



HEROES

TASK 3: DEVELOPMENT AND IMPROVEMENT OF SKILLS AND ABILITIES OF
THE STAFF IN CHARGE OF HWP

Development of training courses program

**Module: Tools needed for human resources planning in
the health care system**

MADRID. MINISTERIO DE SANIDAD

Paseo del Prado, 18-20

9 May 2025, 9:30 to 20 hours



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Introduction: Course objectives

There is a need to improve the capacity to plan and forecast HWF in the Spanish NHS. The Ministry of Health has been doing planning for some years, but the regions have many competences in this area, and they need to improve their methods of planning.

Some Autonomous Communities and professional associations have carried out human resources planning studies for health in Spain, in most cases they are closed replacement models, which take into consider the foreseeable losses due to retirement and the entries due to graduation. In Catalonia, an independent committee for the reform of the healthcare system (Cairos) was set up in September 2024, which has created two specific HR working groups, one on professional roles and the other on planning methods and models. All this background suggests that this is a propitious moment in Spain to tackle the problem with a long-term vision.

The general aim of the course is to provide Human Resources managers of autonomous communities and other administrations with some data analysis tools and planning and forecasting tools. The goal is to be able to anticipate the needs of professionals in a 15-year horizon.

The course will be a one day (8 hours) face-to-face session in Madrid (Ministry of Health), and a moodle based online complementary resources and sessions, both synchronous sessions and asynchronous sessions. It will take place in the last quarter of 2025.

A certificate of attendance may be offered upon completion of the modules. At the end of the face to face session and also after finishing the on line part of the course, an evaluation will be done.

Target audience

The target audience is composed of human resources managers from regional health services and senior managers and technicians from these services, as well as personnel from the Ministry of Health responsible for coordinating the regulation, management, information systems and planning of health professionals. The course will also be open, if places are available, to interested academics and students and to technicians from other regional government departments and ministries, such as universities, responsible for training and accreditation of degrees. Professional councils and associations will be eventually invited to participate.

Regarding engagement with the target audience, we notice the important role of the Ministry of Health in the planning of the course and facilitating the physical infrastructure (classrooms in the building of the Ministry in Madrid).

To involve the participants in the course, we will provide them in advance with readings and documentation, through the virtual platform, so that they come to the classroom session with a certain base and knowledge of the subject. From one month before the face-to-face session, an online communication channel and a discussion forum will be opened, so that all participants can interact with each other. In the virtual platform detailed information about the curriculum, learning objectives, and expected outcomes will be included.

As everyone is expected to work with their data and present their specific problems, previously to the face-to face session, the participants working on HWP will be encouraged to prepare their specific databases to work with.

Course provider

Universidad de Las Palmas de Gran Canaria, Prof. Patricia Barber and Prof. Beatriz González Lopez-Valcarcel.

Professor Barber (<https://dmc.ulpgc.es/en/patricia-barber-2.html>) and Prof. Gonzalez Lopez-Valcarcel (<https://dmc.ulpgc.es/en/beatriz-lopez-valcarcel-2.html>) have been in charge of the reports and studies of supply and demand of physicians in Spain, for the Ministry of Health.

Their last report (April 2024) is available at:

https://www.sanidad.gob.es/areas/profesionSanitarias/profesion/necesidadEspecialistas/docs/Oferta_y_necesidad_de_medicos_especialistas_en_Espana_2023-2035.pdf

Dr. Xavier Bayona (<https://apdcat.gencat.cat/web/.content/01-autoritat/documents/consell-assessor/CV-Xavier-Bayona.pdf>). ICS Barcelona

Approach to teaching and learning

The course integrates theory and practice with emphasis in the real case applications already done and to be done locally.

Learning objectives are detailed and assigned to the module activities. With small variations, the modules stimulate peer learning, discussions and sharing of experiences, small group work, simulation exercises, and systematic reflection and planning. These are complemented with readings, input from experts and engagement in case studies.

As in the Portuguese proposal of training in HEROES, also in Spain is expected that “participants will acquire competencies to lead and facilitate HRH policy dialogue on HWF issues, participate in HRH policy development and implementation, and acquire a basic level of proficiency in the development of related analyses. In this way, participants will contribute to improved HRH efficiency, effectiveness and performance in diverse health systems and health care settings”.

It is expected that each participant will be able to get the most out of the course, which will depend on his or her starting level and experience. A basic requirement is that they use excel or similar with familiarity. They will bring to the course their laptop or tablet with excel or similar installed and running. Participants with a higher level of knowledge and experience will be able to go further in the handling of specific simulation software.

Course structure

1. (9:30- 10:15 hours). Introduction on professional human resource planning and international experiences (Theory).

This expository part will review the existing planning methods, based on supply, demand or need, and will review relevant international and Spanish experiences.

2. (10:15-11:00 hours). Learning how to analyze HR databases, calculating statistics and basic indicators (Excel or similar tool).

In this practical part, we will identify and define the variables and parameters of the model, differentiating between inputs and outputs, and learn how to calculate basic univariate statistics of the model variables. As far as possible, each participant will work with the database of his/her interest. The presenters will bring a hypothetical database to work with as an example and with participants who do not have their own data.

(11:00-11:30 hours) Break

3. (11:30-13:30 hours). Learning to elaborate and interpret basic models of HR replacement due to retirement/downsizing (Excel tool or similar). The importance of Full Time Equivalent in planning models. Examples. (Practice session).

As a continuation of the previous exercise, we will work with a simple supply model in which the objective is to replenish the labor force, matching effective inputs and outputs for a profession. We will work with the full-time equivalent, highlighting its importance, with numerical examples. Each participant will end this session by proposing, for a defined time horizon, the sequence of hires needed per month to compensate for retirements/abandonments and loss of effective working time due to leaves, etc.

(13:30-15:00 hours) Lunch break

4. (15:00-17:00 hours). Demand/requirement forecasting from demographic projections (Excel tool or similar). (Practice session)

This exercise will begin with a discussion of the difference between demand and need and the role of standards and benchmarking. The practical exercise will consist of projecting the need/demand for professionals, for a given profession, by month, based on demographic projections and morbidity patterns.

5. (17:00-17:30 hours). More complex models based on system dynamics. Supply and demand/requirement sub-model. (Theory)

Other more complex models will be presented, such as discrete event simulation, and the software that executes them, with real cases for Spain.

(17:30-18:00 hours) Break

6. (18:00-19:30 hours). Presentation of the results of the Delphi study, and carry out a brainstorming exercise with the participants related to the need to resolve some of the system's professional profiles in the short term (Osakidetza's proposal for final-year residents, for example). This sesión Will be lead by Dr. Xavier Bayona (Interactive session).
7. (19:30-20:00 hours). Evaluation and recap

Evaluation

Evaluation questionnaire with multiple-choice questions (in the face-to-face session). Practical work or application case with data and for the environment in which they work. On line after the face-to-face session. Details will be given at the beginning of the course.

Educational methods and learning activities

Participative method, combining classroom exposition of theoretical and practical sessions and work of the participants.

Participants must bring a personal computer with Excel or other spreadsheet software.

Requeriments

Basic knowledge of spreadsheets is required.

Recommended reading

Astolfi, R., L. Lorenzoni and J. Oderkirk (2012), “A Comparative Analysis of Health Forecasting Methods”, OECD Health Working Papers, No. 59, OECD Publishing.

<http://dx.doi.org/10.1787/5k912j389bf0-en>

Barber P y B Gonzalez (2024) Actualización: Informe de necesidad de médicos especialistas en España 2023-2035

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https://www.sanidad.gob.es/areas/profesionesSanitarias/profesiones/necesidadEspecialistas/docs/Oferta_y_necesidad_de_medicos_especialistas_en_Espana_2023-2035.pdf

Malgieri, A., Michelutti, P., & Van Hoegaerden, M. (2015). Handbook on health workforce planning methodologies across EU countries. Bratislava: Ministry of Health of the Slovak Republic. Joint Action on Health workforce planning and forecasting

Ono, T., G. Lafortune and M. Schoenstein (2013), “Health Workforce Planning in OECD Countries: A Review of 26 Projection Models from 18 Countries”, OECD Health Working Papers, No. 62, OECD Publishing

Additional bibliographic resources:

Azzopardi-Muscat, N., Zapata, T., & Kluge, H. (2023). Moving from health workforce crisis to health workforce success: the time to act is now. The Lancet Regional Health–Europe.

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Kinsella, S., & Kiersey, R. (2016). Health workforce planning models, tools and processes in five countries: an evidence review. Dublin: Health Research Board.

López-Valcárcel, B. G., & Pérez, P. B. (2024). ¿Qué sabemos y qué deberíamos saber sobre los desequilibrios de médicos en España? Diagnóstico y propuestas. Informe SESPAS 2024. *Gaceta Sanitaria*.

NHS. Planning in a complex health economy. NHS England – a country example. High-level Regional Meeting on Health and Care Workforce in Europe 23 March, 2023

OECD (2023), Ready for the Next Crisis? Investing in Health System Resilience, OECD Health Policy Studies, OECD Publishing, Paris, <https://doi.org/10.1787/1e53cf80-en>.

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O'Malley L, Macey R, Allen T, Brocklehurst P, Thomson F, Rigby J, et al. Workforce planning models for oral health care: a scoping review. *JDR Clin Trans Res*. 2022;7(1):16-24. doi: 10.1177/2380084420979585

Parzonka, K.; Ndayishimiye, C.; Domagała, A. Methods and Tools Used to Estimate the Shortages of Medical Staff in European Countries—Scoping Review. *Int. J. Environ. Res. Public Health* 2023,

Rivera F, Andres R, Felipe E, Garcia-Campelo R, Lianes P, Llombart A, et al. Medical oncology future plan of the Spanish Society of Medical Oncology: challenges and future needs of the Spanish oncologists. *Clinical and Translational Oncology*. 2017; 19:508–18. 45

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