

# THE EMPLOYABILITY AND COMPETENCES OF RECENTLY QUALIFIED NURSES

THE PERCEPTIONS OF DIRECTORS OF  
NURSING AND EQUIVALENT POSITIONS

Main findings and results of the 2015 study on hospitals  
and other health facilities



Agència  
per a la Qualitat  
del Sistema Universitari  
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C. dels Vergós, 36-42  
08017 Barcelona

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**Translated by: Charles Southgate**

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## 0. EXECUTIVE SUMMARY

### Aim of the study

The aim of this study, entitled Employability and Competences of Recently qualified nurses, was to establish the skills and competences required by early-stage professionals in nursing.

The study complements the findings of the survey of graduate employment outcomes, which includes recently qualified nurses, and the qualitative results of a focus group consisting of supervisors and directors of nursing.

The aim is to ultimately to better match the training requirements for the nursing profession with the training offered by higher education institutions in Catalonia. The study was also an opportunity to identify the strengths and weaknesses, from the employers point of view, of the post-Bologna bachelor degree courses in Nursing Science compared to pre-Bologna degree courses (*diplomatura*).

### Population and sample

- The study on the perceptions of hospitals and other health facilities regarding the skills and competences of recently qualified nurses consists of 112 responses from directors and supervisors of nursing of hospitals and other health facilities under the Public Hospital Network (Xarxa Hospitalària d'Utilització Pública/XHUP, 46%) and the Catalan Institute of Health (Institut Català de la Salut/ICS, 54%). All survey activities were carried out online.
- A recently qualified nurse is a person who has obtained a degree or similar qualification from a higher education institution within approximately two years prior to recruitment and therefore has little or no professional experience
- In terms of responses to the sample, 56% were from hospitals, 39% from primary health care facilities and 5% others.

### Recruitment of recently qualified nurses

- A large majority of the employers were satisfied with the training of recently qualified nurses. More specifically, 85% of ICS facilities were either very or quite satisfied with the match between the graduate profile and the requirements for recruited nurses. This percentage was 75% for XHUP facilities.



## *The employability and competences of recently qualified nurses*

- Post-Bologna undergraduate programmes (*graus*) in Medicine were not considered to be a clear improvement over pre-Bologna programmes (*diplomatura*). Only 29% of ICS employers and 7% of XHUP employers rated them as being more appropriate. According to the type of facility, primary health care facilities had a more favourable opinion of post-Bologna programmes, with 32% stating that they represented an improvement, compared to 13% of hospital supervisors.
- Master's programmes<sup>1</sup> were more positively assessed and, according to employers, lead to an improvement in all professional skills and competences (79%).
- 67% of XHUP employers stated that they had had difficulties in recruiting new nursing staff. This percentage was higher than in the overall study of employers (where it was 42%). The main difficulty was the shortage of applicants having the specific required training (74%).

### **Skills and competences of recently qualified nurses**

- In order to ensure the quality of healthcare delivery, a combination of very different skills and competences are required in nursing. Teamwork, respect, a positive attitude and knowledge are, according to employers and in this order, the important competences.
- Teamwork is more important in nursing training than in other professional fields. On the other hand, while communication is a fundamental tool, languages are less important than in other professions, including education.
- Primary health care facilities call for a slightly higher level of skills and competences than hospitals, in particular those associated with decision making and continuing training (engage in the continuous enhancement of professional activities through on-going learning).
- On the other hand, hospitals call for more specialised training (67% identified difficulties in recruitment).
- The mean level of satisfaction of nursing employers was 7.2 (on a scale from 0 to 10), which is slightly higher than the mean satisfaction of employers in general (7.0) and educational facilities with new teachers entering the teaching profession (6.8).
- Overall satisfaction was associated mainly with satisfaction with basic standards of nursing practice, the planning of nursing care and time management, and learning capacity (the learner practitioner).

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<sup>1</sup> Master's programmes for recently qualified nurses have different names: Master's in Nursing Sciences (UdL, URV), Master's in Leadership and Management in Nursing (UB), Master's in Health Promotion (UdG), Master's in Nursing and Health Research (UIC). All of these lead to the same level of skills and competence acquisition and qualify for admission to doctoral studies.

### **The challenges to skills training and development**

- According to the data from the study, in the coming years priority will need to be given to types of training that promote scientific evidence-based practice in nursing.
- Just as important is the group of skills and competences associated with nursing care, which includes effective and effective communication and health promotion; together with skills and competences that foster decision-making, an ability that is developed in professional practice.
- On the other hand, there was no outstanding skills deficit in continuous learning and languages.

### **Induction, training and innovation at hospitals and other health facilities**

- Almost all health facilities provide actions around induction for new nurses. The most common is a pre-contract placement or work experience prior to the start of the contract (60%), together with mentorship (59%).
- Health facilities are centres of innovation. Practically all health facilities have quality enhancement projects (99%) and a strategic plan at hospital, facility and/or service level (98%). The majority also innovate through new forms of association with other medical and health care facilities (86%) and important changes in technology (79%).

### **Collaboration with higher education institutions**

- There is a strong tradition of collaboration between health facilities and higher education institutions, which results in higher indicators of collaboration than for other organisations or institutions, particularly in the offer of placements (91% compared to 63%).
- In addition, almost half of the employers had participated either in training at HEIs or in assessing courses of study, and over 40% had participated in research projects.

# 1. INTRODUCTION

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The aim of the study was to provide information based on the assessment of the skills and competences of recently qualified nurses recruited by hospitals and other health facilities.

Two other studies complement the information gathered in this survey: the survey of labour market outcomes of graduates (graduate destinations) from higher education institutions in Catalonia and the qualitative analysis of the focus group with nursing employers.

This is therefore an ambitious study that combines information obtained from different informants (graduates and employers) using different methodologies (quantitative and qualitative) and represents an important step in improving the match between the requirements of training in nursing and the supply of graduates from higher education institutions.

The study also provides the opportunity to identify strengths and weaknesses, from the employers point of view, of post-Bologna programmes in Nursing compared to pre-Bologna programmes (*diplomatura*) in Nursing.

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This study is of significant importance given the moment in time in which it was carried out. It presents a compilation of the opinions of employers about recently qualified nurses entering the world of work and the importance of and their satisfaction with the professional skills and competences acquired by recent graduates, and as such permits the identification of strengths and weaknesses of the new, post-Bologna programmes in Nursing compared to the now-defunct pre-Bologna programmes (*diplomatura*). In addition, this approach, with the opinions of health authorities, directors and supervisors of nursing and those directly in charge of recently qualified nurses, is of top priority for the medical and health care sector. The study was made possible through the involvement and collaboration of the Government of Catalonia's Ministry of Health and the directors, in particular those of nursing, at hospitals, other health facilities and primary care centres who responded to the survey.

The study was undertaken to coincide with the fact that the third cohort of students in Nursing Science in Catalonia completed their studies and graduated in 2015. This meant that these new graduates would have work experience of a maximum of just two years, which would provide a

sufficiently objective point of view on the part of the employers for comparing pre-Bologna (*diplomatura*) with post-Bologna programmes in terms of the acquisition of both curricular and work-related skills and competences.

The nursing profession is regulated by a European directive concerning the mutual recognition of diplomas, certificates and other evidence of the formal qualifications of nurses responsible for general care between member States of the European Union (European Parliament and the Council, 2005) through the establishment of the minimum training requirements for registered nurses (Council Directive 89/595/EEC of 10 October 1989, which amended Directive 77/452/CEE Directive 77/453/EEC concerning the coordination of provisions laid down by law, regulation or administrative action in respect of the activities of nurses responsible for general care, 1977). These are aligned with the professional standards of the American Nurses Association (ANA, 2010) and recognised by the main nursing associations, including the International Council of Nurses.

These national and European standards and regulations lay down certain characteristic features that are different to other programmes of study at higher education level. Professional requirements have always been highly important in nursing because graduation is synonymous with immediate professional preparation and on many occasions levels of responsibility similar to those of the experienced practitioner. In addition, the present-day health sector is in constant evolution, with technological and scientific innovations that call for continuous training. The new Bachelor's programmes in Nursing Science that, in accordance with European regulations, consist of a high number of teaching hours, are one year longer than the previous (pre-Bologna) programmes. This change means that programmes are now allocated 240 ECTS (over four years), with an academic programme that is regulated by the Spanish Ministry of Education (Spanish Ministry of Education and Science, 2007), together with the minimum skills and competences to be acquired by all undergraduate Bachelor's programmes in Nursing Science, together with a minimum number of credits in certain subjects, including 78 ECTS for practicum. In accordance with the prevailing legislation, at least 2,300 hours of training should be tutored clinical practice in a hospital or other health facility (article 43, Royal Decree 1837/2008, 8 November).<sup>2</sup>

Within the context of the European Higher Education Area (EHEA) there have also been modifications in general to the teaching methodology, which has changed over to a learning-based model so that students become more autonomous and responsible for their own training

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<sup>2</sup> Order CIN/21/34/2008 of 3 July, which established the requirements for the ex-ante accreditation of recognised programmes that qualify for professional practice in nursing, stipulates that there must be 90 ECTS of tutored practice and a final year project. Considering that one ECTS credit point can equal on average between 25 and 30 study hours, this fulfils the required 2,300 hours of clinical practice. Directive 2013/55/EU of the European Parliament and of the Council, 20 November 2013, ratified the importance of clinical practice and recommends at least 4,600 hours of training, with the duration of clinical training representing at least half of the minimum duration of the training, with clinical training being the part of nurse training in which trainee nurses learn as part of a team and in direct contact with a healthy or sick individual and/or community.

process. Schools and faculties of nursing in Catalonia have always been innovative in implementing new teaching methodologies, but the introduction of skills and competences to be acquired by students in course programmes has led to a change of paradigm in terms of teaching strategies and systems for evaluating and assessing outcomes.

The skills and competences that students of a Bachelor's degree in Nursing Science should develop and acquire can be summarised according to five main areas:

- **Training for nursing practice:** which covers the knowledge, skills and aspects of nursing care and scientific thought.
- **Interpersonal competences:** which covers the ability to work well in a team, leadership, decision-making and effective communication.
- **Personal and professional management strategies:** which covers efficient use of resources and time management, adaptability and problem solving.
- **Instrumental competences:** which covers languages, ICT and research.
- **Attitude and professional ethics:** which covers professional values, respect for patients and responsibility towards continuous professional training and development.

The survey was based on the skills and competences of post-Bologna Bachelor's degree programmes, with the contents simplified while preserving the essence of the skills and competences described in the Official State Bulletin (BOE) 18 July 2008 (Ministry of Science and Innovation, 2008). Information in this document may be directly relevant to and serve as a valuable factor in the assessment of aspects of programme enhancement as regards the profile of professional nursing staff expected of higher education institutions by hospitals and other health facilities.

This report follows the example of the Tuning project (Tuning Project, 2000) and the Spanish National QA Agency's White Paper on the Undergraduate Degree Programme in Nursing (*Libro Blanco del Título de Grado en Enfermería*, ANECA, 2004), which sets out a complete analysis of the most highly valued professional skills and competences according to teaching staff, health care providers and employers (directors of nursing) in Spain, with a total number of 2,105 survey responses, of which 343 were from employers. The findings of this survey, which only assessed the importance given to skills and competences, are very similar to those of this present study, which includes a new additional aspect, namely, employer satisfaction with the skills and competences of new graduates.

The fact that nursing as a profession is regulated at EU level has resulted in EU-wide agreed minimum training requirements. These include a minimum of ten years education prior to admission to nursing training, and the fact that training shall consist of a minimum of 4,600 hours and at least three years of study. In addition to setting out the minimum content for subjects to be taught in nursing training, it is also stipulated that the duration of theoretical training shall represent at least one third and the duration of clinical training at least one half of the minimum duration of training (European Parliament and the Council, 2005). There is no regulation however at international level of the skills and competences to be acquired by recently qualified nurses. Furthermore, specialist training in nursing in Spain is still in the

process of being regulated, but at European and international level there is a wide variety of systems as regards training and skills and competences, which gives rise to a professional map that is complex and difficult to use for making comparisons.

Given this situation, it is important to note that professional nurses trained in Catalonia are attracted by the labour market in Europe (UK, France, Belgium, Norway, Sweden, etc.) and are recognised for their level of training, although so far there have been no comparative studies of nursing training from the point of view of professional skills and competences.

The importance of this study lies in the employers' perspective of skills and competence acquisition by graduates, as they are the ones who must directly and objectively identify their acquisition, and this should also enable those responsible for designing curricula for Bachelor's degrees in Nursing to introduce improvements and enhancements that better match the requirements of skills and competences in the health care sector with courses of study at higher education institutions.

David Ballester

## 2. POPULATION AND SAMPLE

The study of the perceptions of health facilities about the skills and competences of recently qualified nurses consists of 112 responses from directors and supervisors of nursing at medical and health care facilities that come under the Public Hospital Network (Xarxa Hospitalària d'Utilització Pública/XHUP, 46%) and the Catalan Institute of Health (Institut Català de la Salut/ICS, 54%). The surveys were carried out online.

92% of the sample respondents were either nursing supervisors or assistant supervisors, with the remaining 8% being directors of nursing.

A recently qualified nurse is a person who has obtained a degree or similar qualification from a higher education institution within approximately two years prior to recruitment and therefore has little or no professional experience.

Of the responses to the sample, 56% were from hospitals, 39% from primary health care facilities (primary health care facilities) and 5% others.

According to the data from the 2014 survey of graduate employment outcomes (labour market outcomes of graduates), two-thirds of all recently qualified nurses, three years after graduating, were employed in hospitals, compared to 8% in primary health care. There has been a decrease in these two areas since 2008, compared to an increase in employment in care for the elderly and other sectors.

### 2.1. Population census and response to the survey

This study offers information that is complementary to that gathered in the surveys of graduate employment outcomes (AQU Catalunya, the most recent in 2014) and a focus group with nursing employers (Verd et al., 2016). This body of information represents an opportunity to rigorously take in and account for the perspective of the labour market in programmes of study.

Figure 1. Recent studies, including the sample size, on the fitness-for-purpose of training (the education-job skills match) provided by degree studies in Nursing Science at HEIs in Catalonia, from a labour market perspective

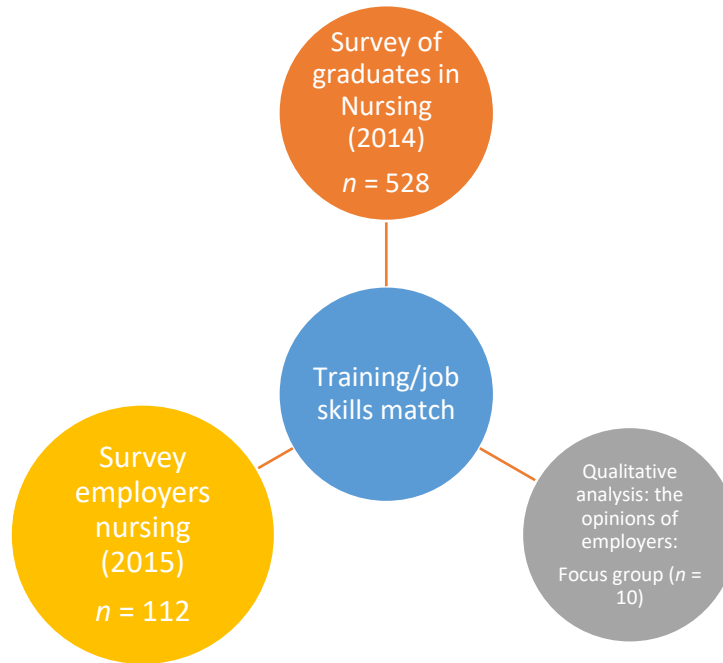


Table 1 summarises the population and sample of the five surveys of recently qualified nurses.

Table 1. Population and sample of recently qualified nurses in the five surveys of graduate employment outcomes

Year of survey	Population	Sample	Response rate	Sample error
2014	1,087	585	53.8%	2.75%
2011	784	415	52.9%	3.30%
2008	543	296	54.5%	3.84%
2005	403	255	63.3%	3.72%
2001	472	245	51.9%	4.40%
<b>Total</b>	<b>3,288</b>	<b>1,796</b>	<b>54.61%</b>	

The aim of this study was for directors of nursing (and those in equivalent or similar positions) to assess the skills and competences of recently qualified nurses they were in charge of. A recently qualified nurse is a person who has obtained a degree or similar qualification from a higher education institution within approximately two years prior to recruitment and therefore has little or no professional experience. The survey covers recruitment during these last two



years in order to assess graduates who were awarded degrees in the new (post-Bologna) Bachelor in Nursing Science, together with comparison with the now defunct pre-Bologna three-year *diplomatura* degrees.

It would have been impossible to establish a census of nursing supervisors at hospitals and other health facilities (and those in equivalent or similar positions) without the cooperation of the Catalan Ministry of Health, which facilitated contact with hospitals and other health facilities to obtain the relevant e-mail addresses.

As a result, a total number of 520 e-mail addresses were obtained of nursing supervisors at health facilities around Catalonia, 112 of which provided useful responses<sup>3</sup> to the survey, from which this report is based. As shown in the following table, the response rate was 21.54% and the sample error 8.38%.

Table 2. Final population, sample, response rate and sample error

Final population	Sample	Response rate	Sample error
520	112	21.54%	8.38%

## 2.2. Characteristics of the survey respondents

Of those who responded to the survey, 92% were nursing supervisors or assistant nursing supervisors, while the remaining 8% were directors of nursing. The mean number of years that respondents had held their position for was 7 years, while the minimum was 3 months and the maximum 30 years, with a standard deviation of 6 years. In terms of the number of nurses working at the same centre, the mean was 65, with a minimum of 1 nurse and a maximum of 1,500, with a standard deviation of 174.

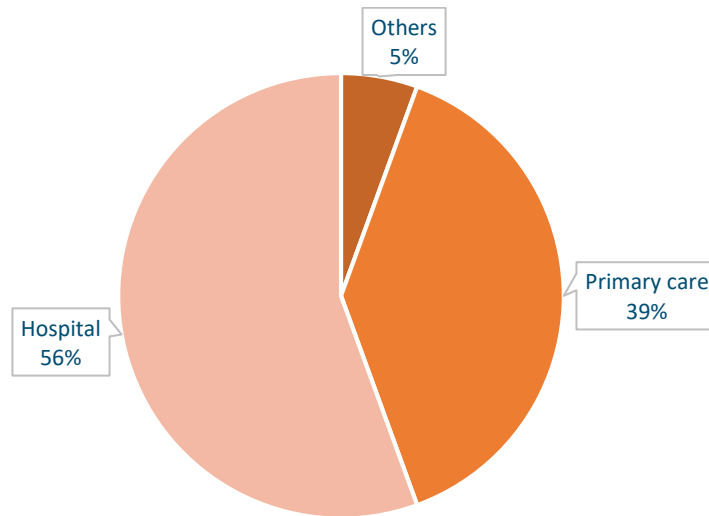
There was therefore little variation in terms of the position of responsibility of the respondents, although in terms of their level of experience and the number of nurses working at the same centre there was greater diversity.

The majority of the respondents were qualified nurses in hospitals (56%), with the remainder in either primary health care facilities (39%) or other types of facility (5%).

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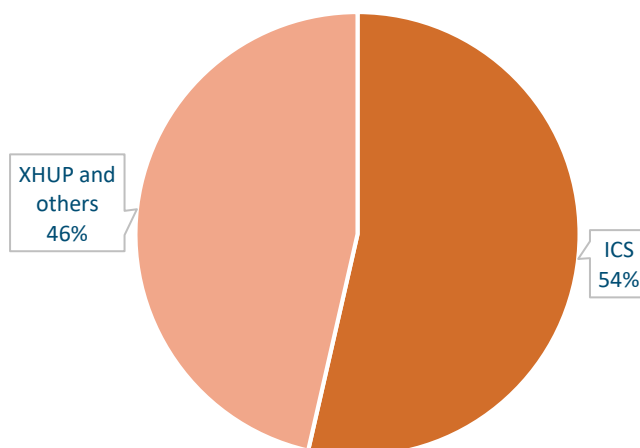
<sup>3</sup> A "useful" response is one where section 3 of the questionnaire (on the skills and competences of recently qualified nurses) has been completed (see annex 2 for details of section 3).

Graph 1. Distribution of the respondents according to the type of health facility



With regard to the corresponding health authority, 54% were working facilities under the Catalan Institute of Health/ICS while the remaining 46% were working in health facilities that either come under the Public Hospital Network (Xarxa Hospitalària d'Utilització Pública/XHUP) or others. XHUP centres may offer both public services (subsidised facilities) and/or private services (private facilities), although they are free to recruit nursing staff. In the case of public health facilities, recruitment takes place through the Catalan Ministry of Health (Departament de Salut).

Graph 2. Distribution of the respondents' health facility according to the health authority (ICS/public or XHUP/private and subsidised)



66% of ICS facilities were primary health care facilities (39) compared to 6% of XHUP facilities (3). On the other hand, only one third of the ICS facilities that responded were hospitals, compared to 84% of XHUP facilities. The health authority and the type of facility or centre are ultimately variables that are inter-related and therefore cannot be compared separately.

Table 3. Health authority (ICS/public or XHUP/private and subsidised) and type of facility

	<i>n</i>	Primary health care	Hospital	Others	
<b>ICS</b>	59	66.1%	32.2%	1.7%	100.0%
<b>XHUP</b>	49	6.1%	83.7%	10.2%	100.0%
		38.9%	55.6%	5.6%	100.0%

### 2.3. The transition into employment of recently qualified nurses

In line with the 2014 graduates survey, two-thirds of all recently qualified nurses, three years after graduating, were in employment in hospitals.<sup>4</sup>

According to the survey data, Nursing Science is one of the degrees with the best graduate employment outcomes, the best education (or training)/job skills match and the highest intention to retake the same programme (82% would take the same degree again).

The types of employer covered by this study account for the transition into employment of 72% of graduates (with 64% working in the in-patient sector and 8% in primary health care).

Table 4. Employment destinations of qualified nurses (2014 graduates survey)

	<i>n</i>	%
<b>Hospital</b>	360	64.3
<b>General primary health care</b>	47	8,4
<b>Care for the elderly</b>	88	15.7
<b>Other associated</b>	37	6,6
<b>Other non-associated</b>	28	5,0
Total	560	100.0

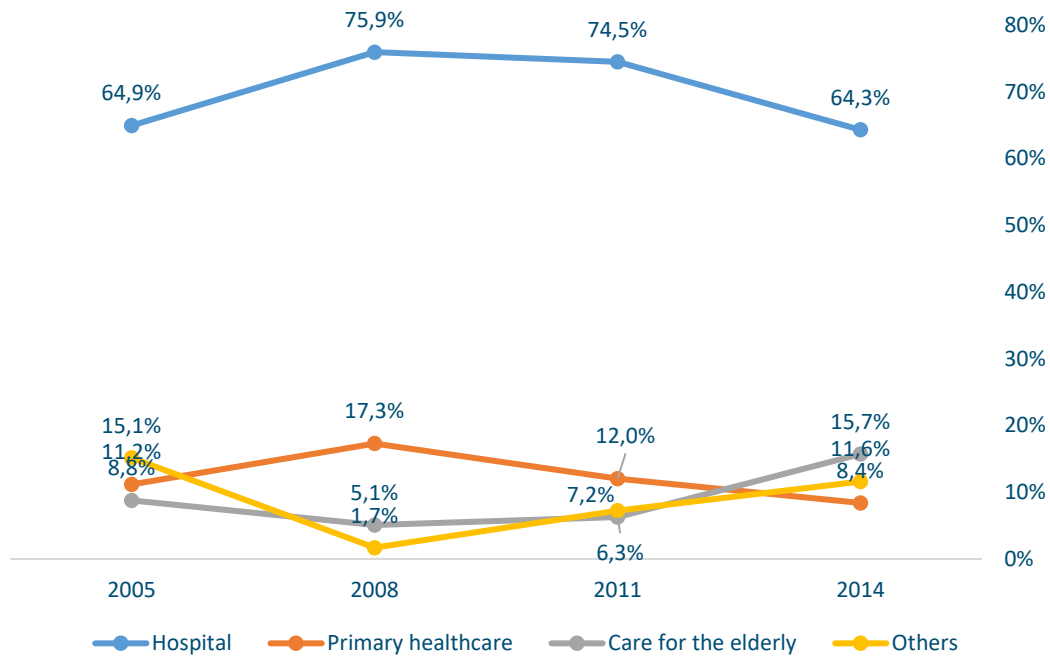
<sup>4</sup> The survey, which was carried out in 2014, covered 585 qualified nurses from the cohort of 2010, out of a total of 1,087. The sample error of the data given was 3%.

### Trends in the transition into employment: a decline in hospital recruitment

The data and figures from the four previous graduate employment outcomes survey show a peak of recruitment by hospitals and primary health care facilities in 2008,<sup>5</sup> which has decreased since then. Graduates are now increasingly finding employment in other sectors, such as care for the elderly.

The study covers the opinions of hospitals (which account for 64% of the transition into employment of graduates) and primary health care facilities (8%), and to a lesser degree of other facilities. Information on care centres for the elderly is needed to give a broader representation of nursing care, as this accounts for an important percentage of graduate employment (16%); however, no employer in this sector was available to take the survey.

Graph 3. Trends in the transition into employment of recently qualified nurses

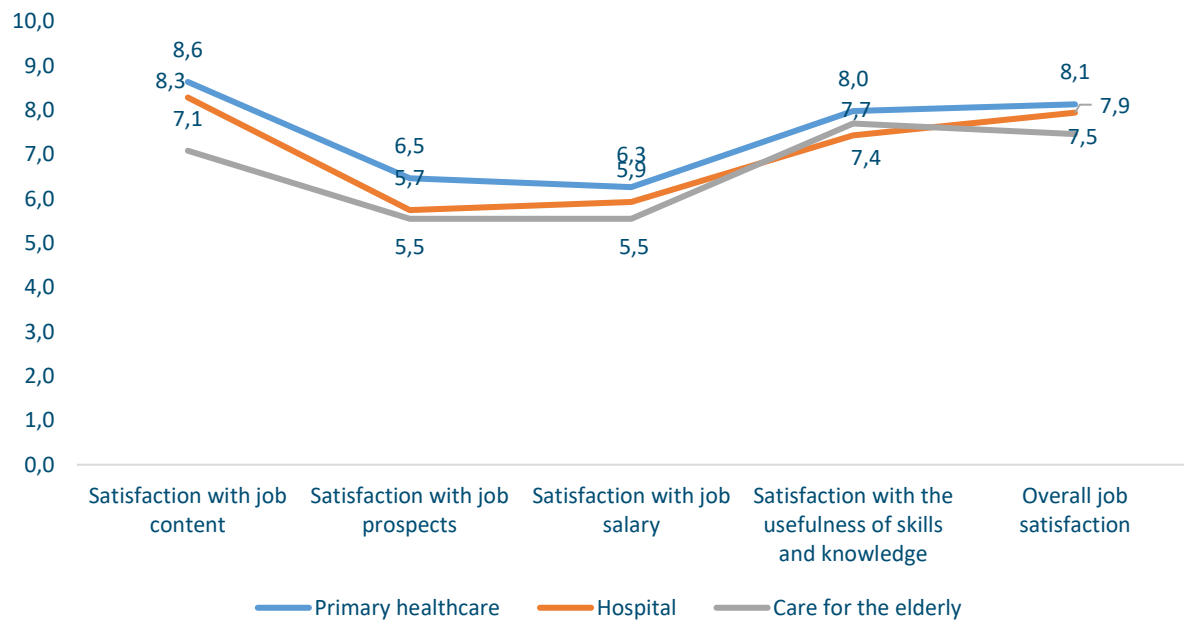


<sup>5</sup> It is interesting to see that the decline is steeper in the period from 2011-2014 than in 2008-2011. Using data from the five graduate employment outcomes surveys, Sáez and Barceló (2016) have found a differential impact of the crisis between the two. These two periods cover, firstly, the economic crisis that started in 2008 (that was fundamentally financial, caused by the subprime mortgage market and the bursting of the US housing bubble) and, secondly, the public debt crisis, which led to a drastic reduction in recruitment in the public sector and government cutbacks. The authors believe that the impact was more prominent during the second period, both in the probability of being employed and in the quality of employment (full-time work, temporary recruitment, etc.).

## Graduate job satisfaction

The surveys show that recently qualified nurses are clearly satisfied with the work that they do, especially those working in primary health care facilities.

Graph 4. Graduate job satisfaction according to the field of work (scale from 0 to 10)



These data are consistent with the vision of employers who participated in the nursing focus group and who stated that recently qualified nurses have a preference for primary health care facilities because they have more autonomy and the effects of expenditure cut-backs have been less pronounced there. They also noted that there is a high staff turnover in hospitals, which adds to increasing job uncertainty (Verd et al., 2016).

### 3. RECRUITMENT OF RECENTLY QUALIFIED NURSES

57% of ICS facilities (public) had recruited recently qualified nurses, compared to 87% in the case of XHUP facilities (either subsidised or private).

An overwhelming majority of employers were satisfied with the training of recently qualified nurses. More specifically, 85% of ICS facilities were either very or quite satisfied with the match between the profile of staff requirements and the training and skills of recruited nurses. In the case of XHUP facilities, the percentage was 75%.

Post-Bologna degrees were not considered to be a clear improvement over pre-Bologna degrees. Only 29% of ICS and 7% of XHUP considered them to be more appropriate. Primary health care facilities were more positive about post-Bologna training programmes: 32% considered them to be an improvement compared to 13% of hospital supervisors.

Master's programmes were viewed more positively and, according to employers, lead to an across-the-board improvement in all professional skills and competences (79%).

The most important factor in recruitment was prior experience at the facility and in the same service (both were rated 8 out of 10). Postgraduate training was also considered to be very important (8 out of 10). The reputation of the educational/training institute was not a decisive factor (6 out of 10), neither was a good command of English (5 out of 10).

67% of XHUP employers stated they had had difficulties in recruiting new nurses. This percentage is higher than in the general employers study (where it was 42%). The main difficulty was the shortage of applicants with specific required training (74%).

The employers asserted that the profile of the polyvalent professional who can do everything is not realistic and that the opportunity to offer more specialised training through the post-Bologna programmes has been lost; they were also of the opinion that formal recognition of the different specialities in nursing needs to be speeded up (Verd et al., 2016).

One should firstly bear in mind that recruitment in ICS facilities (public) is different to that of XHUP and other facilities. ICS facilities recruit nurses selected from the listings of the Catalan Ministry of Health (Departament de Salut), which works on the basis of a certified merits-based

point system. XHUP and other facilities are free to select the profile of nurses according to specific requirements.

Due to these differences in recruitment, different issues arise according to the type of facility.

### 3.1. Recruitment

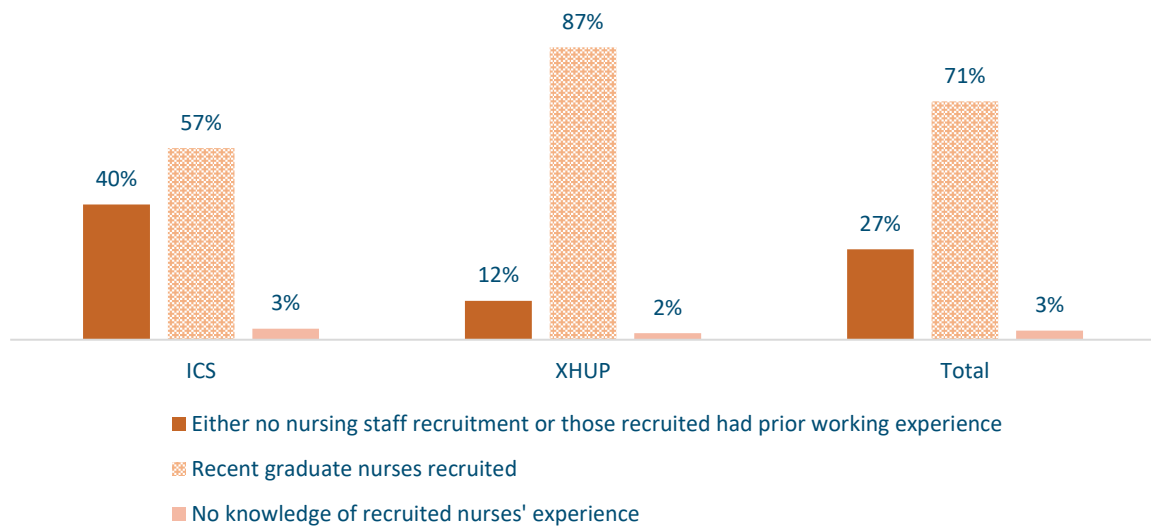
Out of the 112 health facilities that responded to the survey, 79 had recruited recently qualified nurses. The analysis of satisfaction with post-Bologna nursing training programmes was based on the opinions of these 79 cases.

Table 5. Nurse recruitment

	<i>n</i>	ICS	XHUP
No new grad recruitment and/or nurses with experience	30	24	6
Recent graduate nurses	79	34	45
No knowledge about experience of recruited nurses	3	2	1
	112	60	52

In both relative and absolute terms, XHUP facilities had higher levels of recent graduate recruitment.

Graph 5. Nurse recruitment according to the type of facility (sample)

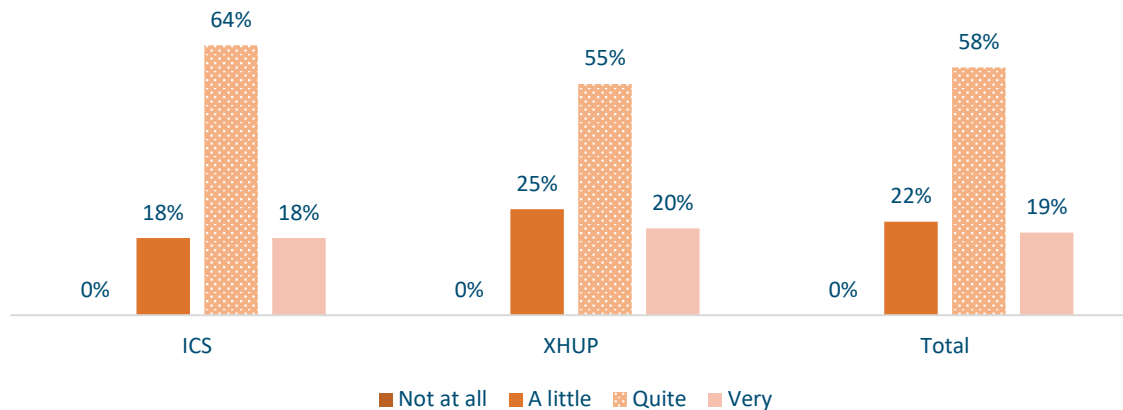


### Satisfaction with the profile of recently qualified nurses

Out of facilities that had recruited recent graduate nurses, a large majority were either quite (58%) or very (19%) satisfied with the fitness for purpose of the graduate profile of post-Bologna Bachelor's degrees as regards nursing job requirements at their facility. 22% were not very satisfied.

The level of satisfaction was slightly higher among ICS facilities which, as commented above, also had lower levels of recent graduate recruitment.

Graph 6. Level of satisfaction with the skills match (between the profile of recently qualified nurses and job requirements)



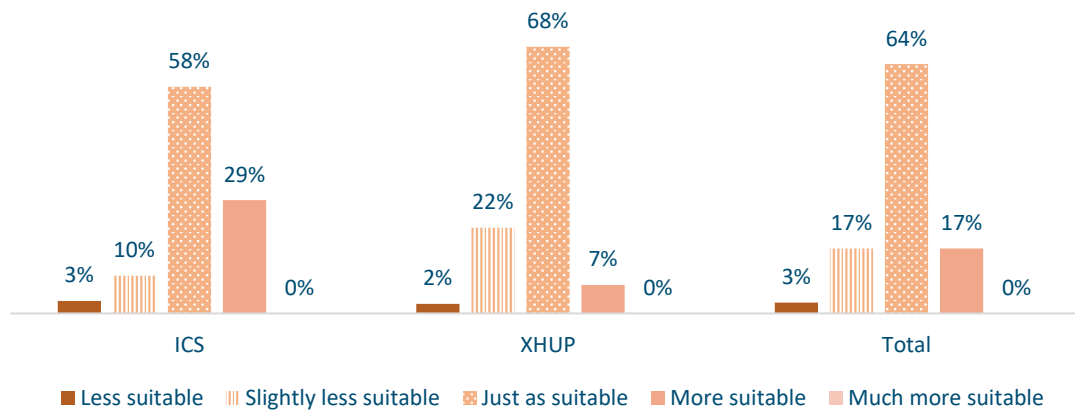
### Has training improved with post-Bologna undergraduate degrees compared to pre-Bologna degrees?

When asked to compare the profile of post-Bologna recently qualified nurses with pre-Bologna recently qualified nurses, the majority considered that both profiles were equally fit for purpose (64%). Fewer than 20% considered there was an improvement.

Assessment by ICS facilities was slightly more positive than with XHUP facilities.

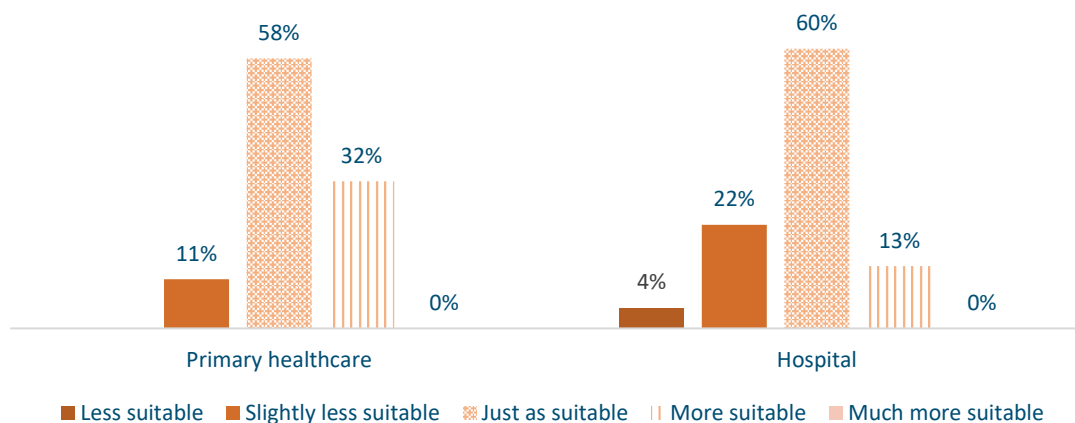


Graph 7. The fitness-for-purpose of the profile of graduates of post-Bologna Bachelor degrees in Nursing Science compared to that of pre-Bologna programmes at health facilities that had recently recruited recently qualified nurses ( $n = 72$ )



According to the type of facility, and among those that had recruited recent graduates, primary health care facilities ( $n = 19$ ) rated new post-Bologna degree programmes more highly than hospitals ( $n = 45$ ). One should bear in mind that 60% of primary health care facilities come under the ICS, which may explain the more positive assessment in the graph above. The five (5) facilities that are neither primary health care facilities nor hospitals all stated that both pre-Bologna and post-Bologna programmes were just as fit for purpose.

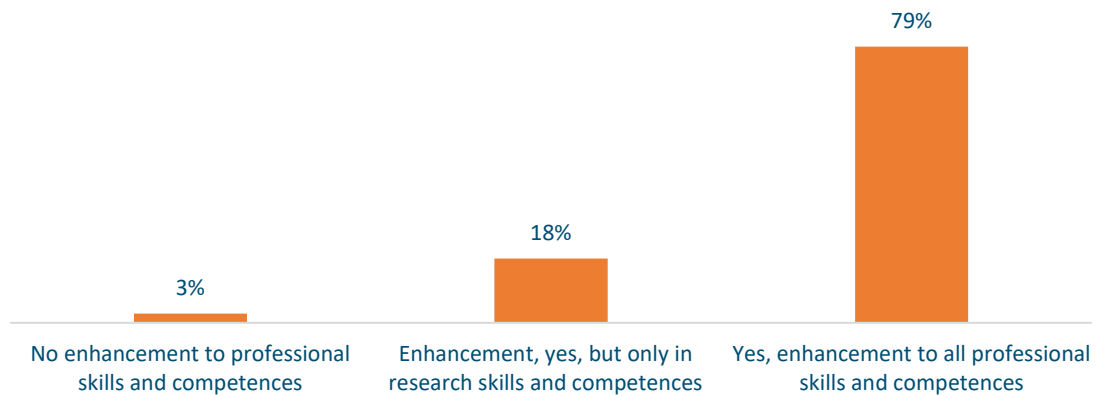
Graph 8. The fitness-for-purpose of recently qualified nurses according to the type of facility (facilities that had recently recruited graduates) ( $n = 69$ )



### Rating of Master's degrees

A total number of 40 facilities stated they had recruited Master's graduates: 7 primary health care facilities, 30 hospitals and 3 others. The great majority of these facilities considered that a Master's degree leads to an improvement in all professional skills and competences (30), compared to just one that considered there to be no improvement.

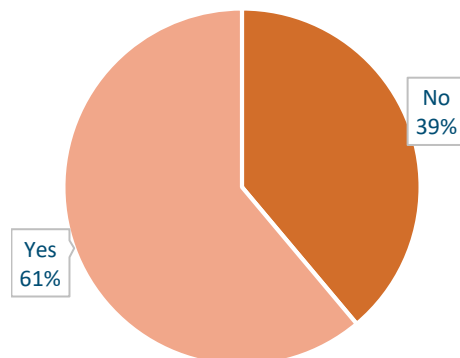
Graph 9. Rating of a training at Master's degree level



### Factors influencing recruitment in ICS facilities covered by the sample

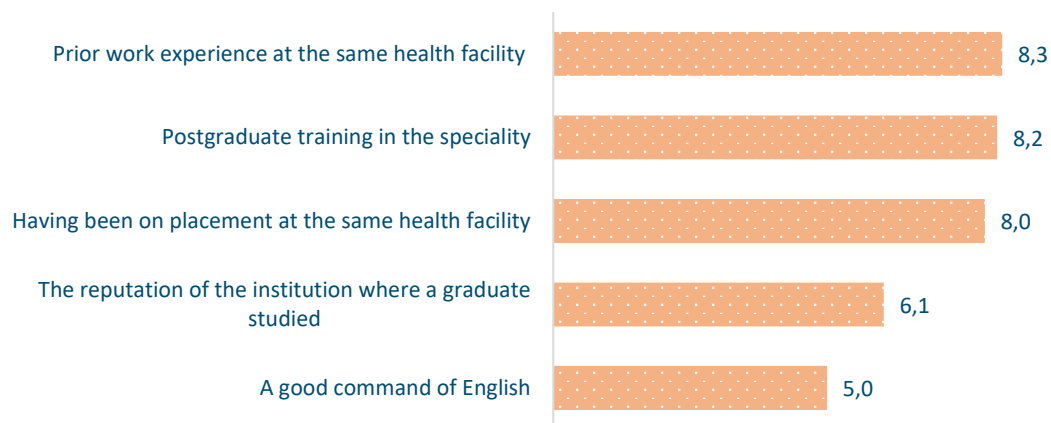
As mentioned above, the selection of nurses at ICS facilities depends on the Ministry of Health (Departament de Salut), although in some cases health facilities have a certain degree of freedom with temporary recruitment. Among the facilities covered by the sample, 61% of ICS facilities (22 out of 36) stated they were able to select the profile of nurses in cases of temporary recruitment.

Graph 10. Possibility of selecting the recruitment profile in cases of temporary recruitment



Among facilities that had the possibility of selecting the profile of temporarily recruited nurses, the decision-making factors most highly rated on a scale from 0 to 10 were previous work experience at the same facility (8.3), postgraduate training in the speciality (8.2) and work experience (placement) at the same health facility (8.0). Other factors considered to be less important were the reputation of the HEI/university where a nurse has graduated from (6.1) and a good command of English (5.0).

**Graph 11. Relevant factors in temporary recruitment at ICS facilities**



Public sector healthcare employers in the focus group criticised the rigidity of the job listings system, in particular the fact that aspects such as practical experience (in a profession that is based precisely on practical experience) are not taken into account. Another essential factor in recruitment is the rating of soft skills, due to the fact that “the interaction with the patient is just as important as technical knowledge” (Verd et al., 2016, 15).

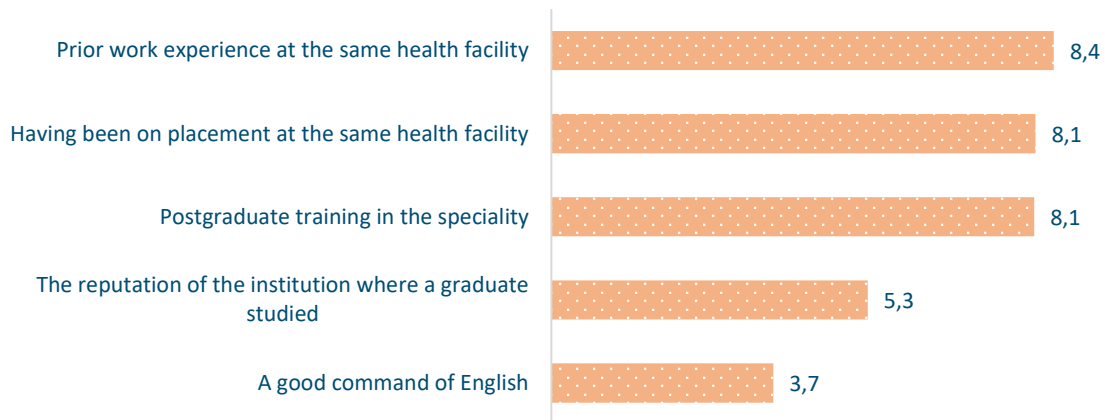
## **3.2. Recruitment in XHUP facilities covered by the sample**

### **Factors and difficulties of recruitment in XHUP facilities**

Although XHUP facilities have the freedom to choose their staff, there are certain factors that are considered more important than others in the recruitment of new nurses. On a scale from 0 to 10, the factors considered the most important in XHUP facilities in recruitment are: prior work experience at the same facility (8.4), having been on placement at the same health facility (8.1) and a postgraduate training in the speciality (8.1).

Other factors considered to be of less importance in recruitment were the reputation of the HEI/university where a nurse has graduated from (5.3) and a good command of English (3.7). The factors considered to be the most and the least important in XHUP facilities were the same as those in ICS facilities.

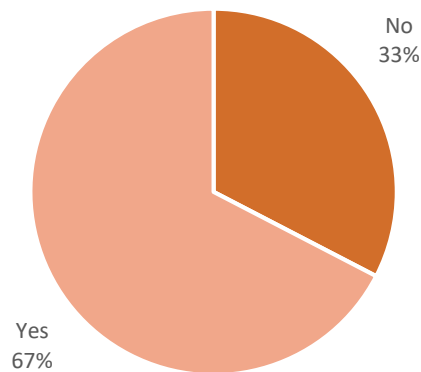
Graph 12. Important factors in the recruitment of new nurses at XHUP facilities



Facilities where students of post-Bologna undergraduate programmes go on placement are therefore a very important factor in their subsequent transition into the labour market.<sup>6</sup>

In spite of the fact that they can choose the nurses who they recruit, 67% of XHUP facilities in the sample stated that they had had difficulties in recruiting new nurses. The main reason stated was the shortage of applicants with the specific required training (74%). Other less important reasons were a shortage of applicants for the job (26%), the shortage of applicants who were willing to accept the job conditions (19%), the shortage of applicants with specific skills and competences (6%) and other reasons (13%).

Graph 13. Difficulties in recruiting new nurses at XHUP facilities

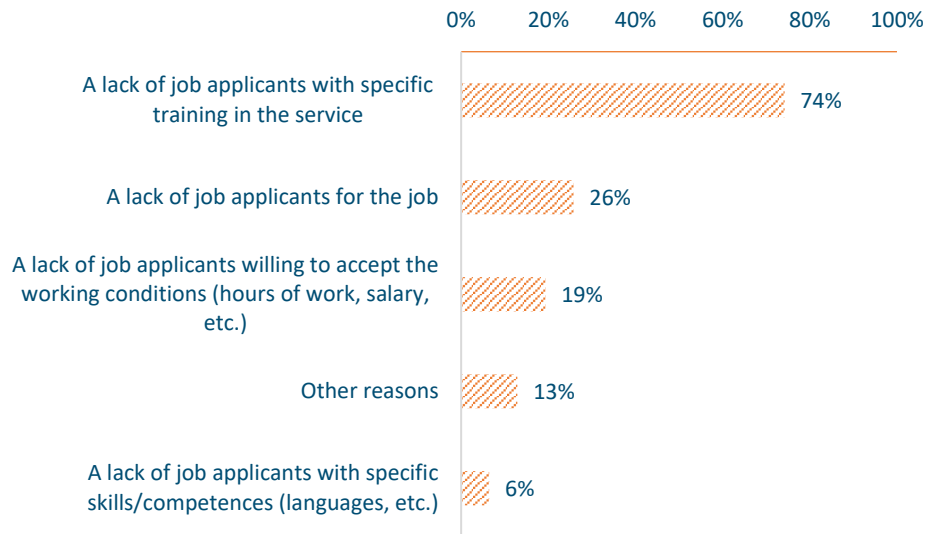


<sup>6</sup> According to the 2014 graduate employment outcomes survey, 28% of recently qualified nurses found their first job through a work placement during their studies, which was considerably higher than the total for Catalonia as a whole, which was 12%.

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The report from the nursing employers' focus group complements these data. The employers stated that the idea of a polyvalent professional who can do everything is unrealistic and that a nursing graduate cannot be expected to do any kind of task, and they called for more specialist knowledge and a broader range of specialities in post-Bologna programmes (for example, surgery, casualty/emergencies and neonatal care).

**Graph 14. Reasons for difficulties in the recruitment of new nurses**



If these data are linked to the fact that post-Bologna degrees in Nursing Science were rated by 67% of employers as being just as fit for purpose as pre-Bologna degrees, it would appear that an opportunity was missed to convert the fourth year of the programme in such a way that would give added value to nursing training in the labour market, which does occur with postgraduate training. This added value is clearly linked to specialisation.

## 4. SKILLS AND COMPETENCES OF NEW NURSES

Nursing is an academic and professional discipline that is involved with teams of other health professionals in providing healthcare, and a range of skill and competences are needed to provide care of a high quality in different healthcare settings. According to employers covered by this study, the most important skills and competences were teamwork, respect, a positive attitude and knowledge of the basic standards of nursing practice, in this order.

Teamwork is more important in nursing training than in other professional fields. Communication is a fundamental tool although languages are not considered as such and they are less important than in other professions, including the education sector.

A slightly higher level of skills and competences is required in primary health care facilities than in hospitals, in particular skills and competences relating to decision making and commitment to continuous training. As mentioned above, however, hospitals require more specialised training (67% stated difficulties in recruiting staff). On the other hand, there were no differences in the importance of the key competences of basic standards of nursing practice, communication and care skills.

The mean satisfaction of employers in the nursing sector was 7.2, or just above the mean level of satisfaction of employers in general (7) and that of educational institutions with new teachers (6.8).

The most highly rated skill was the use of ICT (8), with leadership being rated the lowest (6).

Overall satisfaction was mainly linked to satisfaction with the basic standards of nursing practice, planning of nursing care and time management, and learning capacity (the learner practitioner).

One of the main objectives of this study was to obtain the opinions of nursing supervisors (and those in equivalent or similar positions) on the skills and competences of recently qualified nurses. The assessment of their skills and competences is dealt with here from a two-fold perspective: the importance of these skills and competences in nursing practice and the level of satisfaction with these skills and competences. This two-fold perspective is based on the

assumption that, in order to determine nurse training requirements, a rating of the importance of skills and competences needs to be complemented by their usefulness. And in order to be able to prioritize where improvements are most necessary, focus needs to be put on the skills and competences where there is the biggest disparity between the level of satisfaction and level of importance, instead of just a low level of satisfaction (Allen, Van Der Velden, 2005).

The skills and competences assessed include those necessary for nursing practice as well as those of an interpersonal, personal management, instrumental, professional, attitudinal and ethical nature.<sup>7</sup>

In order to assess the competences of new nurses, it was necessary for a facility to have actually recruited new nurses. This section therefore includes the assessments by informants who had recruited new nurses and also completed the skills section of the questionnaire, which was a total number of 112 health facilities. Of these, 60 were hospitals, 42 were primary health care facilities and 10 were other types of health facilities. 60 came under the ICS (public health authority) and 52 under the XHUP network (either subsidised or private).

#### **4.1. Importance of the skills and competences of new nurses**

The following graph shows the mean rating for the importance of the skills and competences of new nurses.<sup>8</sup> On a scale from 0 to 10, the overall mean rating for skills and competences was 8.7.

The most important was teamwork with 9.4, which is markedly higher than the rating in the survey of employers for other private economic sectors (8.3) and 8.9 for teaching. Collaboration between interdisciplinary teams is necessary for high-quality care (American Nurses Association, 2010).

At the other extreme, the skill/competence rated as being the least important was languages, with 6.8, whereas in the employers survey the importance of a good command of English was higher (7.6).

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<sup>7</sup> See group 3, annex 2 for a detailed list.

<sup>8</sup> The correlation (Cronbach's alpha) of 0.95 that was obtained indicates a high internal consistency of the skills and competences in this section. The only competence with a negative impact on this index (reliability if this item is eliminated) was languages.

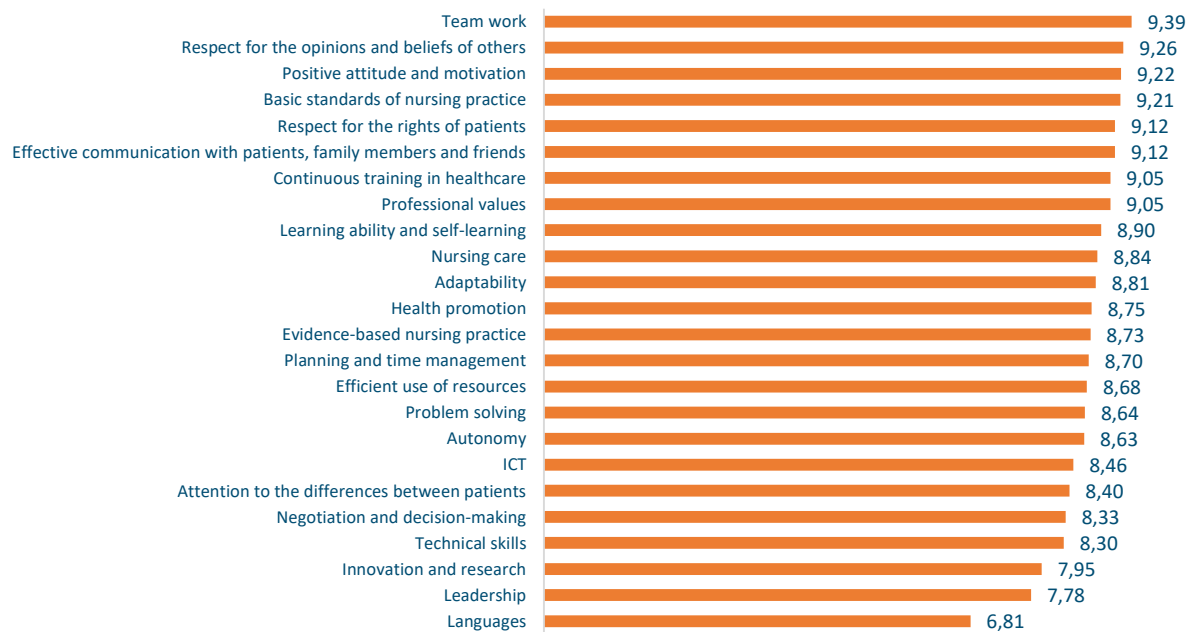
According to the survey of non-health care sector employers (enterprises and institutions), the most important competences were:

- Demonstrating responsibility at work 8.9
- Learner practitioner 8.4
- Team work 8.3

According to the same study, the least important skills and competences were:

- Numeracy skills 7.0
- Leadership 6.6
- Negotiation skills 6.4

**Graph 15. Mean importance of the skills and competences of newly qualified nurses**



### **Key competences (core skills) of nurses**

Factor analysis provides an analysis of employers' responses to the profile of new nurses.<sup>9</sup> The first group covers different skills and competences that can be defined as the key competences

<sup>9</sup> It gives a total number of four components that account for 69% of the variance.



of the nursing profession, there of which are of fundamental importance here: the basic standards of nursing practice, evidence-based practice and communication.

- The basic standards of nursing practice describe a competence level of nursing care as demonstrated by the critical thinking model known as the nursing process, which includes the components (first six competences) of the nursing process: assessment (gathering of health-related data), diagnosis (analysis and assessment of the data), identification of outcomes, planning, implementation, and evaluation of the actions undertaken according to the outcomes (American Nurses Association/ANA, 2010).
- Evidence-based practice, according to the ANA, is a scholarly and systematic problem-solving paradigm that results in the delivery of high-quality health care.
- Communication forms part of nursing care in all areas of practice. Accordingly, “nurses must be as proficient in communication skills as they are in clinical skills” (AACNI, 2005, citation by ANA, 2010).
- A series of other skills and competences also form part of this group, which range from technical skills such as nursing care to team work, as well as skills and competences of an ethical and attitudinal nature, such as respect for the patient's right to consultation, informed consent and participation, and respect for the professional values of nursing. These data support the assertion that the knowledge base for nursing is broad and comprises the natural, human and social sciences as well as the humanities (QAA, 2009).

### **Decision-making**

A second group of skills and competences consists of leadership skills, problem solving, adaptability, planning and, to a lesser degree, health promotion and technical nursing skills. This group of skills and competences implies decisiveness and being able to recognise and respond effectively to uncertainty.

### **Continuous (lifelong) learning**

A third group of competences consists of learning capacity (the learner practitioner, or the ability to engage in the continuous enhancement of professional activity through on-going learning) and a personal learning plan, the use of ICT, and innovation and research techniques. ICT would therefore seem to be linked to the commitment to self development. Trow (2000) predicted the use of ICT in lifelong learning and, given the speed of technological change, it is increasingly important for professionals to be well prepared.<sup>10</sup>

Lastly, the importance of languages emerges separate from the rest, with this competence being less important than all the others.

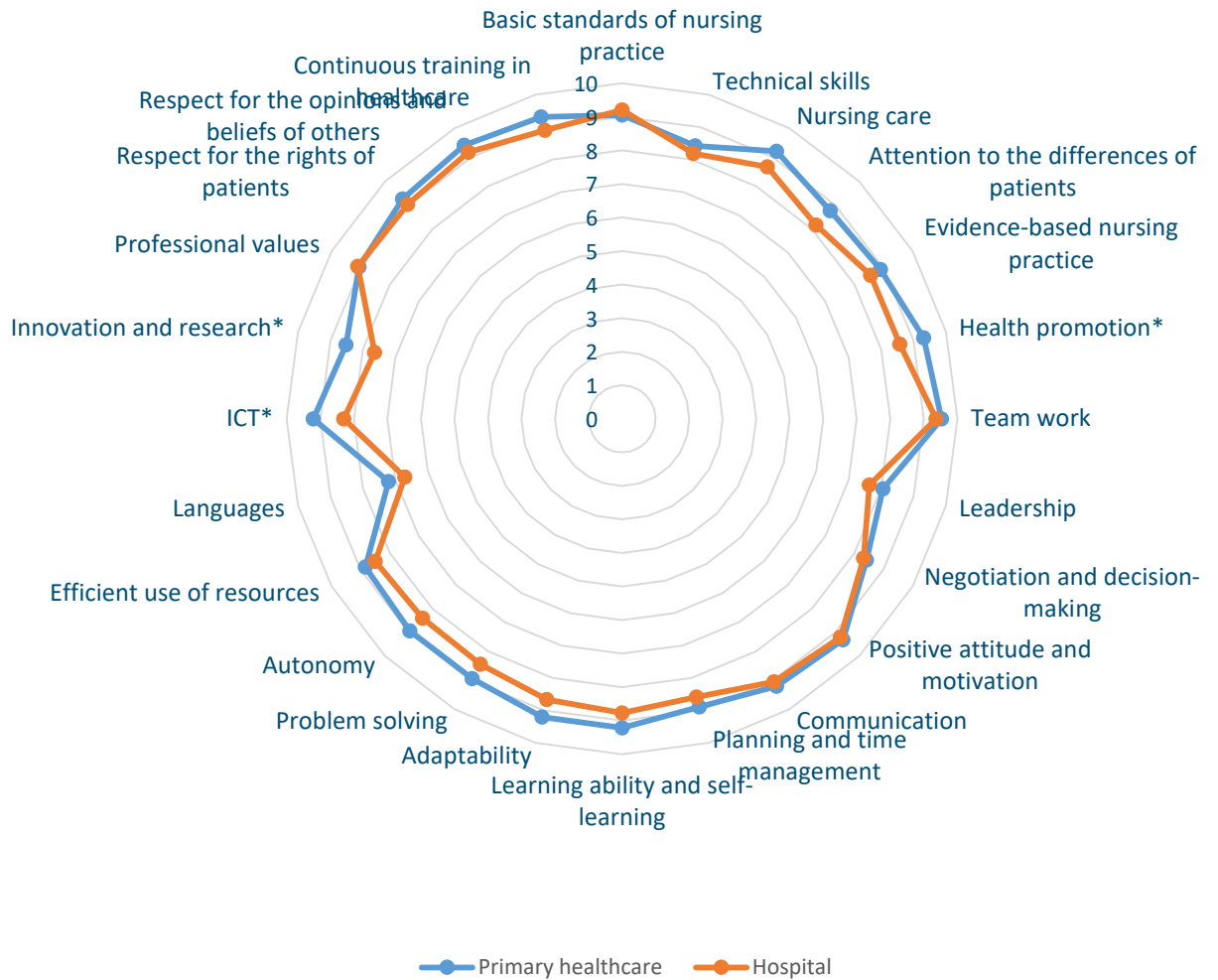
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<sup>10</sup> Trow went even further and claimed that ICT and e-learning threatened to undermine traditional learning structures, which, in the light of the level of satisfaction of nursing employers, is far from being a risk for this type of learning.

**Importance according to the type of facility**

The mean importance was slightly higher for primary health care facilities (8.9) than for hospitals (8.6). The differences are significant although only in 3 out of the 24 skills and competences analysed. Primary health care facilities rated health promotion, ICT and innovation and research as being the most important.

Graph 16. Mean importance of the skills and competences of new nurses according to the type of facility (\*skills and competences for which the difference is statistically significant)<sup>11</sup>



With regard to the health authorities, mean importance was slightly higher for ICS facilities (9) than for XHUP facilities (8.5). The differences are significant in 12 of the 24 skills and

<sup>11</sup> For a comparison of means (test) according to the type of facility (primary healthcare facilities compared to hospitals), with n=19 for primary healthcare facilities, the bootstrapping method for sample comparison was applied using the Inference function R developed by Dr. Mine Cetinkaya-Rundel.

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competences analysed. It would appear that there is a greater need at ICS facilities for technological skills and competences, team work, health promotion, attention to gender and/or socio-cultural differences, problem solving, learning capacity and skills in innovation and research. No differences were observed as regards the basic standards of nursing practice or technical procedures in nursing (nursing care, technical skills, etc.).

Graph 17. Mean importance of the skills and competences of new nurses according to the health authority (ICS/public or XHUP/private and subsidised) (\*skills and competences for which the difference is statistically significant)<sup>12</sup>



<sup>12</sup> Student t-test was used for the comparison of means according to the health authority (ICS compared to XHUP).

## **4.2. Satisfaction with the skills and competences of new nurses**

Mean satisfaction with newly qualified nurses was 7.2, slightly higher than the mean satisfaction for employers in general with recent graduates, which was 7 (AQU Catalunya, 2015b), and the satisfaction of educational institutions with new teachers, which was 6.8 (AQU Catalunya, 2015c).<sup>13</sup>

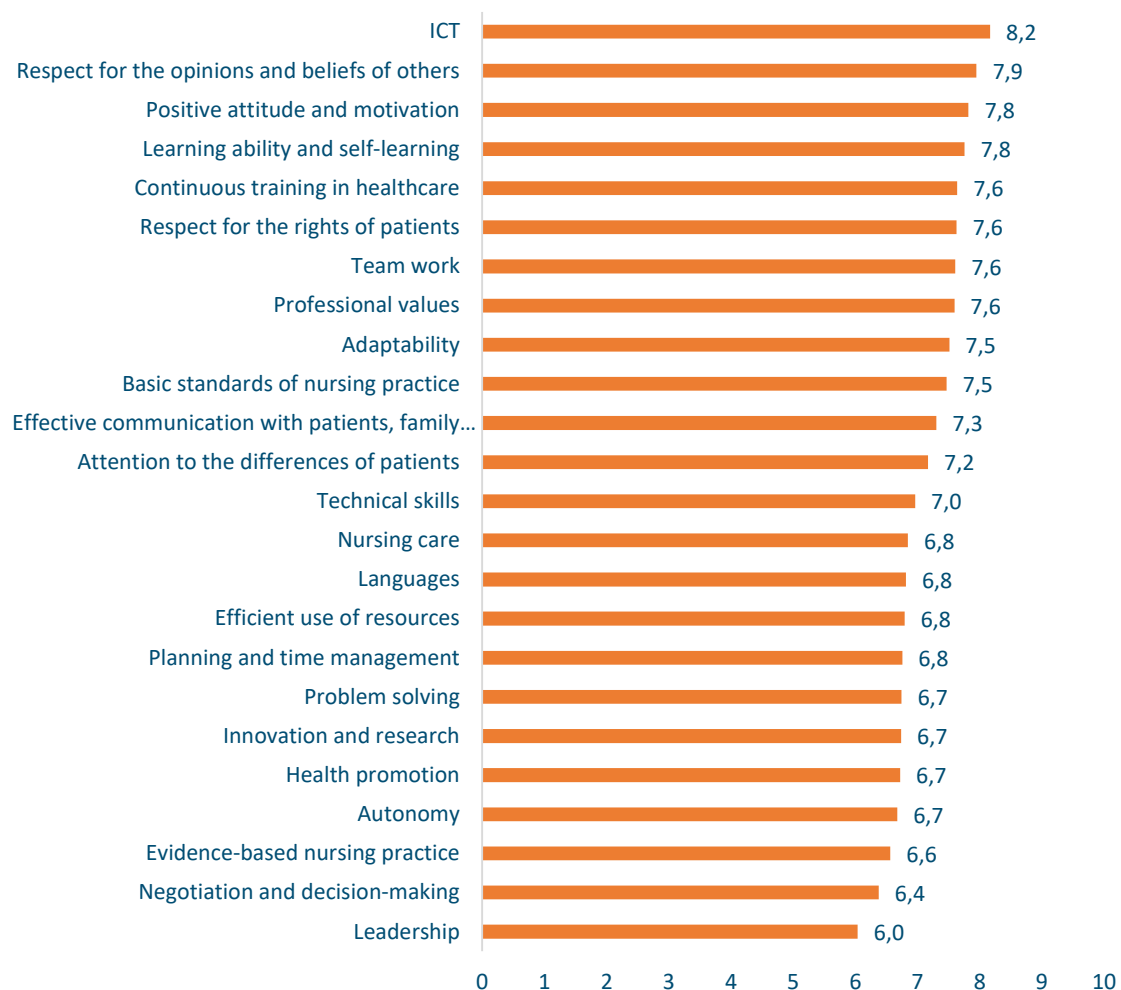
The most highly rated skill/competence of recent graduates was ICT skills (8), which is in line with the focus group's statement that graduates of post-Bologna programmes are better prepared technologically speaking. They subsequently feel more satisfied with respect for the opinions and beliefs of others and their learning capacity. On the other hand, they feel less satisfied with their ability to make clinical judgments and decisions based on available evidence, negotiation and decision-making skills, and leadership. A weak point identified in the focus groups was reflective thinking.

On the other hand, an understanding of the basic standards of nursing practice were rated fairly highly (7.5 out of 10), and technical skills and nursing care scored slightly lower but still high (7 and 6.9, respectively).

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<sup>13</sup> The reliability of the scale of satisfaction is very high (Cronbach's alpha = 0.96), which indicates a very high internal consistency. Factor analysis shows three factors that account for 68% of the variance: a first group with a diverse set of skills and competences (knowledge, health promotion, leadership, negotiation, autonomy), a second group containing mainly attitudinal aspects (professional values, respect for patients' rights, respect for the opinions of others, attention to gender and socio-cultural differences), and a third group made up of satisfaction with learning capacity, languages, ICT and innovation and research.

Graph 18. Mean satisfaction with the skills and competences of new nurses at facilities that had recruited recent graduates



**What skills and competences are useful for predicting higher levels of overall satisfaction?<sup>14</sup>**

- Satisfaction with the basic standards of nursing practice
- Satisfaction with learning capacity

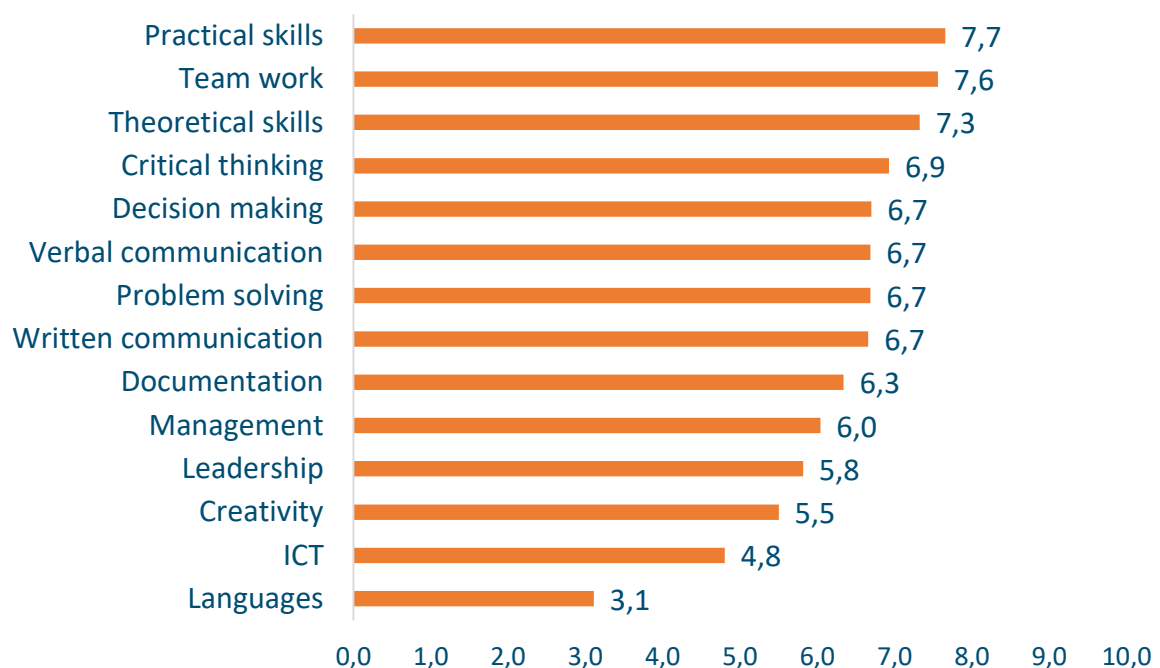
<sup>14</sup> The regression model for overall satisfaction in annex 3 shows that, for each point of satisfaction with knowledge, there is an increase of 0.25 in overall satisfaction and for each point in care planning and time management an increase of 0.19. Satisfaction with learning capacity is also significant at a 90% level of confidence (an increase of 0.16 in overall satisfaction). The  $R^2$  of the model, which consists of six variables, is 68% and adjusted  $R$  65%. Lasso regularisation was used to select the explanatory variables.

**Graduate satisfaction (data from the 2014 survey)**

Graduate assessment of the skills and competences acquired was similar to that of employers, with a high rating for practical training and theoretical skills, as well as team work, whereas their rating of management skills, leadership and languages was low.

There was one marked discrepancy with ICT, however, which graduates rated as below average, whereas employers rated it at 8.2 (high). This probably indicates that these skills are acquired autonomously in young students and it is not a product of a higher education training.

Graph 19. Graduate satisfaction with the level of training received at university



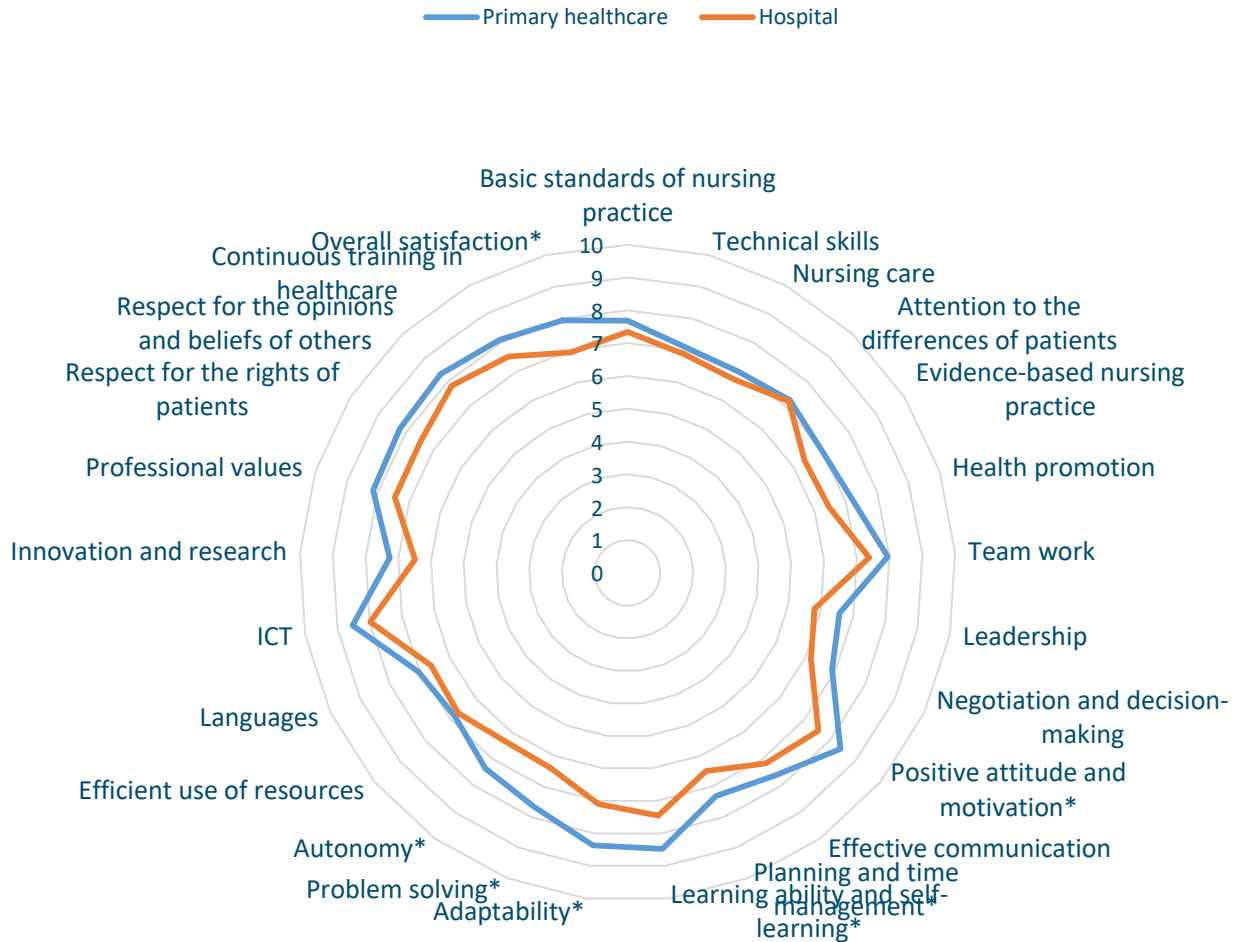
In general, as identified in other studies (Oliver et al, 2014; AQU Catalunya, 2015b), graduates are more critical than employers.

**Differences in satisfaction according to type of facility**

The level of satisfaction with recent graduates was higher for primary health care facilities than for hospitals (7.9 compared to 6.9). There were fewer differences however than with the rating of importance. These differences were only significant in 7 out 25 skills and competences: in overall satisfaction and other skills and competences related to decision making (autonomy, problem solving, adaptability, capacity for learning, etc.). As previously noted, professional nursing staff in primary health care facilities have more autonomy, and for this reason it is easier to assess these skills and competences.

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Graph 20. Mean satisfaction with the skills and competences of new nurses according to the type of facility (\*skills and competences for which the difference is statistically significant)



According to the health authority that the facility comes under (ICS/public compared to XHUP/private and subsidised), satisfaction was slightly higher for ICS than for XHUP facilities (7.7 compared to 6.8), with significant differences for several skills.

One of the most interesting differences is that satisfaction with the basic standards of nursing practice was lower for XHUP facilities, which may result from the lack of specialisation identified in the focus group.



*The employability and competences of recently qualified nurses*

Graph 21. Mean satisfaction with the competences of new nurses according to the health authority (ICS/public or XHUP/private and subsidised) (\*skills and competences for which the difference is statistically significant)



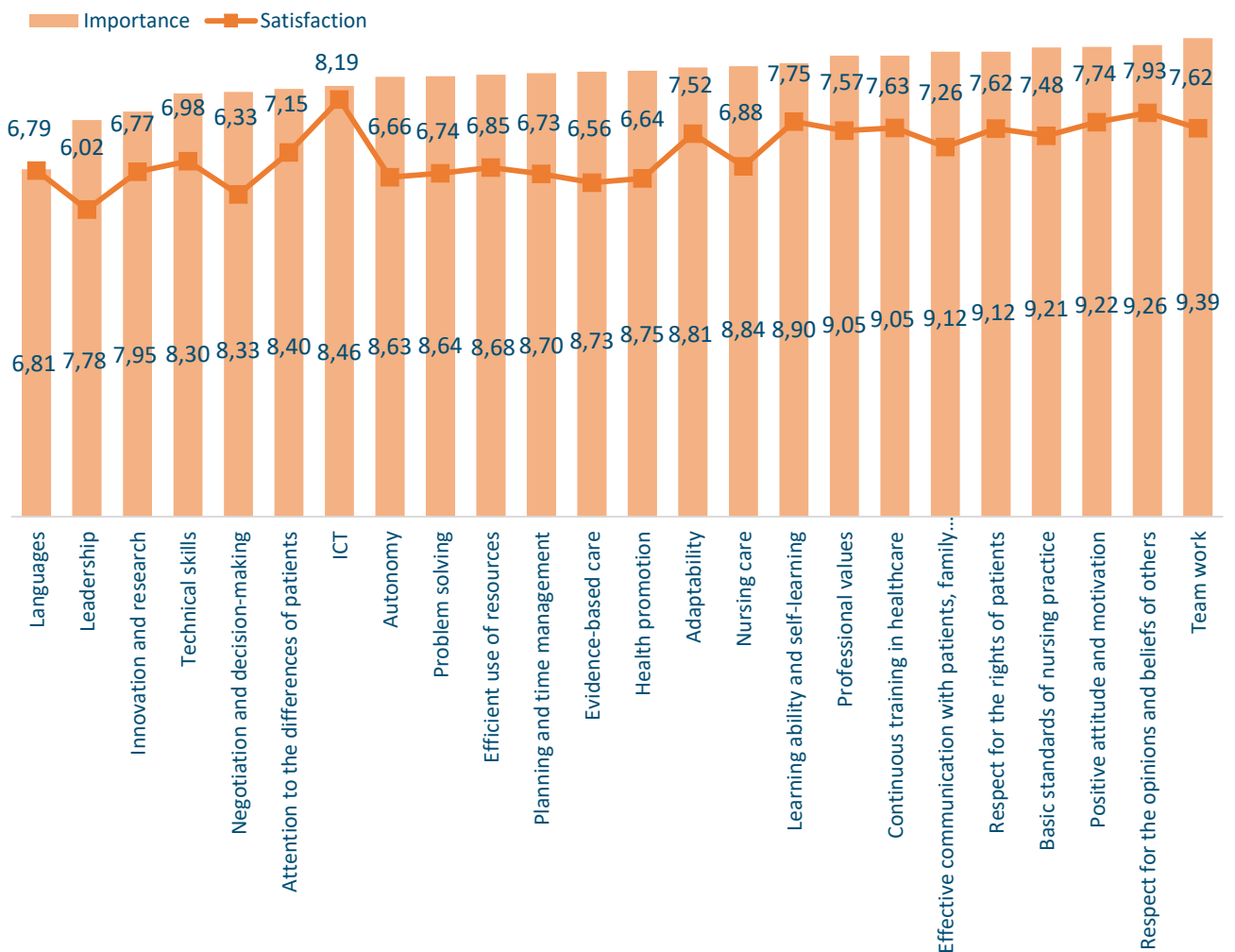
### 4.3. Comparison between the importance of and satisfaction with the skills and competences of new nurses

As can be seen from the graph, the distribution of the importance and satisfaction is similar, in general.

Deficits are evident in evidence-based practice (reflective thinking, i.e. associating theoretical knowledge and skills with professional practice), followed by health promotion and problem solving. These three skills have a 2-point deficit. Placement in care facilities offers the opportunity to develop these skills, in particular evidence-based nursing practice and problem solving. To ensure that everything runs smoothly, however, employers in the focus group noted that greater efforts are needed to coordinate with care facilities and that a reasonable amount of time is given between the rotation between services.

There was no deficit in either languages or the use of ICT.

Graph 22. Comparison between the mean levels of importance and satisfaction with the skills and competences of new nurses



## *The employability and competences of recently qualified nurses*

The following graph shows the scope for improvement between the importance of and satisfaction with the skills and competences of new nurses.

Graph 23. Difference between the means for the importance of and satisfaction with the skills and competences of new nurses (values below zero indicate more importance than satisfaction)



According to graduates, there was more of a deficit in ICT skills, decision-making, languages and problem solving. It is worth noting that the deficit is between the level of training (not the level of skill or competence) and its usefulness in the workplace. As mentioned above, this would explain the deficit observed in ICT, which was zero for employers. With regard to decision-making and problem solving, one way of dealing with this deficit is through the use of methodologies that call for the use of these skills and competences, either in classroom situations (case studies, simulations, etc.) or during placement.

Graph 24. The difference, according to recently qualified nurses, between the level of training in each skill/competence and its usefulness in the workplace



There was no difference between the scope for improvement perceived by professionals in hospitals and primary health care facilities.

#### **4.4. The challenges to skills training and development**

This section sets out a grouping of the skills and competences in order to simplify and prioritise the challenges facing skills training and development in nurse training facilities in the coming years, according to the perceptions of employers.

The skills and competences have been grouped according to the relationships analysed in the factor analysis<sup>15</sup> and the correlation matrix. These groups are as follows:

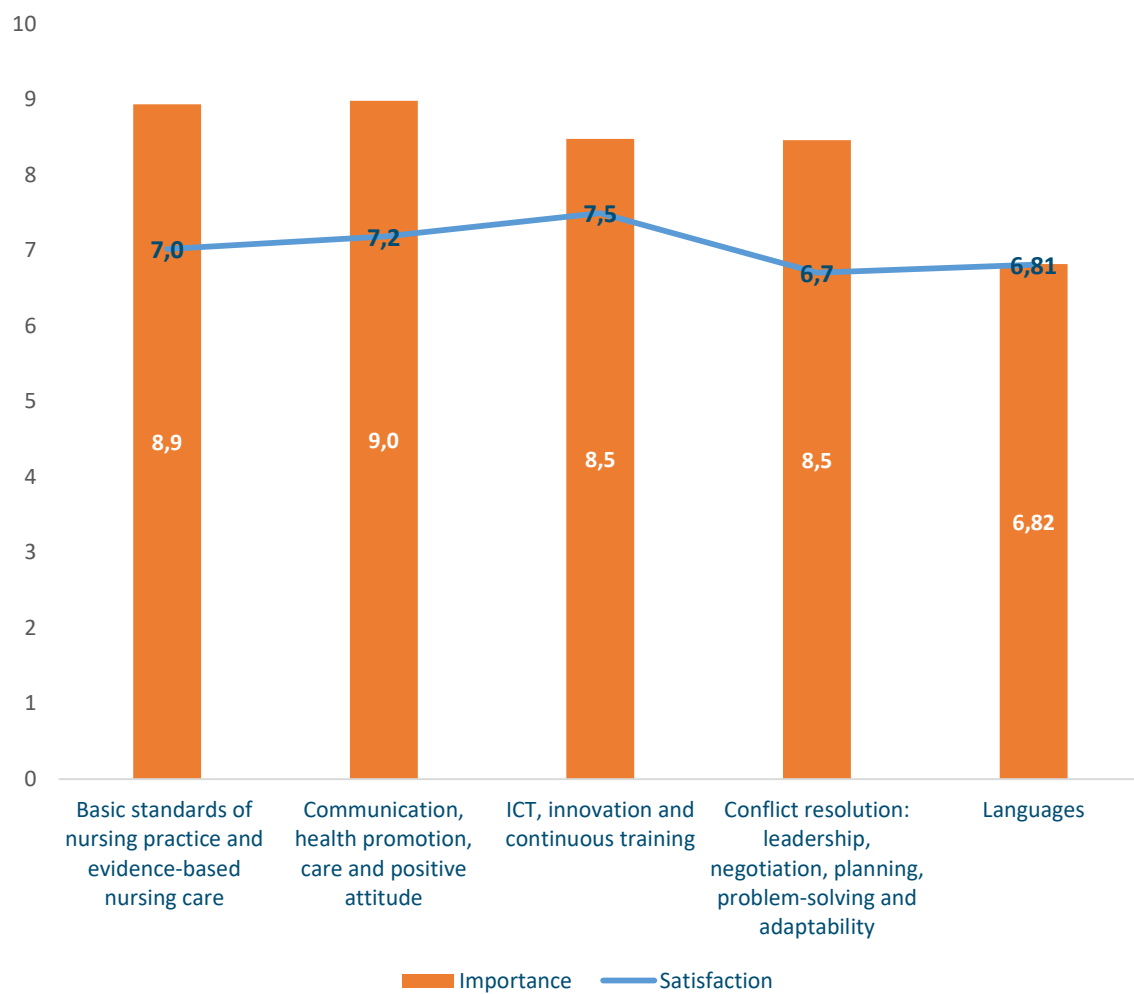
- The core skills and competences of nursing practice (knowledge and reflective practice/knowledge translation): basic standards of nursing practice and evidence-based practice.
- Other core skills and competences of nursing practice: effective communication with patients, family members and friends; comprehensive nursing care aimed at people, families and groups; skills in health promotion and protection, and positive attitude and motivation.
- Decision-making: leadership, skills in negotiation and conflict resolution, planning and time management, and adaptability.
- Lifelong learning: skills in innovation and research techniques, use of ICT skills and the commitment to personal development through continuous training.
- Languages.

The following graphs show the importance of and satisfaction with these five groups of skills and competences, together with the scope for improvement.

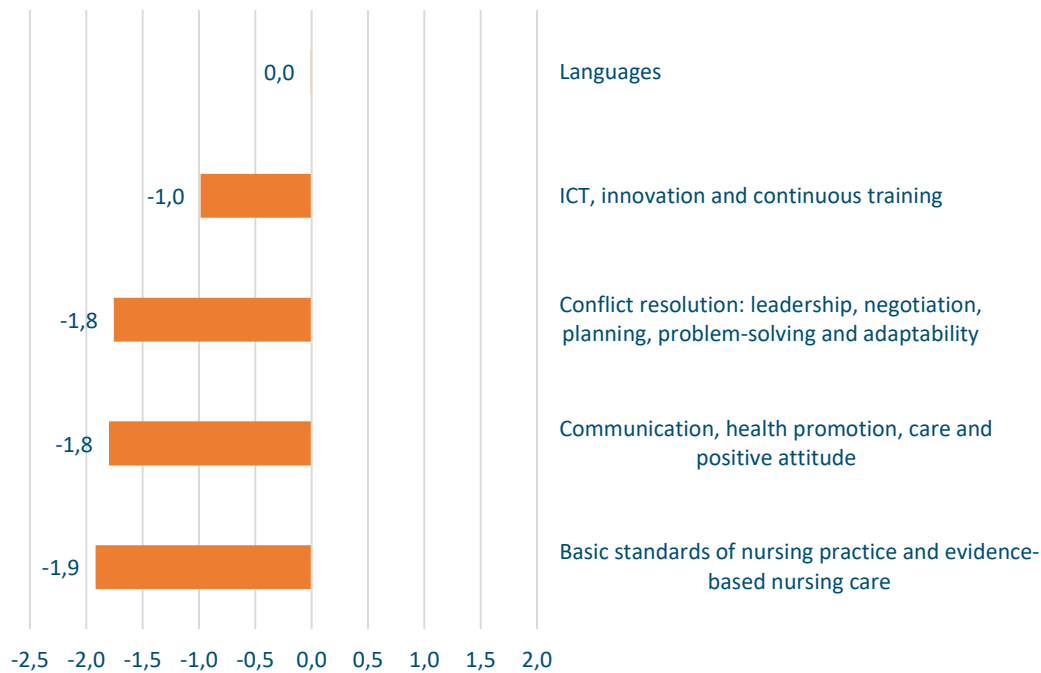
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<sup>15</sup> The second and third groups correspond with the skills and competences that are more important in the second and third components according to the factor analysis of the importance of satisfaction (which account for 7% and 5% of the variance, respectively). The first two groups correspond with the first factor component (which accounts for 52% of the variance), although they were separated as the first two skills are related to the transmission of knowledge (and its application), whereas the second group is made up of soft skills. The fourth component accounts for the variance associated with the importance in languages (4.8% of the variance).

Graph 25. Importance of and satisfaction with the groups of skills and competences



Graph 26. Scope for improvement in the groups of skills and competences



According to the graphs, the priorities as regards the improvement of training programme lie in the development of the core skills and competences of nursing practice, in particular scientific evidence-based nursing practice, i.e. linking know-how to “knowing how to” or, in other words, linking the “body of professional knowledge” with the ability to do so, as Schön claimed (1988), in unknown situations and going beyond established knowledge.

Just as important is the group of skills and competences that relate to nursing care, which is linked to effective communication and health promotion, as well as skills that promote decision making solving in professional practice which, one should bear in mind, is an ability that is developed and acquired in professional practice.

The skills of self-learning and languages are not an obvious necessity according to the data from the study.

## 5. INDUCTION, TRAINING AND INNOVATION AT HOSPITALS AND OTHER FACILITIES

Almost all health facilities provide graduate induction for new nurses. This practice, which is common in health facilities, is less frequent among employers in general (95% compared to 75%).

The most common techniques used are a period spent on placement prior to the start of a contract with a facility (60%) and the provision of a mentor (59%).

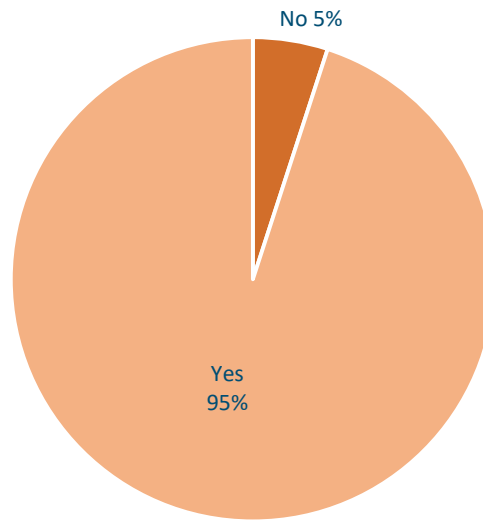
Health facilities are centres of innovation. Practically all of the health facilities covered by the survey run quality enhancement projects (99%) and have a strategic plan at facility and/or service level (98%). The majority also innovate through new forms of association with other medical and healthcare facilities (cooperation agreements, networking, etc.) (86%) and important changes in technology (79%).

### 5.1. Induction and training for recently qualified nurses at hospitals and other health facilities

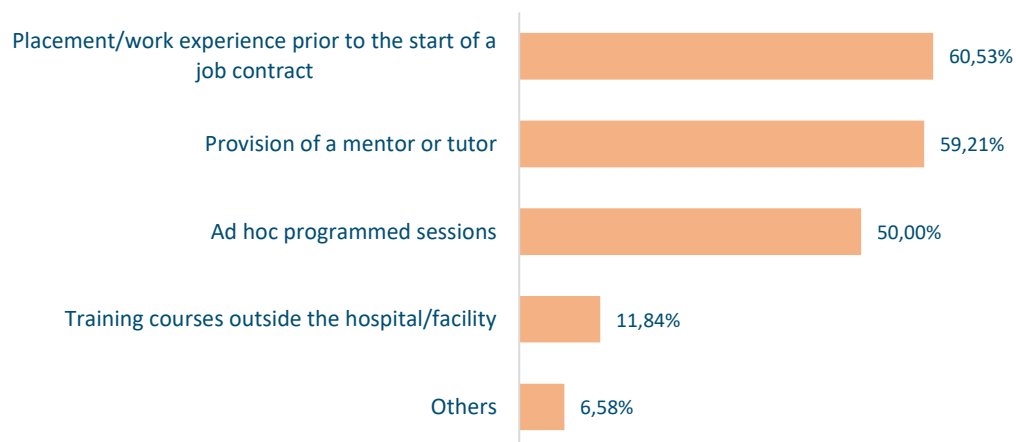
Almost health facilities in the sample (95%) stated that they provide some type of graduate induction and/or training for new nurses joining the facility or service. Types of training include: a period spent on placement prior to the start of a contract with a facility (60%), the provision of a mentor or tutor on joining the facility (59%) as well as ad hoc sessions according to identified training requirements (50%). To a lesser degree, training courses are also provided outside the facility (12%).



Graph 27. Induction and training for new nurses at the health facility or service



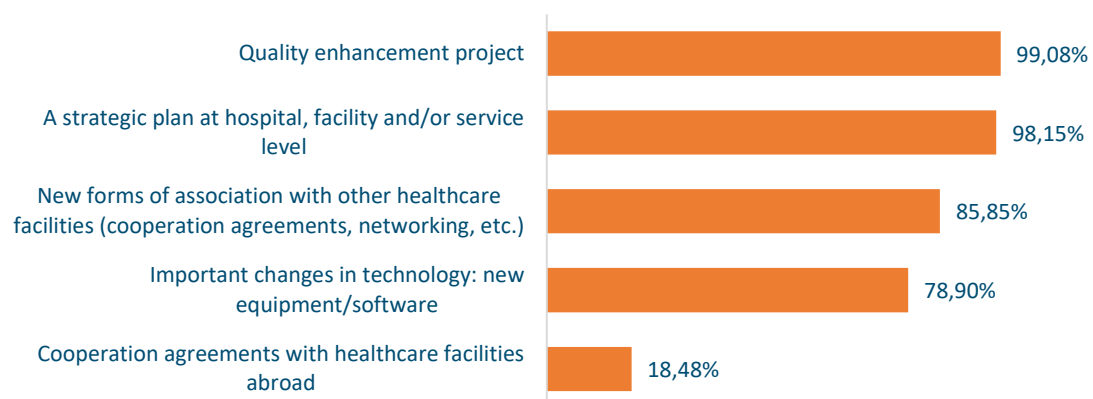
Graph 28. Types of induction and training provided for new nurses



## 5.2. Innovation strategies at health facilities

In addition to providing induction and training for new nurses, health facilities also undertake innovative measures. Almost all health facilities run quality enhancement projects (99%) and have a strategic plan at facility and/or service level (98%). Many also innovate through new forms of association with other medical and healthcare facilities (cooperation agreements, networking, etc.) (86%) and important changes in technology (79%). Only a minority however stated that they had entered into collaboration agreements with health facilities abroad (18%).

Graph 29. Innovative measures at the health facility/service



## 6. COLLABORATION WITH HIGHER EDUCATION INSTITUTIONS

There is a strong tradition of collaboration between health facilities and higher education institutions, which results in higher indicators of collaboration than for other organisations or institutions, particularly in the offer of placements.

The most frequent form of collaboration with HEIs was the offer of placements (91%). Almost half of all employers had either participated in training in a higher education institution and/or been involved in assessing curricula and study programmes. In addition, 40% had participated in research projects.

Compared to educational institutions, there is a certain amount of scope for improvement as regards increased collaboration in research projects.

In comparison to other groups surveyed so far, such as (employers in) the private sector, education and medical interns, collaboration between HEIs and health facilities as regards recently qualified nurses can be considered to be commonplace given that, for all forms of collaboration envisaged, there was a 40% level of either very or quite frequent collaboration. The main way that HEIs and health facilities collaborated was through the offer of placements (91%), followed some way behind by involvement in training at an HEI (50%), involvement in the assessment of curricula and study programmes (46%) and participation in research projects (41%).

These data and figures on collaboration are significantly higher than for institutions and private facilities (employers survey, 2015). For educational institutions, the figures are higher for placements, but lower for participation in research projects.

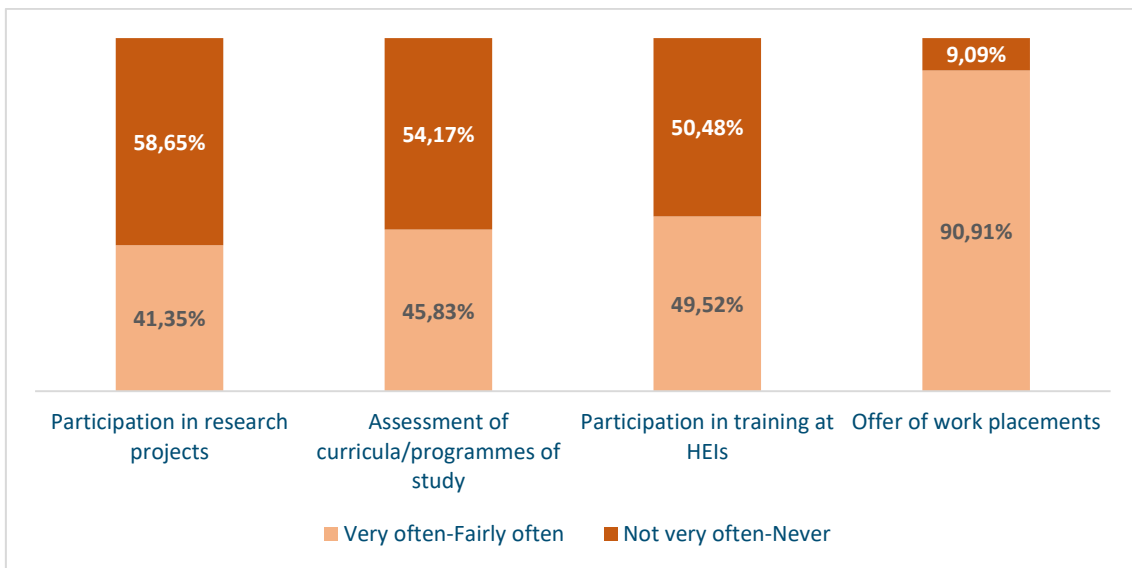
**Graph 30. Frequency of collaboration between higher education institutions and health facilities**

Data from the general study on enterprises and institutions:

- 63% had collaborated with HEIs by offering placements.
- 28% in collaboration agreements and/or partnerships with enterprises.
- 14% in producing curricula and study plans.

Data from the survey of educational institutions:

- 73% had collaborated with HEIs by offering placements.
- 63% had participated in projects involving educational innovation.
- 25% in assessing curricula and study plans.



## 7. ENHANCEMENT PROPOSALS AND CONCLUDING REMARKS

### Enhancement proposals

Following the analysis of the study data and the opinions gathered by employers from the focus groups, a series of enhancement proposals is given below:

1. Firstly, the low regard for post-Bologna Bachelor's degree programmes compared with Master's courses suggests the need to redefine and give the fourth year of Bachelor's programmes added value from the point of view of employers.
2. Given the indicators showing difficulties with recruitment, employers need to be properly integrated in the process of designing academic pathways and specialisations in Bachelor's programmes in order to create this added value through higher level specialisation in the courses being offered.
3. A description and quantification is needed of the requirements for specific training that are causing difficulties with recruitment, especially at XHUP facilities.
4. One proposal from the focus group was to bring what goes on in a health facility to the faculty; i.e. training needs to be more oriented towards broadening students' awareness of professional nursing practice in health facilities and hospitals.
5. The deficit observed in reflective thinking-based care highlights the need to reinforce the organisation of placements and underpin the "reflective practice" that is essential in the practice of nursing. In this regard, employers recommended that placement involving rotation between services needs to be of sufficient duration to allow for the development of reflective practice.
6. The skills of communication and health promotion are just as important as technical know-how. Placement offers the ideal setting to develop these skills because contact with "real patients" is necessary to ensure that these skills are developed and acquired. Assessment procedures are also necessary that provide assurance during the training process for the students (appropriate feedback that shows these skills have been acquired) and the employer (the certification of skills).
7. Teaching methodologies that foster the planning of nursing care, time management and problem solving will lead to both a better understanding of the basic standards of nursing practice and a positive impact on the overall satisfaction of employers.

8. According to the employers, coordination with facilities and centres where students go on placements is essential for ensuring that this fundamental aspect of training operates correctly.

In addition and in relation to the opinions of employers concerning recently qualified nurses, studies are now needed on care centres for the elderly, as these now employ a significant percentage (16%) of recently qualified nurses.

### **Concluding remarks (David Ballester)**

The findings of the study are positive in general, with a higher level of satisfaction with the training of new graduates compared to those graduating from pre-Bologna programmes, especially from the standpoint of primary care. There continue to be differences however between the rating of the importance of and the level of satisfaction with certain skills and competences, meaning that there is always scope for improvement. To this end, the following proposals are made:

- It is important to maintain (or introduce) pedagogical strategies that help to improve skills in communication, decision-making, personal time management, leadership and teamwork. These skills are important and continue to be sought after by employers.
- Aspects relating to research, ICT skills, health promotion and scientific evidence-based nursing care should be intensified. These curricular skills and competences should be integrated across all theoretical subjects as well as in placement (practicum).
- Aspects relating to the professional values of nursing, the science of nursing and its relationship with other disciplines all need to be maintained and reinforced through the fostering of multidisciplinary skills through training to allow for better integration into work teams.
- Grading systems should be directed at assessing student acquisition of skills and competences, which involves the integration of knowledge, skills and attitudes. This is a highly complex aspect, which also calls for assistance from the professional world.
- There is a need for greater involvement from health institutions in the training of students. Considering the large number of hours students spend on placements, this should allow them to acquire many of the skills and competences called for by employers. Appropriate synergies should be sought in each case in order to make the basic training of future practitioners more demanding, including an increase in the number of specialist clinical instructors on teaching staff and an increased in the levels of training and involvement with the HEIs of these staff.
- More mechanisms for direct contact with employers need to be established in order to identify the improvements to academic curricula required in the changing world of healthcare, bearing in mind that the formal regulation of the specialities in nursing may lead to changes in this regard in the near future.

- Although formal recognition of the majority of specialities in nursing may lead to important changes in the professional profile of nursing in the future, the fact that this is still under way has not yet led to any modifications in the present-day requirements for training. This means that the current training requirements of the polyvalent nurse with a high-level capability to learn, self-learn and adapt to changes in healthcare and society would therefore appear to continue to apply.

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## ANNEX 1: TECHNICAL SPECIFICATIONS

<b>Population</b>	<b>Universe:</b> supervisors and directors of nursing (and equivalent or similar categories) in charge of recently qualified nurses at hospitals and other health facilities in Catalonia. <b>Population of contactable supervisors and directors of nursing (and equivalent or similar): 520</b>
<b>Methodology</b>	Online survey (Survey Monkey).
<b>Sample</b>	<b>Sample with useful responses: 112</b> A useful response is where responses, where applicable, were given for the full series of skills and competences.
<b>Period</b>	<b>Online survey:</b> 20 May - 2 June 2015.

Contact details were available of a total number of 520 nursing supervisors (and those in equivalent or similar categories) at health facilities in Catalonia in charge of recently qualified nurses. The survey questionnaire (see annex 2 for more information) was sent by e-mail. As shown in the following table, 9 asked to be excluded and not participate in the study, and there was an e-mail address error with 2. Out of the rest, 372 did not respond to the survey, leaving 137 who did respond. Out of these 137 responses, 112 were considered to be useful responses, with 25 not useful responses due to the fact that various important sections of the survey were not completed. A "useful" response is one in which section 3 (on the skills and competences of nurses) was completed (see annex 2 for details of section 3 of the questionnaire).

Table 6. Summary of the response to the survey

	Responses
<b>Answered</b>	137
<b>Useful</b>	112
<b>Not useful</b>	25
<b>Unanswered</b>	372
<b>Asked to be excluded from the survey</b>	9
<b>Returned (wrong e-mail address)</b>	2
<b>Total</b>	520

## **ANNEX 2: SURVEY QUESTIONNAIRE FOR HOSPITALS AND OTHER HEALTH FACILITIES ON NEW NURSES HOSPITALS AND OTHER HEALTH FACILITIES ON NEW NURSES**

### **The perceptions of hospitals and other health facilities regarding the skills and competences of recently qualified nurses**

According to the European Commission, one of the challenges of increasing the quality of higher education is to encourage the greater relevance of the HE system to the labour market. This questionnaire, which is coordinated by AQU Catalunya and funded by Obra Social “la Caixa”, forms the basis of a study carried out to find out how suitable hospitals and other health facilities perceive the training of recent graduates of post-Bologna Bachelor programmes in Nursing Science to be. This information will also serve as insight for undergraduate and Master's programmes in Nursing Science as regards strengths and weaknesses in the skills and competences of graduate nurses.

In the case of health facilities that had not recruited recently qualified nurses, this questionnaire also includes the assessment made by health facilities of the training of recently recruited nurses in general.

We would very much appreciate if you could complete the questionnaire below, which should take around 10 minutes.

Many thanks for your help and cooperation.

#### **DATABASE IDENTIFICATION DETAILS**

Name of the health facility			
Type of health facility	(1) Hospital	(2) Primary health care centre	
	(3) Other		
Address			
Service and/or speciality (e.g. Paediatrics, Radiology, etc.)			
Facility sector	(1) Public	(2) Subsidised	(3) Private

## SECTION 1. INFORMATION ABOUT THE HEALTH FACILITY

1. How many nurses work in this facility/centre?
2. What year did this facility begin operating? (4-digit year)
3. Your centre/facility comes under:
  - (1) Catalan Institute of Health (Institut Català de la Salut, ICS) Go on to section 2a
  - (2) Public Hospital Network (XHUP) or other entities Go on to section 2b

## SECTION 2a. SELECTION PROCEDURE AT ICS FACILITIES

The questions in this section deal with the procedure for selecting qualified nurses.

4. With regard to staff recruitment, were any recently qualified nurses recruited over the last two years? (A recently qualified nurse is a person who has obtained a degree or similar qualification from a higher education institution within approximately two years prior to recruitment and therefore has either little or no professional experience)
  - (1) Yes, recent graduate nurses were recruited Go on to question 5
  - (2) Nurses were recruited but I do not know if they were recent graduates or if they had prior working experience Go on to question 5
  - (3) No, there was either no nursing staff recruitment or those that were recruited had prior working experience Go on to section 4

*If you answered: "Nurses were recruited but I do not know if they were recent graduates or if they had prior working experience", answer the following questions with regard to your assessment of the least experienced nursing staff recruited during the last two years (even though they were not recent graduates).*
5. Approximately how many recently qualified nurses joined the facility/service in the last two years?
6. How well-matched with the requirements of the workplace were the nurses who joined the facility/service? (level of satisfaction with the skills match between the profile of recently qualified nurses who joined the facility/service and the job requirements)
  - (1) Not at all
  - (2) A little
  - (3) Quite
  - (4) Very
  - (5) n/a
- 6.1. In relation to the qualified nurses, are you of the opinion that nurses who graduated in a post-Bologna degree in Nursing Science have a more or less suitable profile in the workplace?
  - (1) More unsuitable
  - (2) Slightly less suitable
  - (3) Just as suitable
  - (4) More suitable
  - (5) Much more suitable
  - (6) n/a
7. In cases of temporary recruitment (in the absence of job listings' applicants or for any other reason), were you able to fill the position with another recruitment profile?
  - (1) Yes Go on to question 7.1
  - (2) No Go on to question 8

**7.1.** If you answered “Yes” to the previous question, rate from 0 to 10 (0 is unimportant and 10 very important) the level of importance of the following factors in recruitment.

(1) Having been on placement at the same health facility	0	1	2	3	4	5	6	7	8	9	10	n/a
(2) The reputation of the institution/faculty where an applicant studied	0	1	2	3	4	5	6	7	8	9	10	n/a
(3) Having done postgraduate training in the speciality	0	1	2	3	4	5	6	7	8	9	10	n/a
(4) Prior work experience in the same facility/service	0	1	2	3	4	5	6	7	8	9	10	n/a
(5) A good command of English	0	1	2	3	4	5	6	7	8	9	10	n/a

**8.** Had any new nurses in the facility taken a Master's programme?

- |                  |                       |
|------------------|-----------------------|
| (1) Yes          | Go on to question 8.1 |
| (2) No           | Go on to question 9   |
| (3) I don't know | Go on to question 9   |

**8.1.** If you answered “Yes” to the previous question, do you think that the Master's training enhanced their nursing skills and competences?

- (1) Yes, all (2) Yes, but only those in research (3) No (4) n/a

**9.** If you wish to make any comment or remark regarding your answers to the questions in this section, please do so in the space provided below.

## **SECTION 2b. RECRUITMENT AT XHUP FACILITIES AND OTHER ENTITIES**

The questions in this section deal with the procedure for recruiting nurse practitioners.

**4.** With regard to staff recruitment, were any recently qualified nurses recruited over the last two years? (A recently qualified nurse is a person who has obtained a degree or similar qualification from a higher education institution within approximately two years prior to recruitment and therefore has either little or no professional experience)

- |   |                     |
|---|---------------------|
| (1) Yes, recently qualified nurses were recruited   | Go on to question 5 |
| (2) Nurses were recruited but I do not know if they were recent graduates or if they had prior working experience | Go on to question 5 |
| (3) No, there was either no nursing staff recruitment or those that were recruited had prior working experience   | Go on to section 4  |

*If you answered: "Nurses were recruited but I do not know if they were recent graduates or if they had prior working experience", answer the following questions with regard to your assessment of the least experienced nursing staff recruited during the last two years (even though they were not recent graduates).*

**5.** Approximately how many recently qualified nurses joined the facility/service in the last two years?

**6.** How well-matched with the requirements of the facility as a workplace were the nurses who joined the facility/service?

- (1) Not at all (2) A little (3) Quite (4) Very (5) n/a

**6.1.** In relation to qualified nurses, are you of the opinion that nurses who graduated in a post-

Bologna Nursing degree have a more or less suitable profile in the workplace?

- (1) Less suitable (2) Not quite as suitable (3) Just as suitable  
(4) More suitable (5) Much more suitable (6) n/a

7. Rate from 0 to 10 (0 is unimportant and 10 very important) the level of importance of the following factors in recruitment).

(1) Having had a placement at the same health facility	0	1	2	3	4	5	6	7	8	9	10	n/a
(2) The reputation of the institution/faculty where a graduate has studied	0	1	2	3	4	5	6	7	8	9	10	n/a
(3) Having done postgraduate training in the speciality	0	1	2	3	4	5	6	7	8	9	10	n/a
(4) Prior work experience in the same facility/service	0	1	2	3	4	5	6	7	8	9	10	n/a
(5) A good command of English	0	1	2	3	4	5	6	7	8	9	10	n/a

8. Have you had any difficulties in recruiting appropriate staff for specific jobs?

- (1) Yes Go on to question 8.1  
(2) No Go on to question 9

8.1. If you answered "Yes" to the previous question, for what reason/s?

- (1) A lack of job applicants with specific training in the service (dialysis, surgery, etc.)  
(2) A lack of job applicants with specific skills/competences (languages, etc.)  
(3) A lack of job applicants for the job  
(4) A lack of job applicants willing to accept the working conditions (hours of work, salary, etc.)  
(5) Other reasons (please specify)

9. Had any new nurses in the facility taken a Master's programme?

- (1) Yes (2) No (3) I don't know

9.1. If you answered "Yes" to the previous question, do you think that the Master's training enhanced their practitioner skills and competences?

- (1) Yes, all (2) Yes, but only those in research (3) No (4) n/a

10. If you wish to make any comment or remark regarding your answers to the questions in this section, please do so in the space provided below.

### SECTION 3. COMPETENCES

In this section please rate, firstly, the **importance of** and, secondly, your **degree of satisfaction** with the training, skills and competences of **recently qualified nursing staff** in your facility/centre as regards their job responsibilities. In the case where no new nurses were recently qualified graduates, answer the following questions with regard to your assessment of the least experienced nursing staff recruited during the last two years.

11. Rate, from 0 to 10, the **importance** of the following skills and competences of the nurses you are in charge of and your **level of satisfaction** with each skill or competence in professional practice (0 for not at all important or dissatisfied and 10 very important/very satisfied).

*The employability and competences of recently qualified nurses*

<b>Training for nursing/practitioner staff</b>	Level of importance / Level of satisfaction
(1) Basic standards of nursing practice	..... / .....
(2) Technical skills in nursing	..... / .....
(3) Comprehensive nursing care based on dealing with people, families and groups	..... / .....
(4) Gender and/or socio-cultural aspects of nursing care skills	..... / .....
(5) Scientific evidence-based nursing care	..... / .....
(6) Health promotion and protection skills	..... / .....
<b>Interpersonal skills</b>	Level of importance / Level of satisfaction
(7) Team work	..... / .....
(8) Leadership	..... / .....
(9) Negotiation and decision-making	..... / .....
(10) Positive attitude and motivation	..... / .....
(11) Ability to communicate effectively (both oral and written) with patients, their families and friends	..... / .....
<b>Personal management skills</b>	Level of importance / Level of satisfaction
(12) Scheduling and time management	..... / .....
(13) Capacity for learning and self-learning	..... / .....
(14) Adaptability	..... / .....
(15) Problem solving	..... / .....
(16) Autonomy	..... / .....
(17) Efficient use of available resources and the avoidance of waste	..... / .....
<b>Instrumental skills</b>	Level of importance / Level of satisfaction
(18) Languages	..... / .....
(19) Use of ICT	..... / .....
(20) Research techniques	..... / .....
<b>Attitude and professional ethics</b>	Level of importance / Level of satisfaction
(21) Practice of professional nursing values	..... / .....
(22) Respect for the right of patients as regards participation, information and autonomy and informed consent	..... / .....
(23) Respect for the opinions, beliefs, intimacy and confidentiality of others	..... / .....
(24) Responsibility for one's own personal development through continuous training	..... / .....
<p><b>12.</b> Rate, from 0 to 10, your <b>overall level of satisfaction</b> with the following skills and competences of the nurses you are in charge of (0 for not at all important or dissatisfied, and 10 very important/very satisfied).</p> <p>0   1   2   3   4   5   6   7   8   9   10   n/a</p>	
<p><b>13.</b> If you wish to make any comment or remark regarding your answers to the questions in this section, please do so in the space provided below.</p>	

#### SECTION 4. INDUCTION AND TRAINING FOR NEW NURSES

The questions in this section deal with graduate induction and training for newly qualified nursing staff at your health facility/service.

**16.** Does your health facility or service provide induction and training for new nurses?

- (1) Yes            Go on to question 16.1
- (2) No             Go on to question 17
- (3) n/a            Go on to question 17

**16.1.** If you answered “Yes” to the above question, state the type of training. (Where appropriate, choose more than one option)

- (1) Provision of a mentor or tutor
- (2) *Ad hoc* programmed sessions
- (3) Training courses outside the hospital/facility
- (4) Pre-contract placement/work experience
- (5) Others (open)

#### SECTION 5. COLLABORATION WITH HIGHER EDUCATION INSTITUTIONS

The questions in this section deal with collaboration between your medical facility/service and higher education institutions.

**14.** How often does your facility/service participate in activities involving **collaboration with higher education institutions?**

(1) Offer of work placements (work experience and placements)	Never	Not very often	Fairly often	Very often	n/a
(2) Communication with HEIs in the assessment of programmes of study	Never	Not very often	Fairly often	Very often	n/a
(3) Participation in research projects	Never	Not very often	Fairly often	Very often	n/a
(4) Participation in training at HEIs (outside specialist instructor in courses)	Never	Not very often	Fairly often	Very often	n/a

**15.** What kind of activity would you be willing or would like to collaborate in with HEIs? (Either choose options from the above list or others)



**SECTION 6. INNOVATION STRATEGY**

The questions in this section deal with different features of your health facility and/or service in reference to innovation.

**17.** With regard to the facility and/or service, over the last three years have any new developments been introduced as regards?

(1) Important changes in technology: new equipment/software	Yes	No	n/a
(2) New forms of association with other healthcare facilities (cooperation agreements, networking, etc.)	Yes	No	n/a
(3) Cooperation agreements with health facilities abroad	Yes	No	n/a
(4) Quality enhancement project	Yes	No	n/a
(5) A strategic plan at hospital, facility and/or service level	Yes	No	n/a

**SECTION 7. HEALTH FACILITIES WHERE THERE WAS NO RECRUITMENT**

**18.** Give reasons why there was no recruitment of newly qualified nursing staff over the last two years? (Where applicable, choose more than one option)

- (1) No vacancies
- (2) Nurses were recruited, but with previous work experience
- (3) A lack of job applicants willing to accept job mobility
- (4) A lack of job applicants willing to accept the working conditions (hours of work)
- (5) A lack of job applicants willing to conform to the contractual conditions
- (6) A lack of job applicants willing to accept the salary
- (7) A lack of job applicants willing to accept the facility's location
- (8) Other reasons (please specify)

**SECTION 8. DETAILS OF THE INFORMANT (PERSON COMPLETING THE SURVEY)**

What is your position in the health facility or service?

- (1) Director of nursing      (2) Nursing supervisor or assistant supervisor

Since when have you held this position in this facility/service? (4-digit year)

If AQU Catalunya requires more information on this matter, would you be willing to collaborate?

- (1) Yes   (2) No

Please provide:

- your name and surname .....

- your e-mail address .....

Many thanks for completing the survey questionnaire.

## ANNEX 3: FACTOR ANALYSIS

Table 7. Model for predicting overall satisfaction

Coefficients:

	Estimate	Std. Error	t value	Pr (> t )	
(Intercept)	0.57905	0.64445	0.899	0.3725	
Basic standards of nursing practice	0.25421	0.10754	2.364	0.0213	*
Planning and time management	0.19117	0.07930	2.411	0.0190	*
Learning capacity and self-learning	0.16105	0.08727	1.845	0.0699	.
Leadership	0.12563	0.08755	1.435	0.1565	
Positive attitude and motivation	0.11706	0.09509	1.231	0.2231	
Respect for the opinions, beliefs, intimacy and confidentiality of patients	0.07169	0.09181	0.781	0.4379	

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.6761 on 60 degrees of freedom

Multiple R-squared: 0.6862, Adjusted R-squared: 0.6549

F-statistic: 21.87 on 6 and 60 DF, p-value: 1.9e-13

## **ANNEX 4: EDITORIAL TEAM**

### **Editors**

Anna Prades Nebot	Project manager, Quality Assurance/AQU
Queralt Capsada Munsech	Project technician, Quality Assurance/AQU
Lorena Bernáldez Arjona	Project management technician, Quality Assurance/AQU
David Ballester Ferrando	Director, Department of Nursing, University of Girona

### **Collaboration**

Carne Edo Ros	Project Manager, Quality Assurance/AQU
Maria Giné Soca	Secretary to AQU Catalunya and the AQU Governing Board

### **Acknowledgments**

David Ballester was responsible for adapting the employers survey in order for the skills and competences of recently qualified nurses at the health facilities covered by this study to be assessed.

Dr. Josep Roma was involved in checking the questionnaire and contacting the health facilities to set up the data base of respondents that allowed this study and survey to be undertaken.





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