furthermore, collective commitment and action was taken to overcome the delays. The findings from the third Process Evaluation are summarized in Figure 3.

During Process Evaluation III, four (4) items of the overall 28 items were deemed as needing to be evaluated as part of the Final Evaluation Report, since they referred to deliverables that were due after September 2015 - namely D043 Report on HWF Planning Data (month 30), D054 Report on Pilot Studies (due month 36) D063 Web Content on Horizon Scanning (month 30) and D084 Final Guide (due month 36). Since September 2015, it can be concluded now in the final evaluation report that D043 has been evaluated and D063 was evaluated in June 2016 by using an Expert Reference group method. D054 Report

on Pilot Studies could not be evaluated even as part of the final report due to delays in its delivery. Finally, the D084 Final Guide was left outside the evaluation of the WP3, since its evaluation was not part of the original evaluation strategy. Instead, the evaluation of the Final Guide was organized by WP2.

In addition, one item ‘Processing the risks and issues in the Management Office Meetings’, was not being assessed as part of the process evaluation. Due to practical reasons, records of Management Office Meetings were not being kept during the evaluation period and hence the item had lost its relevance. Risks and issues were continuously discussed in work package leader meetings (WPLMs) and based on this appropriate corrective actions taken.

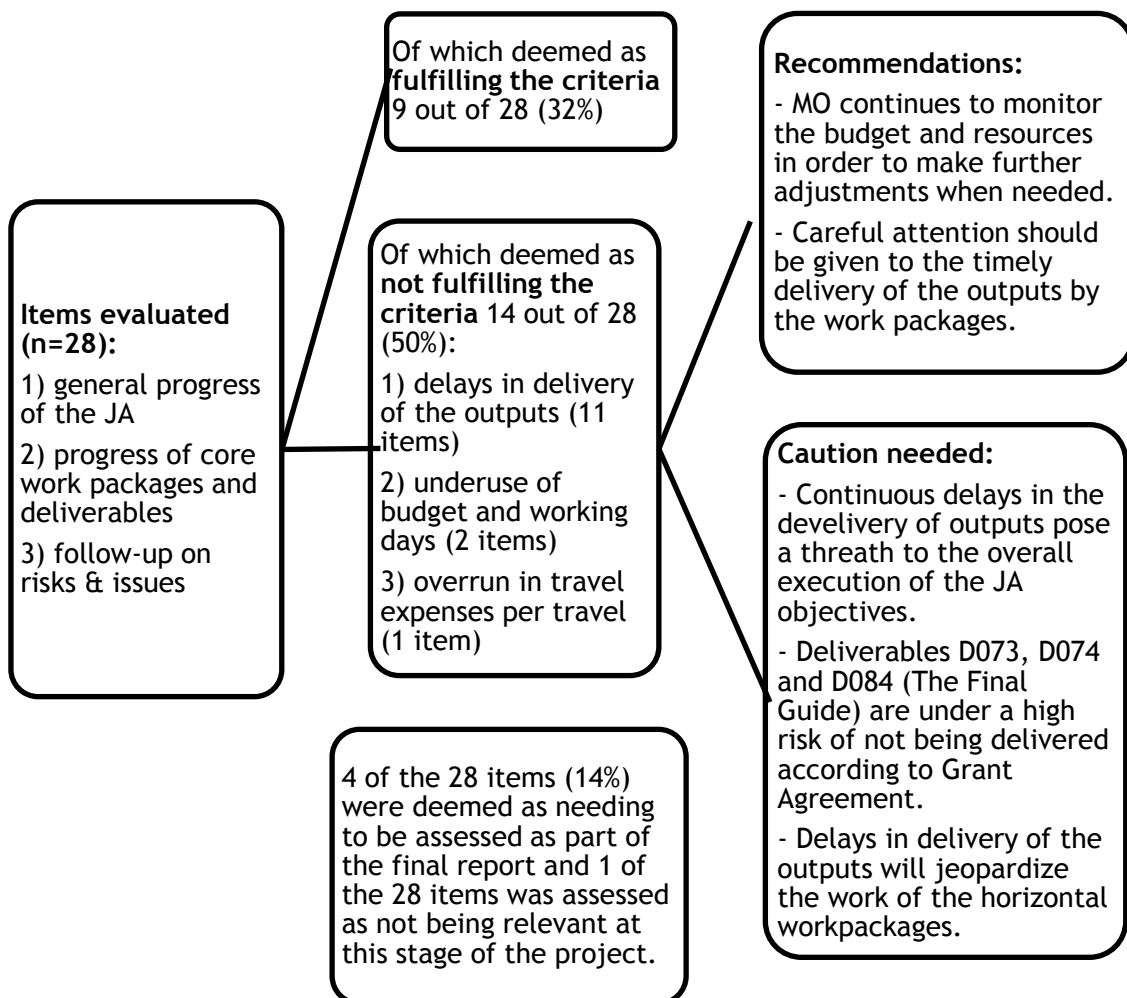


Figure 3. Summary of the process evaluation III

Based on the three process evaluations it could be confirmed that the Management Office and WP1 had been using all necessary process management tools as appropriate to ensure the progress of the Joint Action as agreed upon in the Grant Agreement. WP3 emphasised that the underuse of resources and the overuse of travel expenses reported in the process evaluations were not alarming and had been handled with due care throughout the project. WP1 had been monitoring the situation meticulously and corrective action had been taken where appropriate. In addition, risks & issues were followed up in accordance with good project management principles as defined in the Project Policy¹⁵ and the assessment of risks and issues management met the evaluation criteria.

4. Output Evaluation - Internal Evaluation by WP3

4.1 Description of the Internal Evaluation Method

The internal output evaluation was performed by WP3 on Work Packages 4, 5, 6 and 7. The aim of the output evaluation was, in terms of compliance with the content and quality, to assess if the work packages were delivering the outputs according to the schedule and if the quality of the deliverables met the goals set in the Grant Agreement. The materials, method, and evaluation tools used in the internal output evaluations are presented in Table 5.

Table 5. Elements of internal output evaluation

Materials	Evaluation method	Evaluation tool
The deliverables of WPs 4,5,6 and 7 at different stages	Review process of the deliverables conducted by WP3	Structured check-lists designed by WP3 for each deliverable, based on criteria agreed with the WP leaders and the Management Office

The output evaluation of the Joint Action was a continuous process aimed at ensuring the quality of the deliverables and the whole process of the programme. Evaluation tools were designed by WP3, based on the criteria from the Grant Agreement approved evaluation indicators. Evaluation indicators were formulated on the basis of the objectives set in the Grant Agreement and on knowledge of the subject of the deliverable. Further, the indicators were matched for each deliverable separately and discussed among the work package leaders before application in the output evaluation. The evaluation of the deliverables focused on (1) the status of the deliverable, (2) the process of creating the deliverable and (3) the contents of the deliverable. Each of the tools consisted of a check-list with 18-31 items relevant for each deliverable in question. Evaluation tools for the

¹⁵ Project Policy. Joint Action on European Health Workforce Planning and Forecasting 2013.

deliverables were thus constantly adapted according to the specific needs of the deliverables at hand, yet at the same time they encompassed the same basic elements so as to ensure continuity and uniform quality (see e.g. Lewis 2001; Quinn Patton 2002).

According to the principles of developmental evaluation, WP3 commented on the early versions of deliverables in order to support the development of the deliverables. In addition to submitting the formal evaluation reports, the evaluation team contributed to the work of the core work packages by means of informal written and oral comments and feedback through Skype meetings. WP3 also provided comments on some of the deliverables during 3-4 rounds before the final evaluation. The evaluation team was thus part of the whole process of creating the deliverables, as presented in Figure 4.

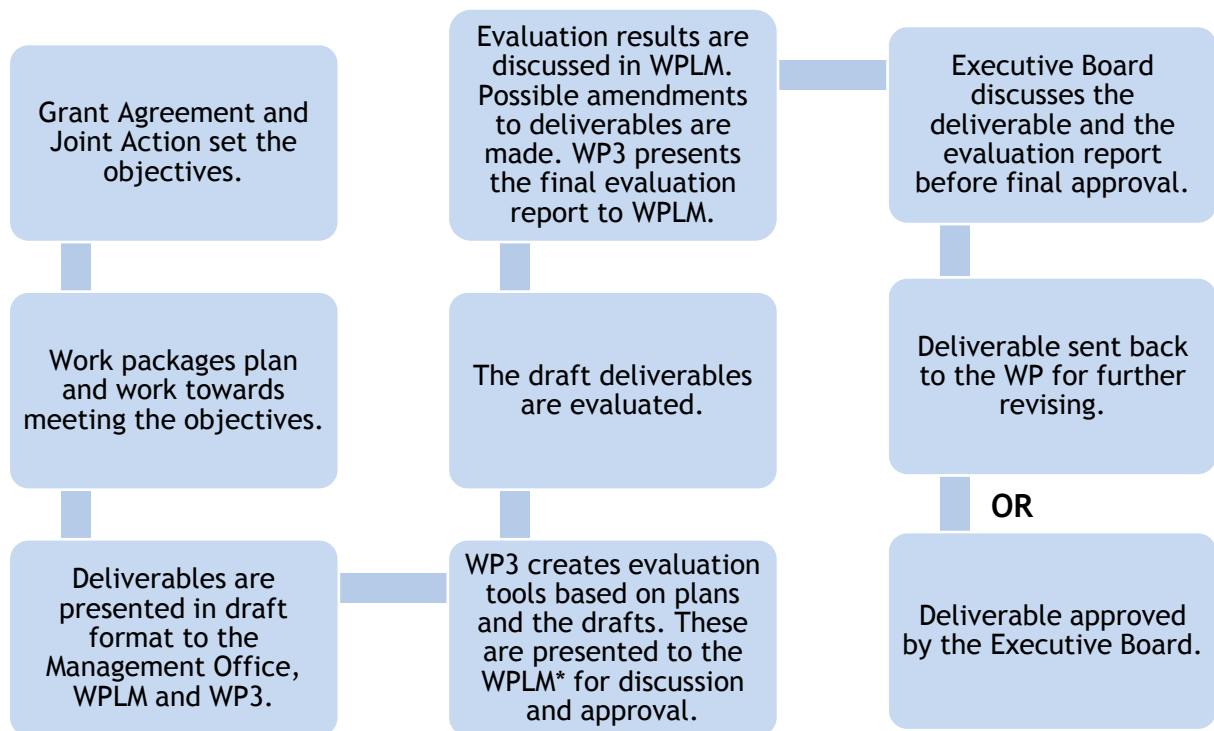


Figure 4. Simplified flow chart of the delivery process of the tangible outputs and their evaluation (deliverables) in the Joint Action. (*WPLM = work package leader meeting)

This chapter presents the summaries of the evaluation reports and results conducted during the Joint Action from April 1, 2013 to June 30, 2016. Results of the output evaluations are presented by the work packages, describing each deliverable separately.

4.2 Work Package 4: Data for Improved Health Workforce Planning

Three deliverables of WP4 *Data for Improved Health Workforce Planning* were evaluated internally by WP3 (Table 6). Main results of the evaluations of each deliverable are presented below.

Table 6. Summary of the progress, delivery and evaluation of the deliverables of WP4

Deliverable	Delivery planned ²	Delivery executed	Delivery on time		Evaluation items	
			YES	NO	Number of items fulfilling the criteria	Number of incomplete items or items not fulfilling the criteria
D041 Report on Terminology Mapping	Month 20 (Nov. 2014)	Accepted in EB#5, month 24 (March 2015) with minor revisions.		X	22 of 27	3 of 27 (2 assessed as not being applicable to the scope of the D041)
D042 Report on Mobility Data in the EU	Month 24	Accepted in EB#7, month 28 (Jan. 2016)		X	17 of 26	9 of 26
D043 Report on Health Workforce Planning Data	Month 30	Accepted in EB#8, month 37 (April 2016)		X	11 of 20	7 of 20 (2 assessed as not being applicable to the scope of the D043)

D041 Report on Terminology Mapping

It was planned that the report on Terminology Mapping would contain the results of the questionnaire on terminology to be sent to all Member States participating in the Joint Action and the results of discussions of the questionnaire at a workshop. It was planned that the report would identify problems and gaps and to formulate suggestions and recommendations (GA, Annex 1b, 7). Based on the evaluation, country examples were assessed as valuable, concretizing the theoretical perspectives. WP3 suggested some recommendations to further develop the report. A summary of the evaluation of D041, version 0.93 is presented in Figure 5.

Two evaluation items out of the 27 were deemed as not being applicable to D041. Considering the two items, it was concluded that the scope and focus of D041 was not to draft the process of implementing the recommendations made, nor to plan for a detailed dissemination of the results.

² As defined in the Grant Agreement, Annex 1.

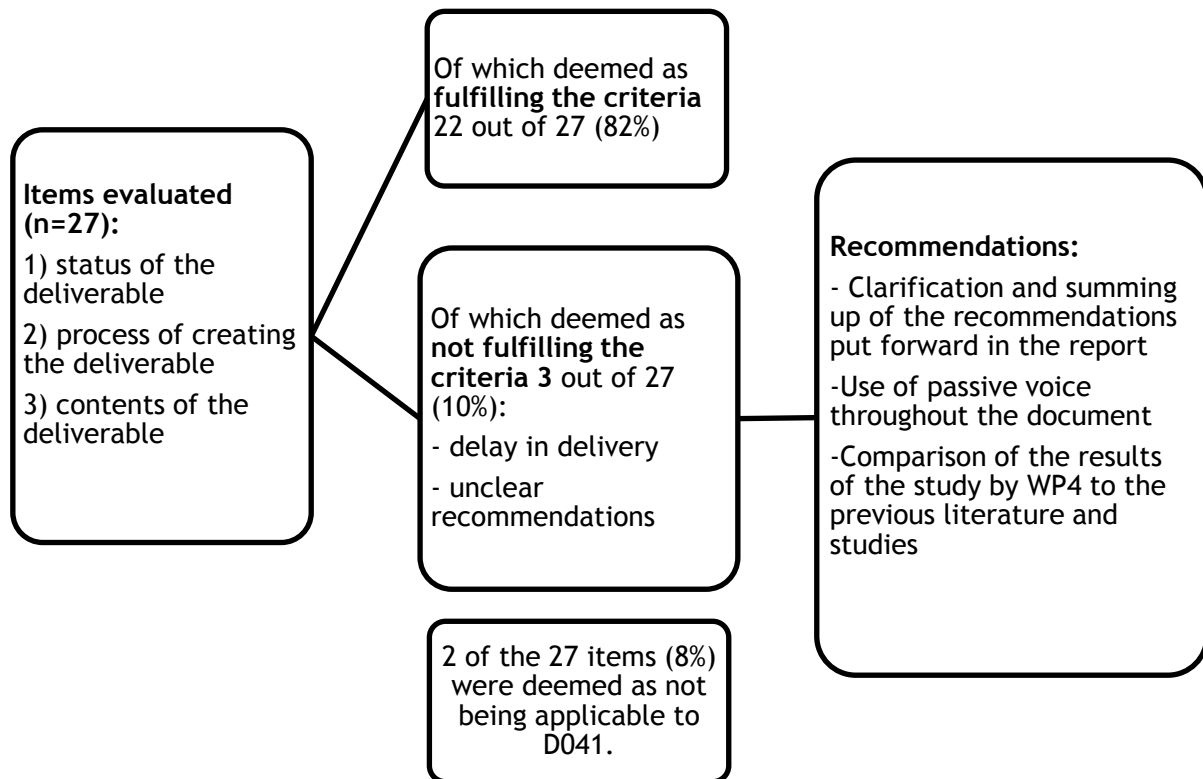


Figure 5. Summary of the evaluation of D041 version 0.93, Report on Terminology Mapping

D042 Report on Mobility Data in the EU

It was planned that the report on mobility data (D042) would contain an overview of the added value of inserting a minimum set of mobility indicators into international data collection and recommendations to support improvements in mobility data collection (GA, Annex 1b). The WP3 evaluation team concluded that the Report on Mobility Data brought added value to the discussion on data and indicators of health workforce mobility. It provided both guidance to the Member States and for the international audience on how to proceed with data collection, measurement and analysis of the mobility issues. The literature used as a basis for the analysis of the current situation in monitoring and measuring health workforce mobility is extensive and the analysis of the literature was reliable and solid. Selection of country cases raised some critique. The role of international experts in the process of delivering the report and the contribution of the different stakeholders needed clarification. A summary of the evaluation of D042, version 7.0 is presented in Figure 6.

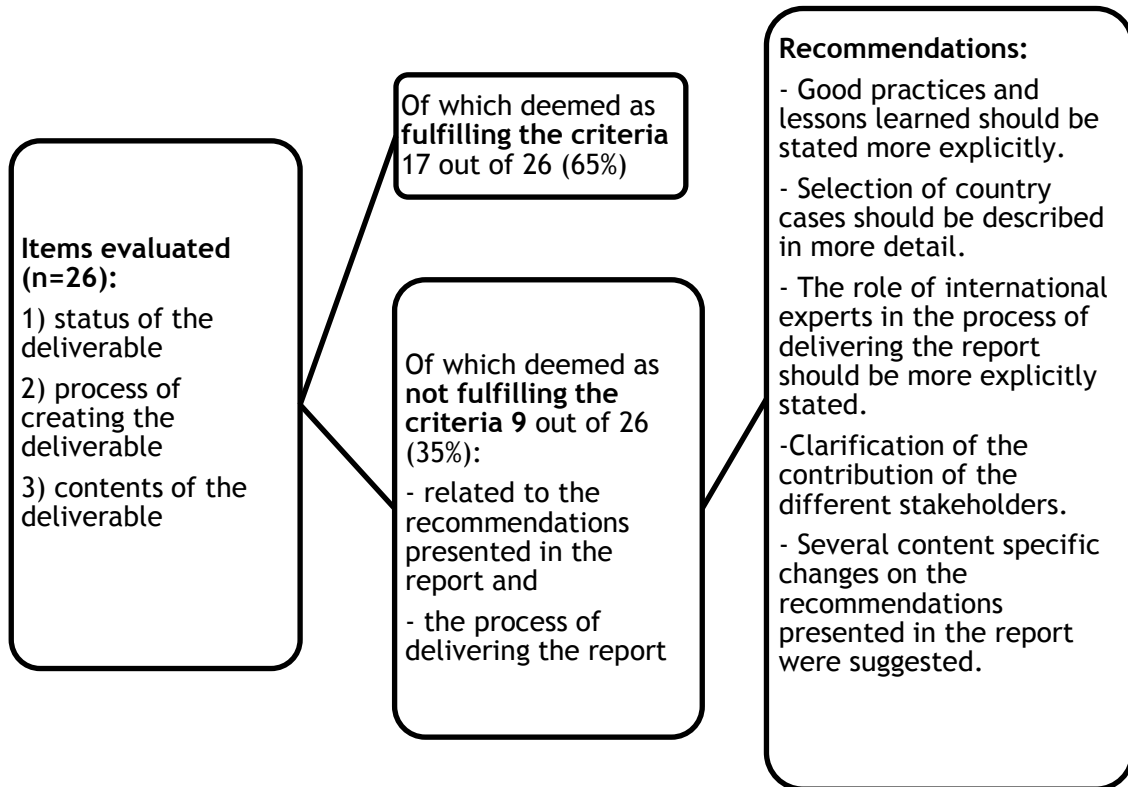


Figure 6. Summary of the evaluation of D042 version 7.0, Report on Mobility Data in the EU

D043 Report on Health Workforce Planning Data

It was planned that the report on Health Workforce Planning Data would identify the gaps between data currently collected by the Member States and the contents of the proposed minimum data set (GA Annex 1b, 7). In the evaluation, WP3 concluded that the report on Health Workforce Planning Data was valuable and well-presented in identifying the existing gaps in the collection and use of HWF planning data. However, several minor recommendations were also given to further develop the deliverable. The summary of the evaluation of D043, version 4.0 is presented in Figure 7.

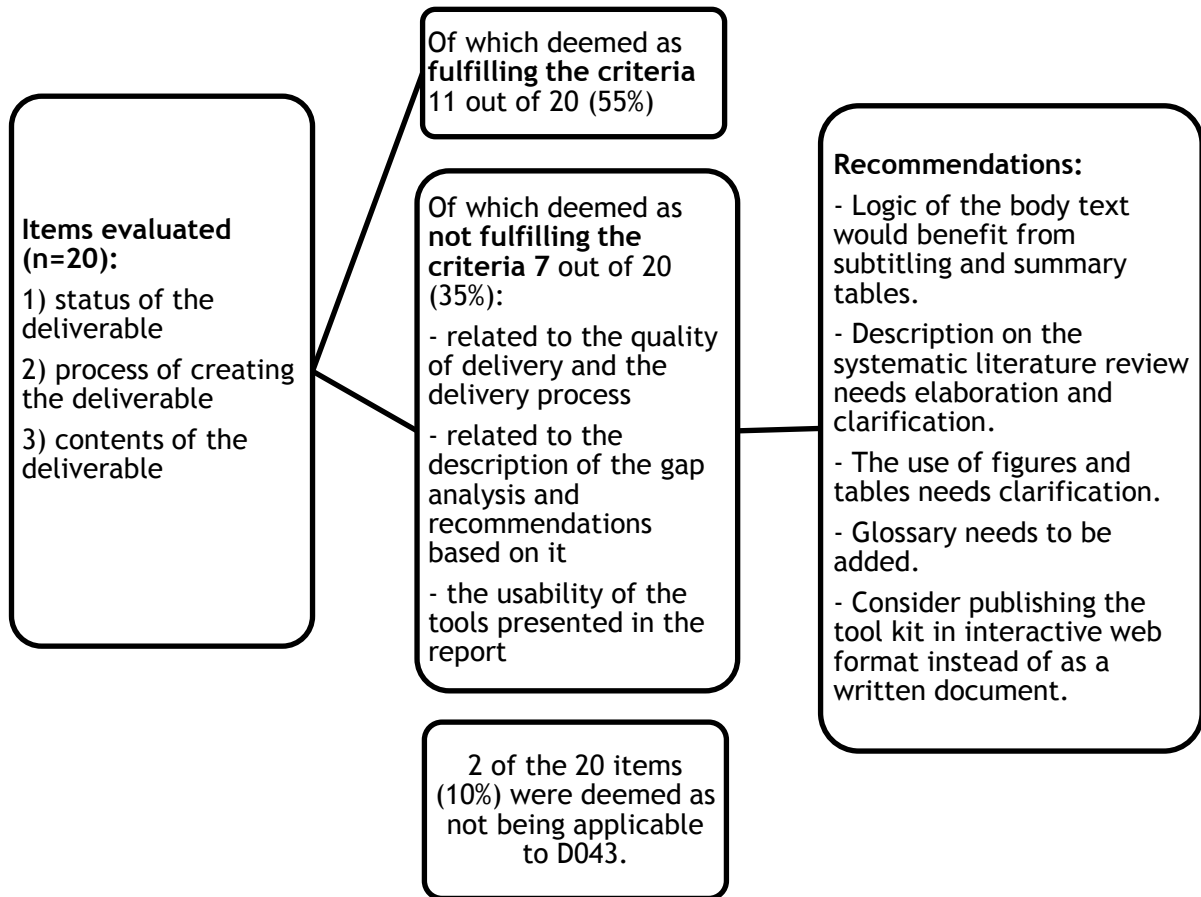


Figure 7. Summary of the evaluation of D043 version 4.0, Report on Health Workforce Planning Data

Two items that were deemed as not being applicable to the D043 referred to the implementation and distribution of the deliverable. These issues were out of the original scope attributed to D043 and hence left outside the evaluation focus.

4.3 Work Package 5: Exchange of Good Practices in Planning Methodologies

One deliverable of WP5 *Exchange of Good Practices in Planning Methodologies* was evaluated internally by WP3 (see Table 7). A summary of the evaluation of D051 version 3.0 is presented below in Figure 8. Pre-evaluation feedback was given several times on D052, which was later evaluated by means of ERG and FG. The content of D053 was evaluated as part of D052 and the usability of the web portal based on D052 as part of the ERG on D24. Due to late delivery, D054 could not be evaluated.

Table 7. Summary of the progress, delivery and evaluation of the deliverables of WP5

Deliverable	Delivery planned ²	Delivery executed	Delivery on time		Evaluation items	
			YES	NO	Number of items fulfilling the criteria	Number of incomplete items or items not fulfilling the criteria
D051 Minimum Planning Data Requirements	Month 7	Accepted in EB#3, month 15 (June 2014)		X	16 of 31	7 of 31 (8 / 31 will be assessed later)
D052 Handbook on Planning Methodologies	Month 18	Accepted in EB#5, month 24 (March 2015) in pdf format.		X	Note: Evaluated via ERG ¹⁶ and FG ¹⁷	
D053 Web Portal on Health Workforce Planning Methodologies	Month 22	Accepted in EB#8, month 37 (April 2016)		X	Note: Content evaluated as part of D052 and usability as part of the ERG on D24	
D054 Report on WP5 Pilot Study Experiences	Month 36	Accepted in EB#9, month 39 (June 2016)		X	Note: Due to late delivery could not be evaluated	

D051 Minimum Planning Data Requirements

According to the GA (Annex 1b, 7), minimum planning data requirements were supposed to ensure a view on two data sets: one for supply-based planning and one for demand-based planning of the HWF. In the evaluation by WP3, the status of the deliverable was deemed complete in regard to taking into account international experience, including the international participants and stakeholders, providing a mechanism for testing, as well as fulfilling several general and specific aspects based on the contents of the deliverable. Some examples of the alternative scenarios of possible futures for HWF planning were

² As defined in the Grant Agreement, Annex 1.

¹⁶ ERG = Expert Reference Group

¹⁷ FG = Focus Group

recommended for inclusion in D051 or some other relevant deliverable. The evaluation of the literature review and the report on international experiences (as part of D052/D054) were planned to be conducted at a later stage of the Joint Action by expert reference groups and focus groups. A summary of the evaluation of D051, version 3.0 is presented in Figure 8.

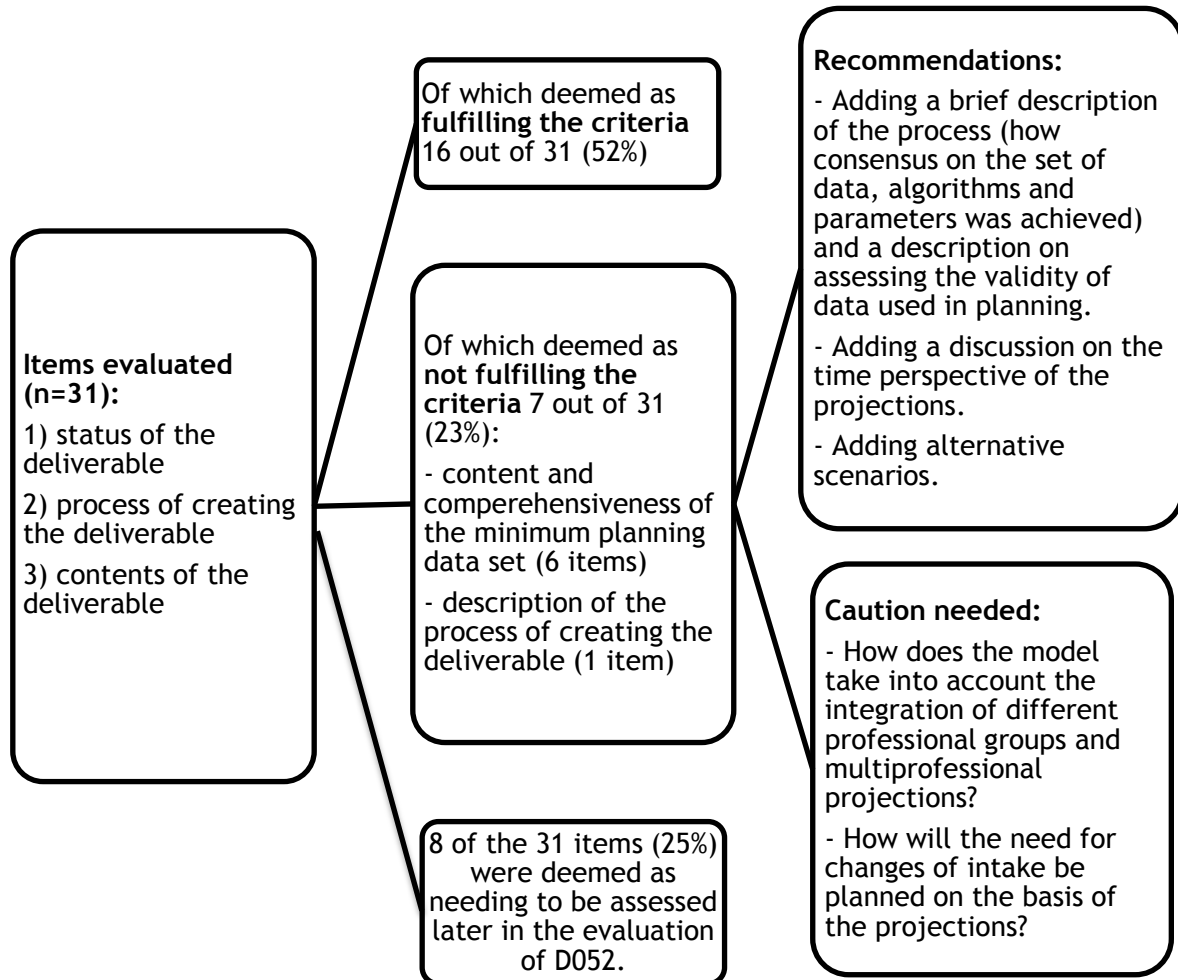


Figure 8. Summary of the evaluation of D051 version 3.0, Minimum planning data requirements

Eight (8) of the 31 items were to be appraised later in relation to the quantitative methodologies (D052), since planning data were seen as being dependent on the methodological choices as well as the objectives of the forecasting and planning model. In addition, evaluation reports were to be provided later based on the appraisal of the literature review (as part of D052) and the report on the experiences from the pilot studies (as part of D054). The literature review was embedded in D052 and as such appraised as

part of the aggregate report by the expert reference group and the focus group. The D054 Report on Pilot Study Experiences was delivered at such a late stage of the JA that it could not be included in the evaluations conducted by the WP3. However, the findings based on the Overall Report on Two Pilot Projects and Two Feasibility Studies (version 02, 08/06/2016 by WP5) and the addendum 2016 of Minimum Planning Data Requirements (14 June 2016) provided evidence that the minimum planning data set D051 proved to be applicable in identifying and analysing the imbalances between the HWF supply and demand and thereby useful in finding solutions for planning sustainable HWF.

4.4 Work Package 6: Horizon Scanning

Two deliverables of WP6 *Horizon Scanning* were evaluated internally by WP3 (see Table 8). The main results of the evaluations of each deliverable are presented below.

Table 8. Summary of the progress, delivery and evaluation of the deliverables of WP6

<i>Deliverable</i>	<i>Delivery planned²</i>	<i>Delivery executed</i>	<i>Delivery on time</i>		<i>Evaluation items</i>		
			YES	NO	Number of items fulfilling the criteria	Number of incomplete items or items not fulfilling the criteria	
D061 User's Guidelines on Estimating Future Needs	Month 14	Accepted in EB#4, month 20 (Nov. 2014)		X	18 of 18		
D062 Report on Future Skills and Competencies	Month 30	Accepted in EB#8, month 37 (April 2016)		X	18 of 28	6 of 28	(4 assessed as not being applicable to the scope of the D062)
D063 Web Content on Horizon Scanning	Month 30	Accepted in EB#9, month 39 (June 2016)		X	Note: Content and usability was evaluated as part of D024 via an ERG.		
D064 Report on WP6 Pilot Study	Month 36	Accepted in EB#8, month		X			

² As defined in the Grant Agreement, Annex 1.

Experiences		37 (April 2016)				
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D061 User’s Guidelines on Qualitative Methods

The goal of the user’s guidelines was to identify and classify the various methodologies used to do qualitative health workforce planning across MSs (GA, Annex 1b, 8). The WP3 team concluded that the evaluated draft on the User’s Guidelines on Qualitative Methods was reader-friendly and compact. All the evaluation items were deemed as being complete, but some comments were provided for the consideration of WP6 to further improve the deliverable and to be taken into account in the completion of the final guide. A summary of the evaluation of D061, version 5.0 is presented in Figure 9.

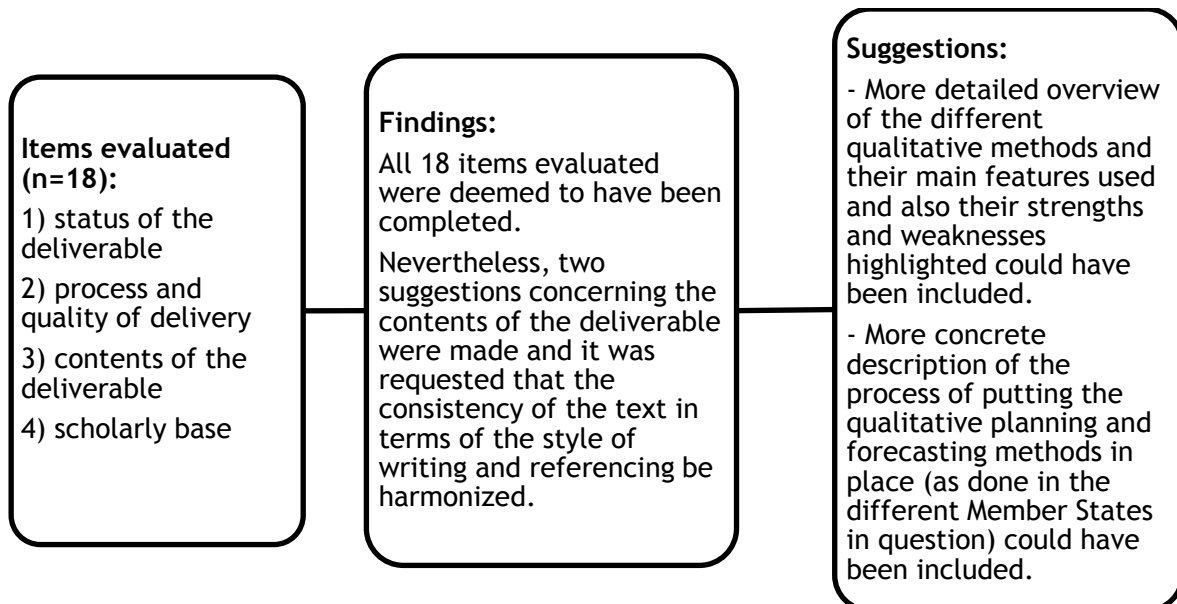


Figure 9. Summary of the evaluation of D061 version 5.0, User’s Guidelines on Qualitative Methods

D062 Report on Future Skills and Competencies

According to the GA (Annex 1b, 8) Report on Future Skills and Competencies aimed at giving an estimation of the future needs for skills and competencies of the HWF and their distribution. It was planned that the report would contain a series of papers either

covering a key professional group (e.g. nurses) or a large trend (e.g. ageing population). A summary of the evaluation of D062, version 6.0 is presented in Figure 10.

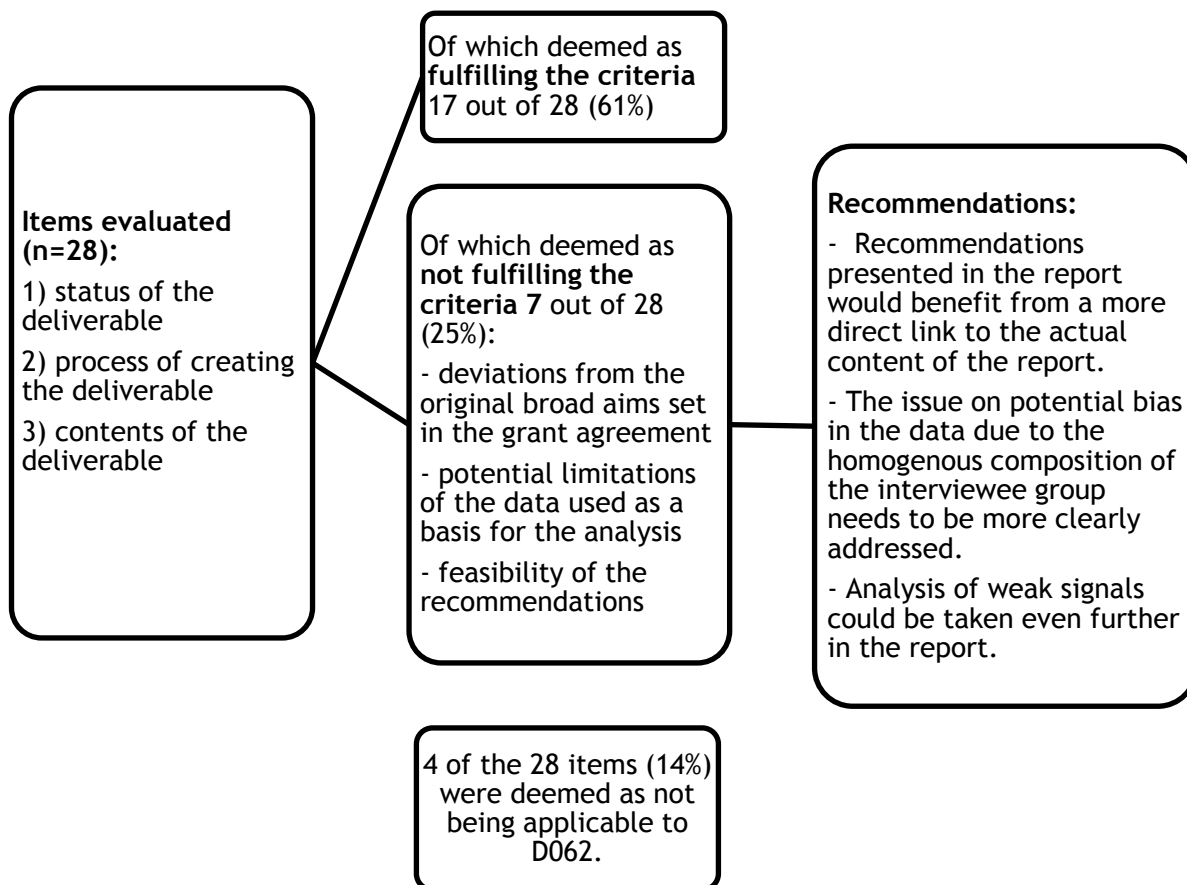


Figure 10. Summary of the evaluation of D062 version 6.0, Report on Future Skills and Competencies

WP3 noted in the evaluation that there was a possible bias in the data due to the reasonably homogeneous composition of the interviewee group. This in turn might have had an effect on the possibility to detect weak signals. Due to the potential bias in the data there might be some neglected issues affecting HWF skills and competences and potentially some surprising drivers that were ignored by the interviewees. Hence the analysis of weak signals might have been taken a bit further in the report and its limitations addressed more openly. WP3 also suggested that the recommendations made in the report would have benefited from a more direct link to the actual content of the report, HWF skills, and competences.

Four items out of the 28 were deemed to be inapplicable in the evaluation of D062. These items concerned the relations between other JA deliverables and the implementation and distribution of the findings of the report. These were assessed as not being in the original scope of D062 and hence were left outside the evaluation.

4.5 Work Package 7: Sustainability of the Results of the Joint Action

Three deliverables from the WP7 *Sustainability of the Results of the Joint Action* (see Table 9) were internally evaluated by WP3. The main results of the evaluations of each deliverable are presented below.

Table 9. Summary of the progress, delivery and evaluation of the deliverables of WP7

<i>Deliverable</i>	<i>Delivery planned</i> ²	<i>Delivery executed</i>	<i>Delivery on time</i>		<i>Evaluation items</i>	
			YES	NO	Number of items fulfilling the criteria	Number of incomplete items or items not fulfilling the criteria
D071 Sustainability Strategy	Month 4	Accepted in EB#3, month 15 (June 2014)		X	17 of 28	11 of 28
D072 List of Experts (version 1) D072 List of Experts ¹⁸ (version 2)	Month 10 Month 22	Version 1 (release 1) accepted in EB#3, month 15 (June 2014)		X	version 2 19 of 29	version 2 7 of 29
D073/74 ¹⁹ Technical Recommendations and Recommendations Towards Policy Making	Months 8, 20 and 36	Accepted in EB#9, month 39 (June 2016)		X	11 of 28	7 of 28

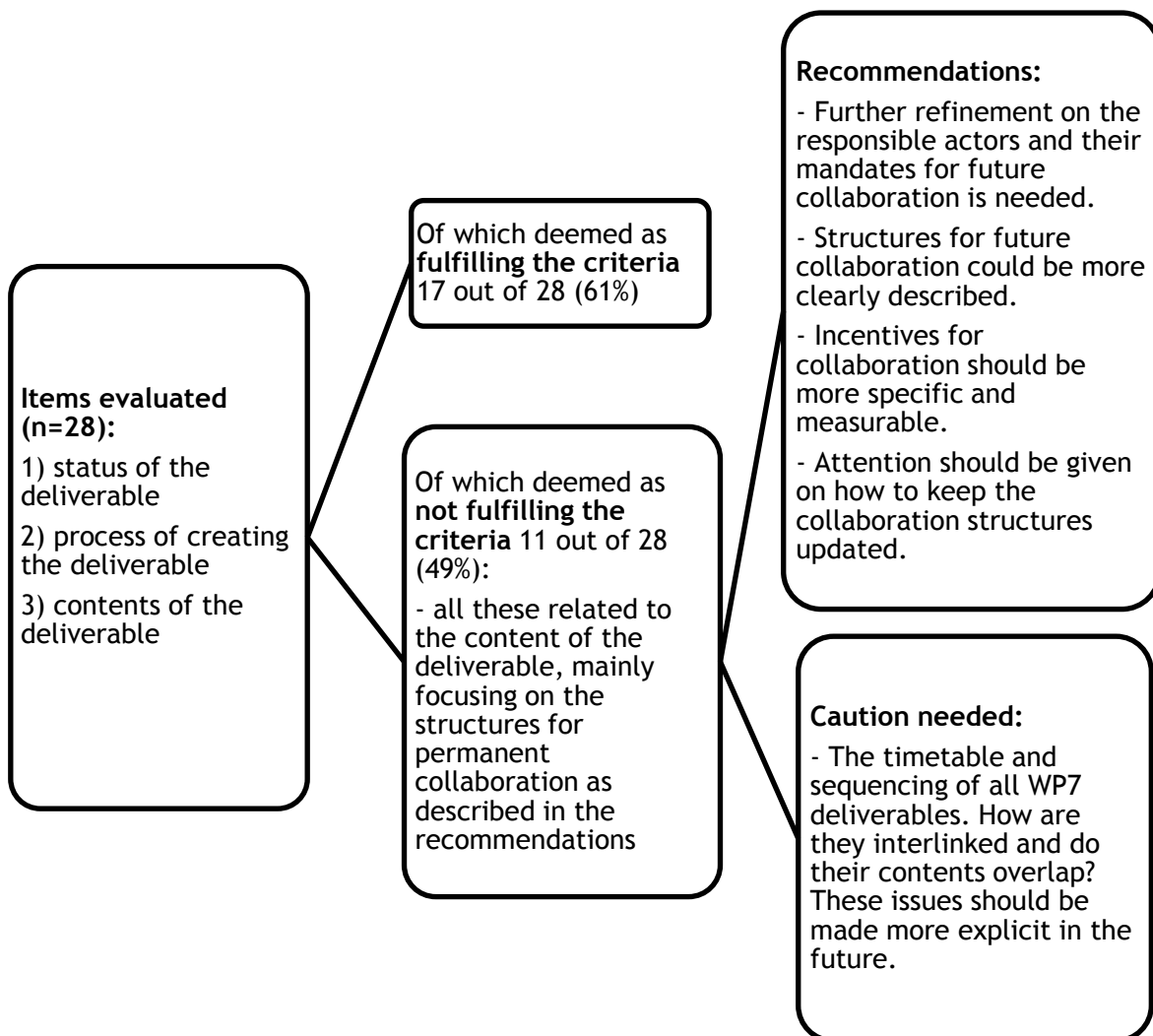
² As defined in the Grant Agreement, Annex 1.

¹⁸ Renamed as Network of Experts.

¹⁹ Two separate deliverables, D073 and D074, merged into one deliverable.

D071 Sustainability Strategy

The sustainability strategy aimed at giving a detailed plan and description of all the sustainability activities in the Joint Action and contained the sustainability plan and a draft list of experts collaborating in HWF issues in Europe (GA, Annex 1b, 8-9). The WP3 evaluation team acknowledged that the evaluated release 1 of D071 was to be revised later by WP7, since the release cycle of the different versions of it was clearly described in the document. It was recommended that the actual structures and activities would be further revised. A summary of the evaluation of D071, version 1.0 is presented in Figure 11.



**Figure 11. Summary of the evaluation of D071 version 1.0, Sustainability Strategy
D072 List of Experts / Network of Experts**

According to Annex 1b of the Grant Agreement of the JAEUHF²⁰, the WP7 was to prepare an annotated list of experts on health workforce planning and forecasting with common understanding of the sustainability proposals and drivers and barriers for future cooperation (D072). These experts from Member States could assist competent authorities to (1) build health workforce planning and forecasting capacity, (2) share common responsibility in helping future roll-out plans to succeed, (3) exchange good practice, (4) take an active part in the updates of the Joint Action tools and (5) share interest for a next Joint Action. Based on the evaluation, the needs to further revise the deliverable concerned e.g. the methodological justification for the criteria of the expertise and the sustainability of the cooperation of the network of experts after the JA were identified. The continuity of the expert network after the Joint Action period was evaluated to be of special importance for the European wide collaboration on health workforce planning related issues. The feasibility of the proposed network structures was questioned by the evaluation team of WP3. Summary of the evaluation of D072, version 2.0 is presented in Figure 12.

²⁰ Grant Agreement of the JAEUHF. Annex 1b.

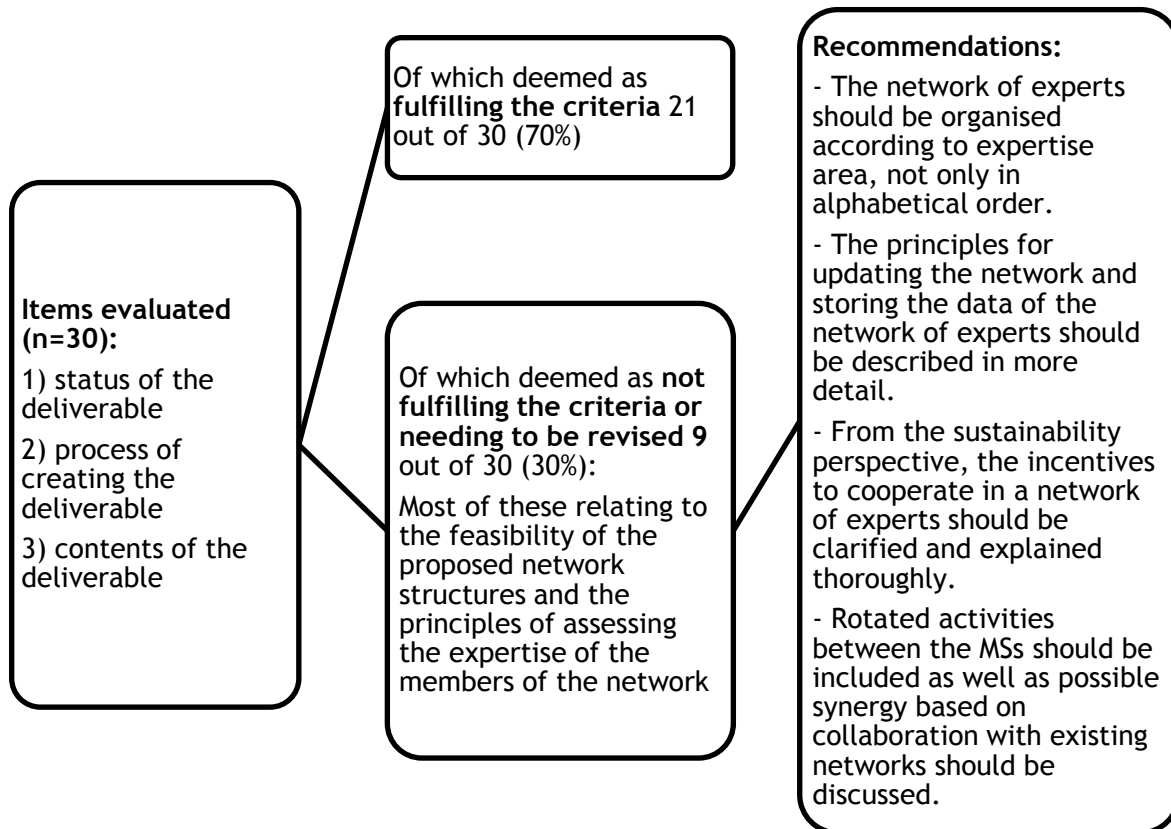


Figure 12. Summary of the evaluation of D072 version 2.0,²¹ Network of Experts

D073/74 Technical Recommendations and Recommendations towards Policy Making

According to the GA (Annex 1b, 9) D073 Technical Recommendations aimed at providing recommendations for the sustainability of the Joint Action and D074 recommendations towards policy making for the sustainability of health workforce and cooperation on HWF planning. D073 and D074 were merged into one deliverable during the Joint Action. The process of delivering the D073/74 was evaluated as one deliverable, but technical and policy recommendations were assessed separately based on the evaluation indicators originally defined for them in the evaluation strategy. The need was highlighted to further revise the deliverable concerned e.g. the use of two different analysis frameworks, the formulation and applicability of the recommendations and the relationships between deliverables D072 and D073/D074. Summary of the evaluation of D072/73, version 1.3 is presented in Figure 13.

²¹ The original name ‘List of Experts’ was changed in its final form to ‘Network of Experts’. Version 2.0 was the latest version evaluated by WP3 on April 8th, 2016.

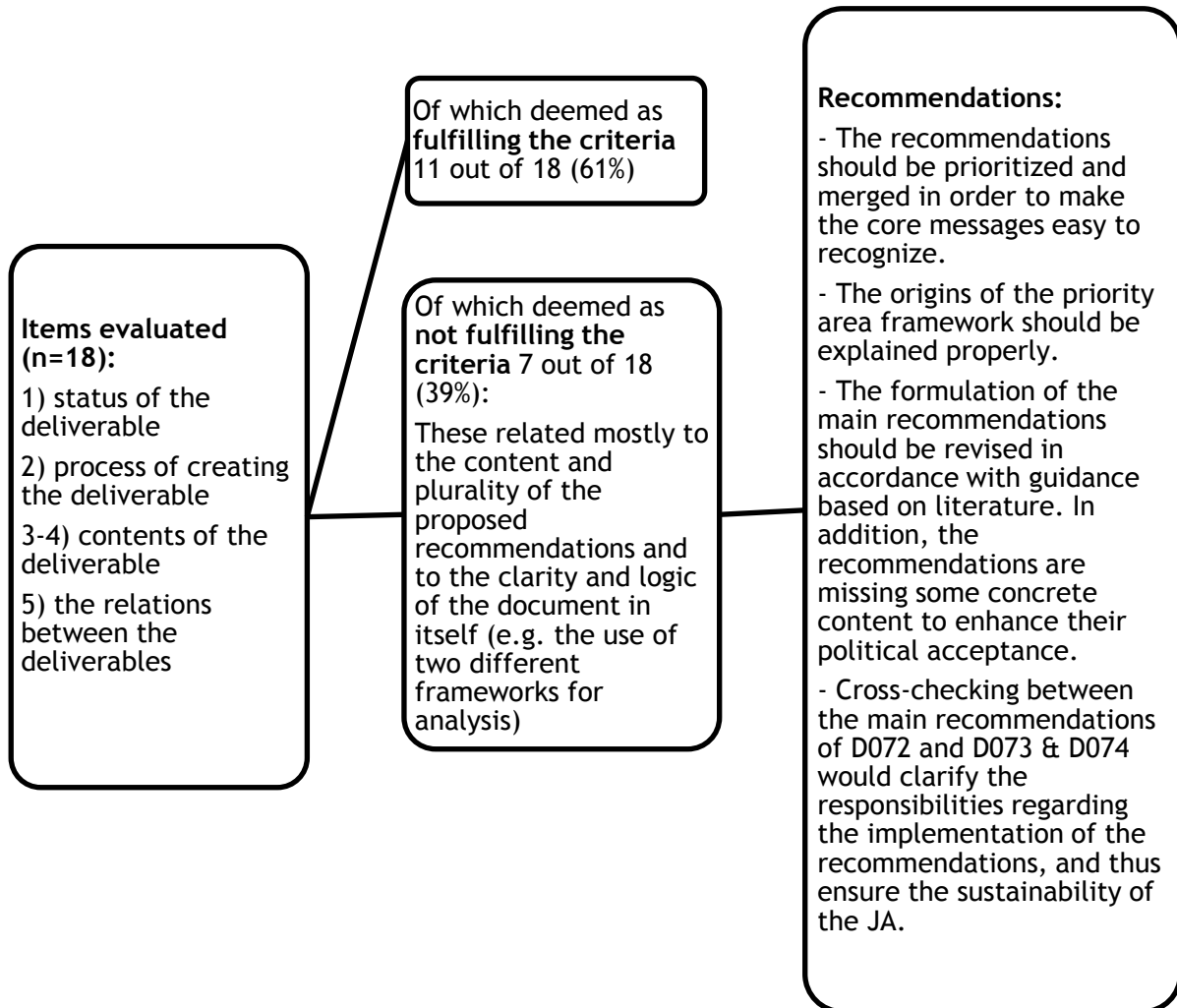


Figure 13. Summary of the evaluation of D073/74 version 1.3,²² Technical Recommendations and Recommendations for Policy Making

²² Version 1.3 was the latest version evaluated by WP3 on April 7th, 2016.

5. Output Evaluation - External Evaluation by the Expert Reference Groups

5.1 Description of the Expert Reference Group Method

The external output evaluation was performed by using expert reference groups (ERG). The aim of using expert reference groups was three-fold: 1) they formed part of the quality management of the Joint Action in assessing the contents of the deliverable, 2) they provided valuable feedback on the development targets of the content, as part of the developmental evaluation of the deliverable, and 3) they provided quality management for the internal evaluation carried out by WP3, adding an external perspective to the deliverable. The materials, method and evaluation tools used in the external output evaluations (the ERGs) are described in Table 10.

Table 10. Elements of the external output evaluation

Materials	Evaluation method	Evaluation tool
Selected deliverables at their final stages	Assessment of selected deliverables by Expert Reference Groups including researchers, policy-makers, decision-makers and practitioners, balanced by gender and geographically	Semi-structured electronic questionnaires including Likert-type scales and open-ended questions, designed by WP3

In Section 5.1, expert reference groups are described in detail. In Section 5.2 to 5.5, the recommendations made by WP3 based on the Expert Reference Groups conducted are summarized according to the deliverable.

The expert reference group procedure followed, in general, the principles of the scientific referee process, both in formulating the questionnaire, in the data collection process as well as in the analysis of the data. Finally, the summarized feedback was forwarded to the WP leaders in question for further application. All reviews given were first analysed individually by the WP3 team members. The comments and assessment made by the experts were then discussed among the team. The WP3 team compared their views to the expert reference reviews and formed a consensus about the findings. Based on the comparisons the results of the reviews were itemized according to three categories: 1) main observations, 2) general framework and process of delivering the document and 3) content-specific comments.

The selection of the experts was based on criteria derived from literature and previous experiences in EU-project evaluations.²³ The criteria were used as guidelines to design the composition of the expert reference group. It proved to be a difficult task to balance the composition of the groups, and the most defining inclusion criteria for participation was the expert's willingness to share her/his expertise. The geographical and gender balances needed to be somewhat compromised in order to include all the relevant expertise areas in the expert reference group. The expertise of a person was assessed based on her/his academic background and publications, recognition by other international experts as being competent in the given expertise area, and/or a representative of an international organization (such as the OECD) or official professional organization, e.g. the European Federation of Nurses or Standing Committee of European Doctors. (Babuscia & Cheung 2014; Bellew, Schöeppe, Bull & Bauman 2008; Bishop & Lexchin 2013; Chu & Hwang 2008; Zawacki-Richter 2009.) The composition of the expert reference groups are presented in Appendix 1.

The general criteria for selecting representatives to an expert reference group can be summarized as follows:

- 1) The existing materials provided by different WPs may be used in the selection of experts (List of experts and Knowledge Brokers network). However, the experts can be selected also from outside the Joint Action partners or primary stakeholders.
- 2) A person who is familiar with the area of expertise needed. Areas of expertise relevant to the Joint Action for Health Workforce Planning and Forecasting include, but are not limited to, the following:
 - health workforce planning
 - health workforce forecasting
 - health workforce migration
 - health workforce supply
 - health human resources
 - health care systems (EU-wide)
 - policy formulation and implementation
 - political decision-making
 - research
 - higher education

Any one person was not required to possess expertise on all the related areas, but the total composition of the expert reference group must cover all expertise areas needed in the evaluation of the deliverable in question.

²³ 1) 'Terms of reference for an expert group on the ex-post evaluation of the Sixth Framework Programmes'. Accessible <http://ec.europa.eu/research/evaluations/pdf/terms-of-reference.pdf>.

2) 'Terms of reference for an expert group on the interim evaluation of the Seventh Framework Programme. Appendix 3.' In Interim Evaluation of the Seventh Framework Programme. Report of the Expert Group. Accessible http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/fp7_interim_evaluation_expert_group_report.pdf.

- 3) A person's expertise is recognised by other experts at national, EU and/or international level or within academia.
- 4) A person is willing to share his/her expertise and is skilled in communication, problem solving, co-operation and group work.
- 5) The total composition of experts in the group must be balanced so that
 - a. there are both researchers, policy makers, decision-makers, professional associations and practitioners present
 - b. there is a fair balance between men and women
 - c. there is a reasonable balance in geographical origins

5.2 Report on Mobility Data (D042)

The D042 Report on Mobility Data was assessed by the experts as meeting the goals and aims set out in both the Grant Agreement and in the deliverable itself. They also deemed that the report was useful and brought added value in terms of improving the national-level data collection and EU-level policy dialogue on HWF mobility. Furthermore, the recommendation sets were assessed as being applicable both in national and international contexts.

The recommended Individual Mobility Data Set (IMDS) was seen by the experts as being relevant in terms of tracking HWF mobility while respective indicators were seen as being sufficiently inclusive. Some experts highlighted the importance of data protection and privacy issues. Some experts appraised IT systems as being less relevant because mobility data can be collected in different ways, and the primary data sources for mobility data do not need to be interlinked. In addition, experts pointed out the role of international organizations in data collection as well as giving a detailed insight into developing diversity among HWF professionals in the future.

Based on the expert reference group reviews the following topics were recommended by WP3 to be further developed:

- 1) The recommendations on data warehousing or online databases needed further discussion before being applicable in the practice of mobility data collection because of data protection and privacy issues and because of different data collection approaches.
- 2) The specification of health professions and potentially overlapping qualifications therein, were thought to be best addressed as part of the general development of the Joint Questionnaire data collection.
- 3)

5.3 Handbook of Planning Methodologies (D052)

According to the experts' judgement, D052 met the objectives of the Joint Action regarding the assessment of the health workforce planning methods. The experts also agreed that the five key elements of health workforce planning systems presented in D052 were valid and reliable even if the criteria for the key elements and the features of good planning were assessed as remaining somewhat unclear. However, the experts expected the pilot studies to test good practices and strengthen the argumentation behind the key elements. Some experts also considered that D052 did not address all the important issues affecting health workforce planning.

In general, the usability of D052 for both implementation and improvement of HWF planning was assessed to be good by the experts. They highlighted the importance of the country context in HWF planning even if somewhat questioning the actual possibilities for implementing the prescribed good practices in selected countries.

In addition, the role and authority of the deliverable as a handbook were discussed by the experts, asking whether D052 can serve as a reference book in its field. Nevertheless, the experts assumed that the final web format of D052 will change the user interface into a more easily browsable form.

Based on the expert reference group reviews the following topics were recommended by WP3 to be further developed:

- 1) The naming of D052 could have still been revised if the use of the term 'handbook' created confusion among some of the experts and raised unwarranted expectations. Another term might be used instead, for example, simply 'a report on health workforce planning methods'. The experts highlighted that the results presented were not sufficiently justified to serve as the basis for a handbook.
- 2) A clearer and more focused description of the scope and aim of the deliverable was needed in order to allow the reader to assess the purpose of the deliverable and what is purposely left out of the scope, what is addressed in other JA work packages and what is out of the scope of the Joint Action and will be subject to further studies.
- 3) The link between HWF planning and policy action, which is one of the five key elements needing clarification, as well as the definition of good practice needed further refinement.
- 4) The relevance and applicability of good practices needed to be elaborated in different contexts where health workforce planning can be implemented.

- 5) The ‘lessons learned’ section in the deliverable needed revision because at that stage the lessons learned did not provide the reader with sufficient information so as to implement or improve the health workforce planning system.
- 6) It was proposed that the following issues in the deliverable would benefit from revision: 1) more consistent use of terminology, 2) refinement of the goal-setting of the deliverable and 3) a description of the methods for delivering the results.

5.4 Web Portal on Health Workforce Planning Methodologies (D024/D053)

The experts assessed the web portal on health workforce planning methodologies to meet the goals set out in the Joint Action and that the contents of the web portal were in general of high quality. However, there was some variety in the experts’ opinions regarding the variety of the content. The experts also assessed the content to be very theoretical and practical applications to be difficult.

The reviews regarding the usability of the web portal were somewhat less positive, for example, regarding how to find and use the tools or the elements of the web portal, even while the experts judged that there was no need for any further technical support or learning anything new in order to be able to use the web portal. Furthermore, the issue on how to run the web portal after the Joint Action period was raised.

Based on the expert reference group reviews, the following topics were recommended by WP3 to be further developed:

1. Further refinement was proposed regarding (1) guidance on how to find and use the tools or the elements of the web portal, (2) the layout of the web portal, (3) design of the videos and images, (4) technical applications regarding pdf formats, (5) the size of the text and (6) the use of acronyms.
2. The experts proposed that it would be beneficial for the users of the web portal to find actual possibilities to contact experts e.g. via linking the web portal with the list of experts included in D072.
3. Further collaboration and development were needed in order to support the practical implementation of the HWF process, for example, by means of mathematical formulas and calculation models.

5.5 Report on Future Skills and Competences (D062)

The Report on Future Skills and Competences had to be evaluated as a work in progress, since it was the final stage of JAEUHWf. The experts agreed that the report on future skills and competences met the aim set for it in the report. However, the goal set in the Grant Agreement was seen as being met only in part. According to the experts' comments the report gave an excellent overview of the possible change drivers, but did not prioritize or deliver a systematic approach to unpack the complex set of items or give sufficient explanation of the future skills and competences.

The systems thinking approach in the report was assessed to be relevant. Policy briefs were also assessed as being of high quality and they were judged to summarise the core messages for policy dialogue and health workforce planners. There were differences in opinion, however, as to whether the report drew sufficient conclusions, whether the recommendations were feasible enough, and whether the composition of the experts interviewed was sufficiently representative.

Based on the expert reference group reviews, the following topics were recommended by WP3 to be further developed:

- 1) Arguments on the choice of the 20-year-span for HWF planning presented in the report and more detailed definitions on the concepts of skill and competence needed to be provided.
- 2) It was proposed that a more detailed analysis of an inter-professional approach and the changing roles of health professionals would be elaborated on in the discussion even if both profession-specific and inter-professional education were also deemed to be required in the future. In addition, continuous professional development, lifelong learning, retention of the current health workforce, non-professional and non-typical care were topics to be further explored.
- 3) It was proposed that the recommendations would take into consideration financial constraints and political decisions influencing the implementation.
- 4) It was requested to include in the discussion and conclusions a more detailed elaboration of the weak signals potentially missed in the report.

WP6 has taken the comments provided by experts into account in finalizing the Report on Future Skills and Competences. Due to the tight time schedule, it was not possible to re-evaluate the deliverable.

5.6 Web Content on Horizon Scanning (D024/D063)

The Web content on Horizon Scanning had to be evaluated as a work in progress because it was in the final stage of JAEUHWF. The experts assessed the web content on Horizon Scanning as partly meeting the goals set in the Joint Action. However, there was some diversity in their opinions regarding meeting the goals in terms of downloading user guidelines on estimating future needs. Similarly, the experts considered the title of the web portal ‘Horizon Scanning’ to be misleading, since there was no content on horizon scanning.

In general, the majority of the reviews given by the experts provided some support to the quality of the content of the web portal and it was considered mainly good. The content was deemed to be reliable and accurate, and there was not too much content in the web portal. However, the experts had diverse opinions on whether the content was topical and whether the language was clear and understandable.

Most of the experts’ reviews strongly agreed about the usability of the web portal. The portal was considered easy to use and easy to navigate, but the experts had diverse opinions about guidance on how to find and use the tools and elements of the web portal, as well as the layout of the web portal. Furthermore, the integration of different elements divided the experts’ opinions.

In general, there was a clear need to improve both the content and usability of the web portal, and all detailed comments have been sent to WPs 2 and 6 in order to improve the web portal.

Based on the expert reference group reviews, WP3 concluded the following:

- a) The web portal was assessed as partly meeting the goals set in the Joint Action.
- b) The content of the web portal was considered to be meagre. Further refinement was proposed regarding (1) guidance on how to find and use the elements of the web portal, (2) content and the title of the web portal and (3) the story line of the content.

WP6 has taken the comments provided by experts into account in finalizing the Web Portal and its content. Due to the tight time schedule, it was not possible to re-evaluate the deliverable.

6. Outcome Evaluation - External Evaluation by the Focus Groups

6.1 Description of the Focus Group Method

The external outcome evaluation was performed by using Focus Groups that included external and internal thematic experts. The aim of the focus groups was, in terms of defining the lessons learned and recommendations, to assess what kind of outcomes from health workforce planning and forecasting in Europe could be attributed to the Joint Action efforts. The materials, method and evaluation tools used in the external outcome evaluation are presented in Table 11.

Table 11. Elements of outcome evaluation

Materials	Evaluation method	Evaluation tool
Selected deliverables at the final stages	Focus Groups interviews with external and internal experts	Interview themes prepared by WP3

The aim of the focus group in general is to discuss and comment on, from personal experience, the topic that is the subject of the research. It is comprised of individuals who are familiar with the theme of the focus group. Selecting the members of a focus group is crucial and systematic biases should be avoided in this process. Focus groups should include members from a diverse range of backgrounds, views and experiences. The number of members in one focus group vary from four to twelve, according to a reference (Kitzinger 1995, Powell & Single 1996, Sim 1998).

The actual focus group interview is non-prescriptive and it is based on semi-structured interview themes. The discussion is guided, but still interactional, aiming at gaining divergent views, not consensus. Therefore, the facilitator's role is crucial in this process. Facilitation of open, uninhibited dialogue is central to the role of the moderator and it requires a skilled person. Lively interaction between participants is the goal of every focus group (Kitzinger 1995, Powell & Single 1996, Sim 1998).

Similar selection criteria were used in selecting focus group experts as were used in the expert reference groups (e.g. expertise area, willingness to participate, see the Final Evaluation Report 2016). However, due to limited possibilities for experts to travel physically to Helsinki, both geographical and gender balances could not be fully taken into consideration. Appendix 2 contains the compositions of the focus groups.

Due to having to conduct the outcome evaluation at the end of the JA when the project was still ongoing, the outcome evaluation was proactively focused towards predicting the

potential future, since long-term outcomes of ongoing projects cannot be evaluated during the projects. The core deliverables from each work package, namely D042, D052, D062, D072 and D073/074 were evaluated for their potential outcomes. Some of the deliverables were already accepted by the Executive Board. D062, D072 and D073/D074 were still works in progress. Unfortunately, the D054 describing the experiences from pilot projects was not available for focus group interviews. The materials, method and evaluation tools used in the outcome evaluation are described in Table 11.

Altogether four focus-group interviews were organized in Helsinki, on April 14-15, 2016. The number of participants varied from four to five experts. WP3 formulated semi-structured interview themes on the basis of 1) the Grant Agreement and 2) the content and especially the recommendations of the deliverable in question, while 3) keeping in perspective the implementation and sustainability of Joint Action results. Seven themes were prepared for each FG. There was a cross-cutting theme in each focus group covering the following question: How do you evaluate the impact of recommendations on the sustainability of the Joint Action? The experts did not receive the final themes beforehand. The FG data were analysed by means of theory-driven content analysis, focusing on three themes: 1) content, 2) policy and 3) implementation.

6.2 Results of the Focus Group Evaluations

Some cross-cutting themes were found on all focus groups. Even though the semi-structured interview themes varied from one focus group to another, similar topics were brought into the discussion (for details, see the Focus Group report). The common themes in terms of the content, policy and implementation across the focus groups are listed below:

Content

1. The added value of Joint Action is two-fold: 1) it provides a European-level perspective to HWF issues and 2) it is clearly a step forward in the progression of HWF planning and forecasting in the EU and its Member States.
2. All the deliverables discussed by the focus group participants were deemed very informative and they produced a lot of tools and theoretical frameworks and models for HWF planning, descriptions of different countries practices and experiences, as well as various examples of HWF planning and forecasting. Furthermore, Joint Action established connections and networks between Member States, organisations and individuals.
3. A lot of good work is being done, but more practical and smaller steps are needed in order to implement the Joint Action results. Different audiences are interested

in different aspects of HWF planning and forecasting. Therefore, the content/message needs to be tailor-made for the audiences, while the methods for delivering the message may vary.

4. In future, there is a need to integrate both qualitative and quantitative planning methodologies. The models should focus on multi-professional planning. Further, it is important to analyse the adopted mathematical models on HWF planning and forecasting.
5. In future work, a broader scope for HWF policies is needed at EU level. A basic assumption on the constant increase of HWF might not be feasible, and thereby HWF demand should be addressed through multiple policies. An important aspect is also to ensure capacity building for HWF planning and forecasting.

Policy

1. The political nature of the health workforce issue has not been fully recognized yet in countries. The importance of the issue will increase in the near future.
2. Political commitment regarding the importance of HWF planning and forecasting is needed and the issue of HWF needs to be high on the political agenda in MSs. Furthermore, MSs need to maintain motivation for international collaboration in this matter.
3. There is no need for regulation on HWF planning and forecasting at EU- level.
4. Evidence and support is needed for policy-makers to tackle the issue of HWF. However, the data and information needs of the policy-makers and decision-makers have to be identified in order to provide relevant data and information on HWF.

Implementation

1. The Joint Action has promoted dialogue on HWF planning and forecasting across the EU, but still there is a need to formulate a clear message on the importance of HWF and to put it forward for inclusion on the political agenda.
2. Mutual learning and exchanging experiences between the countries is a good method for implementation. Countries may benefit from clustering or partnership with countries in a similar situation in terms of HWF planning and forecasting. Also other new methods of implementation were considered to be good, for example, web portals. However, there needs to be a mechanism for updating the information.
3. Implementation of the Joint Action results requires collaboration and using existing structures in the implementation. Different stakeholders, international organisations, the European Commission, working groups, Member States and national organisations need to be involved in the implementation, with clear responsibilities and expert participation that is based on an institutional background and official commitment.



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In conclusion, the focus group participants considered the Joint Action to be very useful, but there is still work to be done on implementation issues. From an outcome evaluation perspective, these findings illustrate the situation at the end of the Joint Action as proactively describing the outcomes. A follow-up is needed in order to be able to actually evaluate the outcomes within two-three years' timeframe.



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7. Achievement of the Objectives of the JAEUHWF

All in all, it can be concluded based on the process, output and outcome evaluations that JAEUHWF was able to meet most of the objectives set for it. Table 12 compiles the achievements of the six objectives and provides justifications for the assessments. It has to be noted that D062, D063, D071, D072 and D073/D074 were still works in progress while the achievements of the objectives of the Grant Agreement were being assessed. Since this assessment, WP6 and WP7 have taken the comments provided by experts into account in finalizing the deliverables.

Understanding of the terminology currently used in relation to health workforce planning and forecasting across the EU Member States improved considerably. Hence, the first objective of The Grant Agreement can be assessed as having been fully completed. JAEUHWF not only identified gaps and inconsistencies in the availability, analysis and use of HWF planning data in the Member States, but also plenty of good practices that were in use in many different countries. JAEUHWF was able to gather this information into useful and feasible reports that can be distributed and used among the European countries. Thereby, JAEUHWF can be assessed to have achieved the second and the third objectives of the Grant Agreement. In addition, a comprehensive overview of the qualitative HWF planning methodology and examples on how to apply them in the Member States were in line with the fourth objective of the Grant Agreement. Whereas, a feasible estimation of future skills and competences proved to be practically unachievable, even if JAEUHWF provided a concrete exercise on how to understand the dynamic nature of the driving forces and the relations affecting the skills and competences of HWF. Therefore, the fifth objective was not fully achieved and was assessed as having been partly completed.

JAEUHWF planted the seeds for sustainable collaboration on planning and forecasting efforts. It identified the existing structures and methods of HWF planning in Europe. However, the promotion of a sustainable collaboration platform for pan-European HWF planning efforts that is feasible and would support Member States was yet not achieved. Moreover, the link to policy and decision-making at the member-state level and the EU-level was not fully achieved. Based on these assessments, the sixth objective of the Grant Agreement was assessed as having been partly completed.

HWF planning and forecasting is a complex phenomenon, intertwined and embedded in all other public sector and policy dilemmas. It can only be understood, or assessed, in relation to and as part of these overall structural and dynamic features of the European community. There exist discrepancies in resources and commitment to HWF planning and forecasting efforts among the Member States. JAEUHWF truly contributed to capacity



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building and policy dialogue both on the national and the European levels, as well as showing directions to go in strengthening the pan-European collaboration.



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Table 12. Assessment on the achievement of the specific objectives²⁴ of JAEUHWF.

Objective	Basis for the assessment	Assessment of the achievement
1. Better understanding of terminology used in health workforce planning.	Evaluation report on D041 Report on Terminology Mapping	Completed. The comprehensive analysis reported in D041 increased understanding of the gaps between HWF data submitted by Member States and the definitions of the Joint Questionnaire. Recommendations based on the analysis contributed to improving data collection and comparability of HWF data.
2. Better monitoring of the HWF by access to timely data and updated information on mobility and migration trends in the EU on stock and flow data on the HWF in the EU.	Evaluation report, Expert Reference Group report and Focus Group report on D042 Report on Mobility Data in the EU Evaluation report on D043 Report on Health Workforce Planning Data	Completed. HWF mobility was recognized as the least covered area of HWF data in Member States. The proposed sets of mobility data and specific indicators were judged as relevant and sufficiently inclusive in order to improve monitoring of HWF mobility. The Report on Mobility Data contributed to enhancing data collection on the inflow and the outflow of HWF and thereby assessing the impact of policies regarding the management of HWF mobility and the reliance on a foreign workforce. Finally, the analysis of HWF planning data contributed to improving the quality of data by means of identifying gaps in valid and reliable data and acknowledging the lack of quantitative planning models. Furthermore, the flow chart and the toolkit for self-evaluation designed by WP4 contributed to developing and fostering systematic HWF planning.
3. Guidelines on quantitative HWF planning methodology and	Evaluation report on D051 Minimum Planning Data Requirements	Completed. The proposed conceptual model of HWF forecasting, which covers the elements of the planning system and the minimum data set, algorithms and parameters for HWF planning, provided a practical basic toolkit for Member States. Thereby the



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<p>increased quantitative planning capacity.</p>	<p>Expert Reference Group report and Focus Group report on D052 Handbook on Planning Methodologies</p> <p>Expert Reference Group report on 53 Web Portal on Health Workforce Planning Methodologies</p>	<p>model increased the capacity in quantitative HWF planning in the Member States. Testing the toolkit in pilot projects provided evidence on the benefits of the toolkit in recognizing and analysing the imbalances between HWF supply and demand.</p> <p>The handbook elaborating on the five key elements of quantitative HWF planning methodologies and describing how the methods are adapted in selected Member States provided guidelines for Member States on HWF planning. Furthermore, the Web Portal provided a useful online application for exploring the five key elements and thus increased the planning capacity of the Member States.</p>
<p>4. Guidelines of qualitative HWF planning methodology and increased qualitative planning capacity.</p>	<p>Evaluation report on D061 User's Guidelines on Estimating Future Needs</p>	<p>Completed.</p> <p>Report on User's Guidelines on Estimating Future Needs provided both a comprehensive overview of the qualitative HWF planning methodology and country profiles on adapting qualitative methods. The User's Guidelines increased the capacity of the Member States in qualitative methods in HWF planning.</p>
<p>5. An estimation of future skills and competencies needed in the health workforce in Europe.</p>	<p>Evaluation report, Expert Reference Group report and Focus Group report on D062 Report on Future Skills and Competences</p> <p>Expert reference Group report on D063 Web</p>	<p>Partly completed.^a</p> <p>The report on future skills and competences strengthened the capacity of the Member States by providing a concrete exercise and guidelines on how to understand the dynamic nature of future change as well as the factors, driving forces and relations that affect the skills and competences of the future HWF by means of a systems thinking approach. However, information on skills was assessed as somewhat scarce. Furthermore, the recommendations were deemed as rather general and therefore not providing clear guidelines for different actors to detect</p>



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	Content on Horizon Scanning , version 3 June 2016	possible solutions. Thus, the report on future skills and competences was deemed to only partly meet the objectives set out in the Grant Agreement.
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^a WP6 has taken the comments provided by experts into account in finalizing the deliverables after the completion of the evaluation.



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<p>6. A platform of cooperation to find possible solutions for the expected shortage in the health workforce, to consolidate the experience of the JA and to have a higher impact of the HWF planning and forecasts on policy decision-making.</p>	<p>Evaluation report on D071 Sustainability Strategy</p> <p>Evaluation report and Focus Group report on D072 List of Experts / Network of Experts, version 2</p> <p>Evaluation report and Focus Group report on D073/74 Technical Recommendations and Recommendations Towards Policy Making, version 01.3</p>	<p>Partly completed.^b</p> <p>The Sustainability Strategy provided an overview of the potential sustainability actions that could be taken after the JAEUHWF. The proposed optional structures of the cooperation were not assessed as sufficiently feasible to consolidate the experience of the JA. Neither the technical nor policy recommendations were assessed as providing clear messages in order to generate political commitment and leadership and sustain the future of the HWF planning in Europe. Thus, the promotion of a sustainable and feasible collaboration platform for pan-European HWF planning with the support of all the Member States was yet not achieved.</p>
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^b WP7 has taken the comments provided by experts into account in finalizing the deliverables after the completion of the evaluation.



8. Conclusions

8.1 Conclusions on the Joint Action

The overall aim of the evaluation was to verify whether the Joint Action was implemented as planned and reached the defined objectives. The task of the evaluation was to assess both the process of the JAEUHWF and the merit, worth and value of outputs and outcomes of the Joint Action, which are intended to play a role in future practical action situations in health workforce planning and forecasting in Europe. The specific evaluation objectives were:

- 4) In terms of compliance with the rules, to assess if the JAEUHWF was progressing according to the original plan. (Process evaluation)
- 5) In terms of compliance with the content and quality, to assess if the work packages were delivering the outputs according to the schedule and if the quality of the deliverables met the goals set out in the Grant Agreement. (Output evaluation)
- 6) In terms of defining the lessons learned and recommendations, to assess what kind of outcomes from health workforce planning and forecasting in Europe could be attributed to the Joint Action efforts. (Outcome evaluation)

On the basis of the process evaluation, it can be concluded that JAEUHWF was progressing according to the original plan. Necessary amendments were made during the process of JAEUHWF. The Management Office and WP1 had been using all necessary process management tools as appropriate to ensure the progress of the Joint Action, as agreed upon in the Grant Agreement. All the issues emphasised during the project were discussed and solved as well as corrective actions taken.

Both internal and external evaluation were used in the output evaluation. The evaluated deliverables were generally of good quality and produced in accordance with the Grant Agreement. However, there were quite a lot of delays in delivering the outputs, which had an effect on several other work packages, namely WP2, WP3 and WP7. In particular, dissemination of the results and formulation of the recommendations for sustainability of the JA may have needed more time in some cases.

The deliverables were evaluated as being very informative and useful in terms of HWF. There is a lot of potential to contribute in policy dialogue on both national and EU-levels. Improving the national-level data collection brings added value to the discussion on health workforce mobility and the wider context of working conditions and patient safety.

The essential aspects of the HWF planning systems were summarized into five key elements in the *Handbook on Health Workforce Planning Methodologies across EU*

Countries. The five key elements include the goal-setting for HWF planning, the forecasting model, the data used in the model, organization of the HWF planning system and the relevant linking of the planning into policy action. For better implementation these generic elements would need to be refined into a more practical ‘user’s guidelines’.

The Individual Mobility Data Set (IMDS) is relevant in terms of tracking HWF mobility, and it was suggested to be further developed jointly with international partners. The Minimum Data Set in the *Minimum Planning Data Requirements* provides practical tools to identify and analyse imbalances on the supply and demand of HWF in general. Together these two data sets would enable more accurate and timely planning and forecasting of HWF and a balancing of supply and demand in European countries.

The *User guidelines on qualitative methods in health workforce planning and forecasting* introduced useful methods for assessing skills and competences, and detecting future drivers. To complement these guidelines, the *Report on Future Skills & Competencies* provided a systems approach to be used, for example, in workshops between clusters of countries with similar contexts. Based on the feedback from the focus groups the clustering of countries in similar conditions of HWF planning would provide value for the future steps to improve both the planning in itself and its linking to policy action.

A *Network of Experts* is important for building sustainability and political support for health workforce planning in the long term. Now that the experts on HWF planning in Europe have been brought together in the same forum, the network needs to be incorporated into existing structures if it is to provide added value also in the future.

The outcome evaluation was performed with the help of focus groups, including 18 experts in total. In conclusion, the focus group participants considered the Joint Action to be very useful, but there is still a need to consider further both implementation issues and issues relating to political commitment. It was suggested, for example, that more practical and smaller steps for implementing the Joint Action results would be advantageous.

In future, there is a need to integrate both qualitative and quantitative planning methodologies, and the models should focus on multi-professional planning. A basic assumption on the constant increase of HWF might not be feasible, and thereby a broader scope for HWF policies is needed. An important challenge is also to ensure capacity building in HWF planning and forecasting.

Clustering or partnership with countries, sharing experiences and web portals were assessed as good methods for implementation. To foster implementation, the JAEUHWF results and the produced materials should be continuously updated. Furthermore, existing structures and extensive collaboration based on clear responsibilities and experts’

participation should be utilized. These experts should have an institutional background and official commitment.

The political nature of the HWF issue has not been fully recognized, and the political importance of the issue was anticipated to increase in the near future. Thus, the HWF issue needs to be high on the political agenda in the Member States and in the EU. This has to be supported by a clear message on the importance of HWF. Evidence and support are needed for policy-makers to tackle the HWF issue.

In general, it can be concluded that the Joint Action mainly achieved the objectives set out in the Grant Agreement. Four objectives out of six were assessed as having been completed, while two of these objectives were assessed as having been partly completed. These objectives refer to D062, D063, D071, D072 and D073/D074, which were still works in progress, while the achievement of the objectives of the Grant Agreement was assessed. Furthermore, the objectives of the Grant Agreement were rather extensive and therefore expectations regarding the outcomes might have been too high.

The different evaluation methods (WP3 internal output, ERG external output and FG outcome evaluations) provided quite similar views on the quality of the contents of the deliverables. Similar themes were also discussed regarding the implementation and sustainability of the Joint Action and core deliverables, even though there were different experts participating in the focus groups.

8.2 Lessons Learned and Recommendations Based on the Evaluation

Based on the experiences in this Joint Action, it is encouraged to use a systematic evaluation framework and a diversity in evaluation methods and tools also in the future. Methods and tools must be based both on the evaluation theory and the literature on the subject, while they need to be constantly adjusted to meet the demands of developmental evaluation. The evaluation team greatly benefits from a mixture of expertise both in the evaluation practice and in the subject of the Joint Action in question.

The approach of developmental evaluation enables the evaluation team to take a more active part in the making of the deliverables and the progress of the project. In addition to submitting the formal evaluation reports the evaluation team contributed to the work of the core work packages by means of informal written and oral comments and feedback through Skype meetings. Some of the deliverables were commented on by WP3 during the 3-4 rounds before the final evaluation. Constant dialogue between the evaluators and the core work packages is important and recommended in order to give the work packages timely feedback and support also during the process and not only after the deliverables

have been produced. The work package leaders also considered this to be very valuable. It is recommended that this be taken into account while allocating resources for evaluation.

Use of external experts both in the output evaluation (quality control) and the outcome evaluation is encouraged. The use of external experts was very beneficial and is recommended in evaluating the core deliverables. Instead of using semi-structured questionnaires, individual interviews could provide valuable information for evaluation purposes. However, this must be foreseen in the resources and budget of the evaluation team. Therefore, mixing different methods for evaluation is recommended in future. Selection and recruitment of external experts is critical in terms of the success of output and outcome evaluation. To ensure the external experts' commitment, compensation for their efforts and participation would be encouraged in the future.

Ample time for evaluation must be included in the planning and timing of the whole project and particularly in the delivery of the outputs. Systematic, scientifically solid and at the same time practice-oriented evaluation that provides useful and feasible feedback to core work packages takes time. Thus, the evaluation of any deliverable should not be left to the final weeks of the project.

Constant delays in the delivery of certain outputs were noted. One has to clarify that the Project Management Team did all things possible to ensure the timely delivery of the deliverables, by organising, for example, direct meetings with the WP leaders concerned and providing constant support etc. These delays and changing schedules not only compromised the feasibility of the evaluation, but also the dissemination of the results and generating the final recommendations for sustainability. The importance of appropriate project management tools was acknowledged by the project management office and must be highlighted in order to control and direct the overall process and quality.

The outcome evaluation gives added value regarding potential the future impact of any project. It is however very challenging, particularly in lengthy projects that have demanding objectives, as was the case with the JAEUHWF. The objectives set for the JA were ambitious and many of them refer to outcomes that can only be assessed in a longer time frame lasting years, which may imply that the expectations have been too high. This is mostly out of the scope of the evaluation, which is bound by both the timing of and resourcing from the project in question.

9. References

Anzoise, V. & Sardo, S. (2016). Dynamic systems and the role of evaluation: The case of the Green Communities project. *Evaluation and Program Planning* 52(2016), 162-172.

Babuscia, A. & Cheung, K-M. (2014). An approach to perform expert elicitation for engineering design risk analysis: methodology and experimental results. *Journal of the Royal Statistical Society, A* (2014)177, Part 2, 475-497.

Bishop, D. & Lexchin, J. (2013). Politics and its intersection with coverage with evidence development: a qualitative analysis from expert interviews. *BMC Health Services Research* 2013, 13(88).

Bellew, B. & Schöeppe, S. & Bull, F. & Bauman, A. (2008). The rise and fall of Australian physical activity policy 1996- 2006: a national review framed in an international context. *Australia and New Zealand Health Policy* 2008, 5(18).

Chu, H-C. & Hwang, G-J. (2008). A Delphi-based approach to developing expert systems with the cooperation of multiple experts. *Expert Systems with Applications* 34 (2008), 2826-2840.

Foss Hansen, H. (2005). Choosing Evaluation Models: A Discussion on Evaluation Design. *Evaluation* 11(4), 447-462.

Kitzinger, J. (1995). Introducing focus groups. *British Medical Journal* 311(1995), 299-302.

Lewis, J. (2001). Reflections on Evaluation in Practice. *Evaluation* 7(3), 387-394.

Ling, T. (2012). Evaluating Complex and Unfolding Interventions in Real Time. *Evaluation* 18(1), 79-91.

Niiranen, V. & Puustinen, A. (2012). Evaluating welfare services amidst an ongoing reform. How to evaluate emergent changes and invisible effects? In Kalliola, S., Kettunen, P., Eskelinen, O., Kosonen, K-J., Rostila, I. & Leander, A. (eds.) 2012. *Improvement by Evaluation. Peer Reviewed Full Papers of the 8th International Conference on Evaluation for Practice: 'Evaluation as a Tool for Research, Learning and Making Things Better'*.

Available:

tampub.uta.fi/bitstream/handle/10024/65313/improvement_by_evaluation_2012.pdf

Owen, J. & Rogers, P. (1999). Program Evaluation: Forms and Approaches. SAGE Publications.

Powell, R.A. & Single H.M. (1996). Focus groups. International Journal for Quality in Health Care 8(1996), 499-504.

Sim, J. (1998). Collecting and analysing qualitative data: issues raised by focus groups. Journal of Advanced Nursing 28(1998), 345 - 352.

Quinn Patton, M. (2002). Qualitative Research and Evaluation Methods (3rd ed.). SAGE Publications.

Quinn Patton, M. (2011). Developmental Evaluation. Applying Complexity Concepts to Enhance Innovation and use. The Guilford Press, New York.

Robson, C. (2000). Small-Scale Evaluation: Principles and Practice. SAGE Publications.

Vedung, E. (1997). Public Policy and Programme Evaluation. Transaction Publishers, New Brunswick, New Jersey.

Zawacki-Richter O. (2009). Research Areas in Distance Education: A Delphi Study. International Review of Research in Open and Distance Learning, 10(3). Retrieved 8 December 2013 from <http://www.editlib.org/p/49048>.

Appendix 1: Compositions of the Expert Reference Groups

Appendix Table 1.1: ERG for D052 the Handbook on Health Workforce Planning Methodologies

Name of the expert	Title	Affiliation	Gender	Country
Eszter Kovács	Assistant Professor	Health Services Management Training Centre, Semmelweis University	Female	Hungary
Gaétan Lafortune	Senior Economist	OECD Health Division	Male	France / international
Lucas Besson	Vice President of the International Affairs	European Pharmaceutical Students' Association	Male	Belgium / international
Paul de Raeve	Secretary General	European Federation of Nurses (EFN)	Male	Belgium / international
Pekka Tiainen	Ministerial Adviser	Research and Foresight, Ministry of Employment and the Economy	Male	Finland
Sarada Das	EU Senior Policy Advisor	Standing Committee of European Doctors (CPME)	Female	Belgium / international

Appendix Table 1.2: ERG for D042 the Report on Mobility Data

Name of the expert	Title	Affiliation	Gender	Country
Gissler, Mika	Professor	National Institute for Health and Welfare	Male	Finland
Hinkov, Hristo	Associate Professor	National Center of Public Health and Analyses (NCPHA)	Male	Bulgaria
Oomen, Ber	Executive Secretary / Treasurer	European Specialist Nurses Organisations (ESNO)	Male	Belgium / international

Appendix Table 1.3: ERG for D062 the Report on Future Skills and Competences

Name of the expert	Title	Affiliation	Gender	Country
Alexandra Kotowicz	Senior Specialist	Ministry of Health	Female	Poland
Filomena Gaspar	President	ESEL - Lisbon College of Nursing	Female	Portugal
Kaisa Immonen-Charalambous	Director of Policy	European Patients' Forum	Female	Belgium
Matthias Gruhl	Director General	Behörde für gesundheit und Verbraucherschutz der Freien und Hansestadt Hamburg	Male	Germany
Matthias Maucher	Policy Staff, Health and Social Services	European Federation of Public Service Unions (EPSU) ²⁴	Male	UK
Stelina	Expert	European Centre for the	Female	Greece

²⁴ The answer provided by EPSU was a compilation of several experts, wherein Mr. Maucher was the contact person.

Chatzichristou		Development of Vocational Training (CEDEFOP)		
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Appendix Table 1.4: ERG for D024 / D053 the Web Portal on health workforce planning methodologies

Name of the expert	Title	Affiliation	Gender	Country
Kaija Saranto	Professor	University of Eastern Finland	Female	Finland
Jesmond Sharples	Director Nursing Services	Ministry of Energy and Health	Male	Malta
Ana Gouveia	Profissional de Recursos humanos	Administração Central Do Sistema De Saúde	Female	Portugal
Paul De Raeve	Secretary General	European Federation of Nurses (EFN) Association	Male	Belgium / international

Appendix 2: Compositions of the Focus Groups

Appendix Table 2.1: Focus Group for D042 Mobility data

Name of the expert	Title	Affiliation and country
Maria Rohova	Chief Assistant Professor	Medical University of Varna, Bulgaria
Merja Merasto	President	Finnish Nurses Association, Finland
Sarada Das	Senior EU Policy Advisor	Standing Committee of European Doctors CPME, Belgium
Mika Gissler	Research Professor	National Institute for Health and Welfare, Finland

Appendix Table 2.2: Focus Group for D052 Handbook

Name of the expert	Title	Affiliation and country
Pieter-Jan Miermans	Lead Analyst - Statistician	FPS Health, Belgium
Reka Kovacs	Professional Advisor	State Secretariat for Health, Hungary
Claudia Maier	Policy Analyst in Health Systems and Health Workforce	Technische Universität Berlin, Germany
Liliane Moreira	Consultant	OECD, France

Appendix Table 2.3: Focus Group for D062 Future Skills and Competences of the Health Workforce in Europe

Name of the expert	Title	Affiliation and country
Ronald Batenburg	Program Coordinator Health Care and Manpower Planning	Netherlands Institute for Health Services Research
Ilmo Keskimäki	Research Professor	National Institute for Health and Welfare, Finland
Kaarina Tamminiemi	Senior Advisor	SOSTE Finnish Federation for Social Affairs and Health
Nina Hahtela	Health Policy and Development Director	Finnish Nurses Association, Finland
Sarada Das	Senior EU Policy Advisor	Standing Committee of European Doctors CPME, Belgium

Appendix Table 2.4: Focus Group for D072+D073+D074 Network of Experts + Technical + Policy Recommendations

Name of the expert	Title	Affiliation and country
Caroline Hager	Policy Officer	European Commission, Belgium
Eero Lahtinen	Ministerial Counsellor	Ministry of Social Affairs and Health, Finland
Galina Perfilieva	Programme Manager	WHO Regional Office for Europe, Denmark
Usman Khan	Interim Director	European Health Management Association, EHMA, Belgium
Cris Scotter	Head of Strategic Supply	Centre for Workforce Intelligence, UK