Analysis of the patient safety culture within the Spanish National Health System hospital environment

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This project has been carried out under the agreement signed between the Ministry of Health and Social Policy and the University of Murcia

(Pending review)

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Basis and Objectives

Although little practical experience exists within the health services concerning this matter, the evidence inferred from the analyses in organizations which have a safety-related culture (aviation, chemical industry, electric power industry, etc.) [1], stress their safety culture as being one of the critical features of their safety-related achievements. Within our scope, according to the National Quality Forum recommendations[2,3], the safety culture would be crucial to minimizing errors and adverse effects, gauging this culture being necessary for designing activities for the improvement thereof.

As a result of a prior cooperation between the Ministry of Health and Consumer Affairs and the University of Murcia, we now avail of a valid, reliable, self-administered tool adapting the original U.S. Agency for Healthcare Research and Quality (AHRQ) survey[4] to the Spanish context which can be used for gauging this aspect of the organizations' culture, identifying those aspects on which it would be necessary to take action for the improvement thereof and to be able to monitor its evolution.

On the basis of the foregoing, this study is being conducted on the basis of a further collaboration between the Ministry of Health and Consumer Affairs, through its Quality Agency, and the University of Murcia, setting out the following Objectives:

1. Apply the tool we had adapted and validated for gauging the patient safety-related attitudes and behaviors within the Spanish National Health System's hospital environment.

2. Describe the frequency of favorable patient safety-related attitudes and behaviors among the healthcare professionals at the hospital care level.

3. Analyze the sociodemographic and work-related factors which are related to a favorable patient safety-related attitude and behavior.

4. Foster the routine use of the survey evaluating, improving and monitoring the safety climate at the Spanish NHS hospitals.

Methodology

In a random sample of 24 hospitals, proportionally layered by size, a self-administered Patient Safety survey was handed out to a representative sample of 6257 healthcare professionals (physicians, nurses, pharmacists and other degree-holding professionals), up to 2 reminders being provided up to achieving a minimum of 100 surveys completed per hospital.

As in the original version, this survey provides information on the perception related to the following twelve dimensions of the safety culture:

1. Frequency of events reported (Grouping 3 items)
2. Perception of safety (Grouping 4 items)
3. Unit / Department management / supervisory expectations and actions fostering safety (Grouping 4 items)
4. Organizational learning /continuing improvement (Grouping 3 items)
5. Teamwork on the Unit/ in the Department (Grouping 4 items)
6. Open communications (Grouping 3 items)
7. Mistake-related feedback (Grouping 3 items)
8. Non-guilt-finding response to mistakes (Grouping 3 items)
9. Staffing (Grouping 4 items)
10. Hospital management's patient safety-related support (Grouping 3 items)
11. Teamwork among units (Grouping 4 items)
12. Problems in shift changes and transitions between departments / units (Grouping 4 items)

Additionally includes a question on the overall scoring of the safety within the environment of the person answering the survey and another regarding the number of events reported over the past year, in addition to the socio-professional classifying variables.

Based on the results, the safety climate is described and its strong and weak points identified according to the methodology set out by the AHRQ[5]:

For an item or dimension to be classified as a strong point, the following alternative criteria are employed:

- ≥ 75% positive answers ("agree/strongly agree" or "almost always/always) to questions posed positively.
- ≥ 75% negative answers ("disagree/strongly disagree" or "never/rarely") to questions posed negatively.
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For an item or dimension to be classified as a weak point of *chance for improvement*, the following alternative criteria are employed:

- ≥ 50% negative answers ("disagree/strongly disagree" or "rarely/never) to questions posed positively.
- ≥ 50% positive answers ("agree/strongly agree" or "almost always/always") to questions posed negatively.

The statistical significance of the differences by hospital size, type of professional and department are checked by way of ANOVA, and the potential influence of the probable no response bias on the results of positive answer to each one of the dimensions is analyzed.

Results

A total of 2503 surveys were analyzed (response: 40%, the percentage being slightly higher at the medium-sized hospitals: 42%).

At both the overall level, as well as when the hospitals are classified by size, a good representation of type of professionals and departments was achieved, although the response rate was generally higher among pharmacists and other degree-holding professionals (74.4% and 72.2%, respectively) than for nursing personnel (35.5%) or physicians (26.2%). Adjusting the results by the no-response bias potential, there are no appreciable differences between the adjusted values and those obtained with the surveys analyzed.

A total of 93% of the professionals who completed the survey work in direct contact with patients. A total of 50% scores safety at 6-8; 95% having reported <2 events over the past year.

Focusing on the positive side, special importance is placed on the dimensions "Teamwork among the departments/units" (71.8$\pm$1.8) and "Actions on the part of the Department/Unit management/supervisors which promote safety" (61.8%$\pm$1.9).

The major weak points were "Staffing", "Teamwork among departments/units", "Perception of safety", and "Administration support of patient safety".

The significant differences among hospitals, types of professionals and departments highlight a generally more highly positive perception at small hospitals and Pharmacy departments, being somewhat more negative among the physicians.

In general, the opportunities for improvement perceived have to do at all hospital with the staffing and the working pace, above all, at the large and medium-sized hospitals, along with the need for a more proactive attitude on the part of the management and the need for improving the coordination among units and departments.

Conclusions

The strong and weak points in the safety climate which may serve to identify improvement strategies at the Spanish NHS hospitals have been identified.

In view of the findings, the proposals for intervention for the purpose of improving the safety climate at our hospitals would be as follows:

To encourage the in-house reporting and discussion of whatever mistakes may arise. The clear positive attitude for learning from these mistakes is a strong point which must be put to good use.

Dealing with patient safety-related matters as a team problem, not an individual problem. The good perception of the importance of the internal relationship among the different Units or Departments must similarly be put to good use.

Placing top-priority attention on the rationality of staffing assignment and organization and the working paces to which they may be subjected. Given that it is in this area where the existence of weak points and chances for improvement are perceived.

Fostering shared responsibility and coordination among Units and Departments. Particularly at large and medium-sized hospitals, the need is perceived of improving the coordination among units and departments, and a strategy should therefore be unrolled aimed at making the teamwork feeling extensive among all units.

A clearly proactive attitude toward patient safety being shown on the part of the management.

Gauging the safety climate in the full extension thereof or sometimes confined to those dimensions which are problematical should be done at least once a year, particularly in the Autonomous Communities, Areas or Centers at which specific activities have been gotten under way to attempt to improve the same in keeping with the priorities set out at the baseline gauging.

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