ORIGINAL ARTICLE

A quick diagnosis unit as an alternative to conventional hospitalization in a tertiary public hospital: a descriptive study

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KEY WORDS

anemia, cancer, hospitalization, quick diagnosis units, referral

ABSTRACT

INTRODUCTION Reports indicate that a significant number of patients admitted to internal medicine units could be studied on an outpatient basis.

OBJECTIVES This article assesses a quick diagnosis unit (QDU) as an alternative to acute hospitalization for the diagnostic study of patients with potentially serious diseases and suspected malignancy.

PATIENTS AND METHODS Between March 2008 and June 2012, 1226 patients were attended by the QDU. Patients were referred from the emergency department, primary health care centers, and outpatient clinics according to well-defined criteria. Clinical information was prospectively registered in a database.

RESULTS There were 634 men (51.7%), with a mean age of 60.5 ±17.5 years. The mean time to the first visit was 3.5 ±5.3 days. Most patients (65.7%) required only 2 visits. The mean interval to diagnosis was 12.2 ±14.7 days. A total of 324 patients (26.4%) had cancer. The diagnosis was a solid tumor in 81.5% of the cases, lymphoma in 19.8%, and various hematologic malignancies in 4.3%. The second most common diagnosis was anemia not associated with cancer (8.6% of the cases). Admission to the QDU allowed to avoid conventional hospitalization for diagnostic studies in 71.5% of the patients, representing a mean freeing-up rate of 7 internal medicine beds per day. In a satisfaction survey, 97% of the patients were completely or very satisfied and 96% preferred the QDU to conventional hospitalization.

CONCLUSIONS A QDU may be a feasible alternative to conventional hospitalization for the diagnosis of otherwise healthy patients with suspected severe disease. Appropriately managed and supported, QDUs can lighten the burden of emergency departments and reduce the need for hospitals beds.

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INTRODUCTION Inappropriate hospitalization is a significant economic problem in Spain and other countries with public health care systems owing to the high cost of conventional hospitalization. Various Spanish reports suggest that, according to the Appropriateness Evaluation Protocol (AEP), from 9.4% to 16% of the patients admitted to internal medicine units could be studied on an outpatient basis.[1-4] Inappropriate hospitalization may exceed 25% in the United Kingdom,[5,6] 31% to 34% in the United States, 18% in Israel, and 15% in Switzerland.[2] However, diagnosis without conventional hospitalization, including patients in whom severe disease is suspected, may not be practical, owing to factors such as long waiting times, overcrowding in primary

TABLE 1 Criteria for referral to quick diagnosis unit

Adenopathies
anemia, with or without symptoms (hemoglobin level <9 g/l)
unintentional weight loss (loss of >10% of body weight during >6 weeks)
unexplained febrile syndrome (temperature >38ºC; >2 weeks)
unexplained dysphagia
unexplained persistent severe abdominal pain
suspected tumor
persistent change in bowel rhythm (>1 month)
ascites in noncirrhotic patients
lung and or pleural radiologic abnormalities
hepatosplenomegaly
changes in liver function
nonobstructive jaundice
abdominal mass
metastatic cancer of unknown origin

health care centers (PHCs), and the lack of coordination between PHCs and hospitals.[6,7] Consequently, those patients, even those in good health, are hospitalized for diagnostic tests, aggravating overcrowding and increasing costs[8]; in a Spanish report, this was the cause of 9.4% of inappropriate hospitalizations in a public internal medicine department.[2]

Given that the current economic crisis has led to austerity in health policies, with severe restrictions on public health care,[9] avoiding unnecessary admissions and shortening hospital stays is becoming an urgent priority. The increasing cost of hospitalization means that it is a good moment to foster alternatives to conventional hospitalization, including, among others, day centers, hospital at home, noninvasive home telemonitoring, and quick diagnosis units (QDUs).[9,10] Although reports are sparse, there is increasing evidence that more agile and better coordinated internal medicine QDUs are a potentially cost-saving alternative to acute hospitalization for the diagnostic study of patients with suspected malignancy, allowing the majority of patients to continue with daily life during the diagnostic process, thus increasing their comfort.[7] To date, only 1 English-language report describing a QDU of a Spanish tertiary hospital has been published.[11]

This article assesses the functioning of an internal medicine QDU in a public university hospital during a period of 4.5 years.

PATIENTS AND METHODS Our QDU is integrated in the Internal Medicine Department of the Bellvitge University Hospital, Barcelona, Spain, a tertiary public hospital with 906 acute beds serving a reference population of 343,172. The hospital is a referral center for more than 2 million people for processes requiring high technology and is equipped with all medical and surgical specialties except obstetrics and pediatrics. The QDU assesses patients with suspected serious conditions who are physically and mentally able to attend various appointments and who accept the referral. The unit comprises an internal medicine specialist and a nurse, who work for 7 hours a day, 2 days a week. Support is received through coordinated assistance from other specialists. The QDU has a consulting room and a waiting room for patients and families.

Between 28 March 2008 and 30 June 2012, 1226 patients were attended by the QDU. Patients were referred from the emergency department (ED), PHCs, and outpatient clinics. The referral criteria were similar to those previously established in other Spanish QDUs (TABLE 1).[7,12] Referrals to the QDU were made by the hospital computer system, phone calls, or e-mail. The appropriateness of the referral was determined by a QDU specialist.

The care protocol consists of an urgent first visit followed by preferential programming of complementary tests and subsequent visits until a diagnosis is made. In addition to the complementary tests typical of a tertiary such as magnetic resonance imaging, scintigraphy, and (F-18 fluorodeoxyglucose [FDG]) positron emission tomography–computed tomography (PET-CT) scans, there is a dedicated circuit for the evaluation of lymphadenopathy. In the case of suspected malignant adenomegaly, fine needle puncture aspiration (FNPA) is performed with cytology studies available in 30 minutes and, since November 2011, flow cytometry is available for the diagnosis of some lymphomas.

Clinical information was prospectively registered in a database. For every patient, we recorded demographic data, reason for consultation, source of referral and appropriateness of the visit, waiting time to the first visit, number of visits, type, number and dates of complementary tests, diagnosis, time to diagnosis, and destination. The appropriateness of the referral was considered correct when the patient had one of the previously established reasons for consultation (TABLE 1). Delay or time to the first visit was defined as the time from the medical referral to the first patient visit at the QDU. The diagnostic interval was defined as the time from the first visit to the definitive diagnosis, which usually coincides with the result of a complementary diagnostic test, even when histological confirmation remains pending.

We calculated the proportion of QDU patients who might have been hospitalized in the absence of the QDU, taking into account avoidable or inappropriate hospitalizations in internal medicine departments of Spanish hospitals according to several Spanish studies using the AEP,[1,2,4,13] and estimated the daily beds freed up by these patients. For this, we calculated the total study period (51 months), the total number of internal medicine beds (n = 36), and the mean length-of-stay of patients with conditions that could be diagnosed in the QDU who were studied in-hospital before the creation of the QDU (mean length-of-stay, 12 days).

TABLE 2 Clinical parameters of a quick diagnosis unit during the years 2008–2012

Year	First visits, n	Successive visits, n (successive/first visit ratio)	Source of referral, n (%)			Time to first visit, d (mean ±SD)	Time to diagnosis, d (mean ±SD)	Onward referral, n (%)			Appropriateness criteria, n (%)
			ED	PHC	outpatient clinics			ED	PHC	outpatient clinics	admission	
2008	290	163 (0.56)	204 (70.3)	80 (27.6)	6 (2.1)	9.4 ±7.4	9.5 ±11.2	4 (1.4)	182 (62.8)	84 (29)	20 (6.9)	210 (72.5)
2009	272	157 (0.57)	134 (49.3)	136 (50)	2 (0.7)	3.0 ±3.5	11.9 ±14.5	3 (1.1)	119 (43.7)	135 (49.6)	15 (5.5)	246 (90.6)
2010	252	192 (0.76)	111 (44.1)	133 (52.7)	8 (3.2)	1.9 ±2.0	16.8 ±18.6	4 (1.6)	138 (54.7)	99 (39.3)	11 (4.4)	239 (94.3)
2011	266	220 (0.82)	131 (49.2)	127 (47.7)	8 (3.1)	1.0 ±1.1	13.8 ±15.4	0	133 (50)	120 (45.1)	13 (4.9)	252 (94.7)
2012 (6 mo)	146	111 (0.78)	68 (46.6)	59 (40.4)	19 (13.0)	0.3 ±0.7	6.9 ±8.7	0	71 (48.6)	69 (48.6)	6 (4.1)	137 (93.8)
total	1226	861 (0.70)	648 (52.9)	535 (43.6)	43 (3.5)	3.5 ±5.3	12.2 ±14.7	11 (0.9)	643 (52.4)	507 (41.3)	65 (5.3)	1094 (89.2)

Abbreviations: ED – emergency department, PHC – primary health care center, SD – standard deviation

We also carried out a satisfaction survey of consecutive QDU patients seen between 6 March 2012 and 7 December 2012. The survey was administered at discharge from the QDU. Patients were invited to complete in writing an anonymous opinion survey adapted from that used by the Colombian Urologists Association.[14] This survey was chosen as it has been used to evaluate surgical and medical outpatients' satisfaction in other Spanish public health centers.[15] It consists of 20 questions and assesses the level of satisfaction in relation to different items such as the physical characteristics of the unit, the personal and medical care received, and the time to diagnosis. The survey was approved by the ethics committee of the Bellvitge University Hospital and was validated internally by the hospital quality service.

Statistical analysis For each year and for the whole study period, we calculated the following descriptive variables: 1) the number of patients studied and the frequency distribution by age and sex, area of origin, reason for consultation, diagnosis and discharge destination; 2) the mean waiting time to the first visit and the mean diagnostic interval; 3) the frequency of patients who met the QDU appropriateness criteria; and 4) the frequency of patients who avoided hospitalization. Differences were contrasted using the Fisher's χ^2 test for categorical variables and the Student's t test when homogeneity of variance was met, or the Mann–Whitney U test for quantitative variables. Statistical significance was established as a P value of 0.05, and the analysis was made using the SPSS 20.0 statistical package.

RESULTS

During the study period, 1226 patients were evaluated, of whom 634 (51.7%) were male, with a mean age of 60.5 ±17.5 years (range, 16–102 years). The 1226 first visits generated 861 successive visits (successive-to-first visit ratio, 0.70). Most patients (n = 806, 65.7%) required only 2 visits.

TABLE 2 shows the number of patients seen, their origin, time to the first visit, and time to diagnosis for each of the years studied. A total of 52.9% of the patients were referred from the ED, 43.6% from PHCs, and 3.5% from hospital outpatient clinics; 1094 patients (89.2%) met the criteria for adequate pre-established indication for referral to the QDU and the remaining 10.8% did not meet those criteria. More patients from PHCs (n = 463, 86.5%) and hospital outpatient clinics (n = 37, 86%) fulfilled the referral appropriateness criteria compared with those from the ED (n = 517, 79.8%).

The mean time to the first visit was 3.5 ±5.3 days. The mean interval to diagnosis was 12.2 ±14.7 days.

TABLE 3 shows the most common reasons for consultation. The 6 main reasons (80.5%) were persistent lymphadenopathy in 297 cases (24.2%), involuntary weight loss in 187 (15.3%), tumors

TABLE 3 Main reasons for consultation

Reasons for consultation	n (%)
adenopathies	297 (24.2)
involuntary weight loss	187 (15.3)
suspected tumor	169 (13.8)
anemia	154 (12.6)
abdominal pain	106 (8.6)
lung / pleural radiological abnormalities	74 (6.0)
changes in bowel rhythm / chronic diarrhea	36 (2.9)
rheumatic / bone pain	23 (1.9)
pleural effusion	15 (1.2)
febrile syndrome	14 (1.1)
nonobstructive jaundice	14 (1.1)

TABLE 4 Main complementary tests

Complementary tests	n (%)
blood tests	714 (58.3)
simple radiography	249 (20.3)
cytology/FNPA	297 (24.1)
abdominal ultrasonography	293 (23.9)
computed tomography	281 (23.6)
colonoscopy	194 (15.8)
upper digestive endoscopy	184 (15.0)
biopsy	120 (9.9)
body (F-18 FDG) PET/CT scan	115 (9.4)
electrocardiography	108 (8.8)
upper gastrointestinal series	44 (3.6)
barium enema	61 (5.0)
bone nuclear scintigraphy	41 (3.3)
bone marrow aspiration	32 (2.6)
gynecological ultrasonography	26 (2.2)
blood / urine / bronchial secretion culture	39 (3.2)
magnetic resonance imaging	28 (2.3)
fiberoptic bronchoscopy	15 (1.2)
mammography	13 (1.1)
serology	29 (2.4)
tuberculin test	10 (0.8)
flow cytometry	9 (0.7)
Doppler echocardiography	9 (0.7)
bone marrow biopsy	5 (0.4)
pulmonary function testing	3 (0.2)
electromyography	3 (0.24)
Holter monitoring	2 (0.2)

Abbreviations: FDG – fluorodeoxyglucose, FNPA – fine needle puncture aspiration, PET-CT – positron emission tomography–computed tomography

suspected of malignancy in 169 (13.8%), anemia in 154 (12.6%), abdominal pain in 106 (8.6%), and pleuro-pulmonary radiological abnormalities in 74 (6%).

TABLE 4 shows the main complementary tests that were conducted. There were a mean of 2.5 ±1.7 additional examinations per patient. No complementary tests were performed in 192 patients (15.6%). Tests included 297 cytologies and, among them, 9 flow cytometries.

Body (F-18 FDG) PET/CT scans were performed in 115 patients; the most frequent reasons were lymphadenopathy in 37 cases (32.2%), involuntary weight loss without symptoms indicative of a causal process in 35 (30.4%), tumors in 19 (16.5%), and radiographic abnormalities suggestive of lung cancer in 8 (7%).

An etiological diagnosis was obtained in 926 patients (75.5%), a diagnosis of exclusion in 243 (19.8%), a probable diagnosis in 13 (1.1%), and the diagnostic process was not completed in 44 (3.6%).

TABLE 5 shows the most common final diagnoses. A total of 324 patients (26.4%) had cancer: cytological or pathological confirmation of the diagnosis was obtained in 92.1% of the patients. The diagnosis was a solid tumor in 264 cases (81.5%), lymphoma in 64 (19.8%), and various forms of hematologic malignancy in 14 (4.3%). The most common solid tumors were digestive in 123 patients (46.6%), lung in 35 (13.3%), head and neck in 25 (9.5%), gynecological in 26 (9.8%), and nephro-urological in 24 (9.1%) (TABLE 6).

An FNPA study confirmed the diagnosis of lymphoma in 64 cases and showed nonspecific reactive adenitis in 91 cases. In 11 cases, FNPA study confirmed nodal tuberculosis as the only manifestation of tuberculosis with microbiological confirmation in all cases.

The second most common diagnosis was anemia not associated with cancer in 106 cases (8.6%); this was due to iron deficiency in 73 cases, vitamin B_{12} deficiency in 12, multiple factors in 11, postoperative bleeding in 4, and unknown causes in 6 cases.

After completion of the diagnostic study, 647 patients (52.8%) were referred to their PHC physician and 503 (41%) to hospital outpatient clinics. Owing to their poor condition, 11 patients (0.9%) were sent to the ED and 65 (5.3%) required admission owing to complications in the diagnostic process or worsening general condition that did not allow to continue the outpatient studies.

The QDU allowed to avoid conventional hospitalization for diagnostic studies in 870 patients (71.5%), representing a mean freeing-up rate of 7 internal medicine beds per day.

Of 162 patients, 159 (98.1%) responded to the satisfaction survey. On a 1–10 analogue scale, satisfaction was rated as 10 by 129 patients (81.1%), 8–9 by 25 (15.7%), 7 by 4 (2.5%), and 5 by 1 patient (0.6%). No patient scored below 5. When asked whether they preferred the QDU or assessment by conventional hospitalization for the study of their disease, 96.2% of the patients said they preferred the QDU.

DISCUSSION During the study period, 1226 patients were evaluated, generating 861 successive visits. The annual number of patients did not vary significantly throughout the study period.

TABLE 5 Most common diagnoses in patients admitted to a quick diagnosis unit

Diagnosis	n (%)
malignant neoplasm	324 (26.4)
solid tumors	246 (75.9)
lymphoma	64 (19.8)
other hematological tumors	14 (4.3)
anemia (unrelated to malignancy)	106 (8.6)
reactive adenitis	91 (7.4)
digestive disorders	91 (7.4)
thyroid diseases	38 (3.1)
rheumatological disorders	33 (2.7)
cardiorespiratory disorders	28 (2.3)

TABLE 6 Description of solid tumors

Solid tumors	264, n (%)
digestive	123 (46.6)
colon	45 (36.6)
bilio-pancreatic	36 (29.3)
gastric	23 (18.7)
liver	10 (8.1)
esophageal	9 (7.3)
head and neck	25 (9.5)
ear, nose, and throat	14 (56)
parotid gland	6 (24)
thyroid	5 (20)
lung	35 (13.3)
nephro-urologic	24 (9.1)
prostate	9 (37.5)
kidney	11 (45.8)
bladder	4 (16.6)
gynecologic	26 (9.8)
cancer of unknown origin	11 (4.2)
bone and soft tissue tumors	6 (2.3)
melanoma	4 (1.5)
brain tumors	3 (1.1)
other tumors	7 (2.7)

Appropriate referral of patients to the QDU is critical to its effectiveness. The typical profile was a patient with a potentially serious disease but with general good health that allowed a study on an outpatient basis.[11,16] In our study, 89.2% of the patients referred to the QDU met the pre-established referral criteria, which is slightly higher than the rate reported by other QDUs in our setting.[8,12] The remaining 10.8% of the patients who did not meet those criteria should probably have been evaluated by other health care modalities such as family physicians or specific multidisciplinary functional units (e.g., lung or breast units). If the first year of operation of the QDU, which could be considered a year of adaptation, is excluded from the analysis, the percentage rises to 93.3%.

Fewer patients from the ED (79.8%) fulfilled the referral appropriateness criteria than those from PHCs (86.5%) and hospital outpatient clinics (86%). This might be explained by the rapid turnover in ED residents and the fact that some of them make decisions, including referral decisions, on their own, and may not be sufficiently well-informed of the referral criteria.

Most patients were referred from the ED (51.9%) and PHCs (43.7%). During the first year of operation, referrals from the ED were very high (70.5%) and from PHCs very low (27.6%), but later those figures reached almost 50%. This is almost certainly owing to the initial period of introduction and adaptation of the QDU.

The mean time to the first visit was 3.5 days. The time was reduced from 9.4 days in 2008 to 2.3 days in 2012, undoubtedly owing to better selection of patients with previously agreed referral criteria. The mean interval to diagnosis was 12.2 days; however, this was reduced to 6.9 days in 2012 because of the development of new diagnostic circuits for imaging and endoscopy tests. The time to diagnosis in the years 2009–2011 was worse, probably owing to the need for readjustments in care arising from the economic crisis in Spain.

The main reasons for consultation were, in order of frequency, lymphadenopathy with suspicion of malignancy, involuntary weight loss, actual or suspected tumors, anemia, abdominal pain, and abnormalities in simple radiography and CT, which together constituted 74.5% of the cases.

Interestingly, while anemia was the main reason for consultation in 27.5% of the patients referred to a QDU of another Spanish tertiary university hospital,[7] in our series, anemia was the reason for consultation in only 12.6% of the patients. This is because, according to the QDU referral criteria agreed with PHC physicians, microcytic anemia would be studied in PHC except for patients with a high suspicion of neoplasia.

In addition, while lymphadenopathy was the reason for consultation in 10.6% of the patients from the above series,[7] in our QDU, lymphadenopathy was the leading reason for consultation (24.2%). This is undoubtedly due to the introduction of a protocolized preferential circuit, which has been well-publicized in primary care, for the performance of FNPA for enlarged nodes and accessible tumors, which was created in conjunction with the pathology department.

The high rate of consultations for involuntary weight loss and anemia syndrome is a common finding in other QDUs, and is due to the fact that these 2 process are the leading causes of hospitalization for diagnostic tests in Spain.[17] A study that assessed the appropriateness of hospitalization in an internal medicine department using the AEP found that in 70% of the cases, hospitalizations for involuntary weight loss were not justified.[2] QDU evaluation may thus be useful in reducing such hospitalizations.

The main final diagnosis was cancer. The high number of lymphomas can again be attributed to the preferential circuit for quick evaluation of

lymphadenopathies. Of the FNPA negative for lymphoma, 91 were nonspecific adenitis and, importantly, in 11 cases, nodular tuberculosis was diagnosed as the only manifestation of the disease. The most common solid tumors were of gastrointestinal origin. The low percentage of lung, breast, gynecological, urological, and head/neck cancers is certainly due to the existence of specialized functional units for each of these cancers in a tertiary hospital such as ours.

The satisfaction survey was answered by 98.1% of the patients. Ninety-seven percent of the patients were completely or very satisfied and 96% preferred the QDU to conventional hospitalization.

QDU evaluation was estimated to help avoid hospitalization for a diagnostic study in 71.5% of the patients, which led to the freeing-up of 7 internal medicine beds per day during the study period, and resulted in financial savings.

Since the introduction of the Quick and Early Diagnosis Unit of the Queen Elizabeth Hospital, Birmingham, United Kingdom in 1996,[16] various QDUs have been created for the specialized care of different types of cancer. However, QDU dependent on internal medicine departments, such as that described in this study, seem only to have been introduced in Spain, according to studies on their efficacy.[7,8,12] While the differences between QDUs are explained by structural differences, frequent clinical presentations with nonspecific symptoms such as involuntary weight loss, anemia, and lymphadenopathy in generally healthy people with potentially serious illness suggest the need for outpatient study in QDU led by versatile internal medicine specialists. As a result of his or her broad perspective, the internist may be able to recognize the whole clinical scenario of each patient, while closely collaborating with specialists and allocating limited resources in a judicious and fair way.[18]

In comparative studies with conventional hospitalization for diagnostic process, QDUs have been shown to be equally efficacious, less costly, and associated with greater patient satisfaction for the study of potential severe diseases including severe anemia and cancer.[7,8] Moreover, the QDU model has been shown to be efficacious in avoiding referrals from PHCs to the ED.[8,17]

A limitation of our study is that we did not perform a comparative analysis with hospitalized patients or a cost analysis. Yet our results seem to show the high clinical efficiency of a QDU depending on an internal medicine department of a tertiary hospital and further confirm the high degree of patient satisfaction and acceptance of this type of unit. As seen in the application of the AEP in matching hospital admissions,[19,20] the fact that the physician in charge of the QDU is the same who determines the appropriateness of the referral may introduce a bias that tends to overestimate the inadequacies, which is another limitation. The same is true for the proportion of hospitalizations avoided, which would be biased upward.

In conclusion, a QDU may be a feasible and safe alternative to conventional hospital admission for the diagnosis of patients with suspected serious disease. Appropriately managed and supported, they can lighten the burden of EDs and reduce the need for hospital beds. Future research should study the cost-effectiveness of this model compared with hospitalization. In addition, it would be most valuable to examine whether the improvement in the time to diagnosis of these units affects the prognosis of patients.[21]

REFERENCES

1 Rodríguez-Vera FJ, Marín Fernández Y, Sánchez A, et al. [Appropriateness of the admissions and stays in an internal medicine department of a secondary hospital using the current version of the AEP (Appropriateness Evaluation Protocol)]. An Med Interna (Madrid). 2003; 20: 297-300. Spanish.

2 Luis Zambrana García JL, Delgado Fernández M, Cruz Caparrós G, et al. [Factors associated with inappropriate admissions in an internal medicine service]. Med Clin (Barc). 2001; 116: 652-654. Spanish.

3 Alfonso JL, Sentís J, Blasco S, Martínez I. [Characteristics of avoidable hospitalizations in Spain]. Med Clin (Barc). 2004; 122: 653-656. Spanish.

4 Matorras P, de Pablo M, Otero L, et al. [Appropriateness of admissions in an internal medicine service of a tertiary hospital]. Med Clin (Barc). 1990; 94: 290-293. Spanish.

5 Smith HE, Pryce A, Carlisle L, et al. Appropriateness of acute medical admissions and length of stay. J R Coll Physicians Lond. 1997; 31: 527-532.

6 Campbell J. Inappropriate admissions: thoughts of patients and referring doctors. J R Soc Med. 2001; 94: 628-631.

7 Bosch X, Jordán A, Coca A, López-Soto A. Quick diagnosis units versus hospitalization for the diagnosis of potentially severe diseases in Spain. J Hosp Med. 2012; 7: 41-47.

8 Bosch X, Jordán A, López-Soto A. Quick diagnosis units: avoiding referrals from primary care to the ED and hospitalizations. Am J Emerg Med. 2013; 31: 114-123.

9 Pericás JM, Aibar J, Soler N, et al. Should alternatives to conventional hospitalisation be promoted in an era of financial constraint? Eur J Clin Invest. 2013; 43: 602-615.

10 Corbella X, Salazar A, Pujol R. Major ambulatory medicine. Eur J Int Med. 2012; 23: e204-e205.

11 Bosch X, Foix A, Jordan A, et al. Outpatient Quick Diagnosis Units for the evaluation of suspected severe diseases: an observational, descriptive study. Clinics. 2011; 66: 737-741.

12 Capell S, Comas P, Piella T, et al. [Quick and early diagnostic outpatient unit: an effective and efficient assistential model. Five years experience]. Med Clin (Barc). 2004; 123: 247-250. Spanish.

13 Soria-Aledo V, Carrillo-Alcaraz A, Flores-Pastor B, et al. Reduction in inappropriate hospital use based on analysis of the causes. BMC Health Serv Res. 2012; 12: 361.

14 Pérez Blanco V, García Caballero J, Cisneros J, Tabernero A. [Satisfaction of urologic patients in outpatients' clinic]. Rev Calid Asist. 2003; 18: 628-635. Spanish.

15 Ramírez Hernández M, Mérida Fernández C, Negro Alvarez JM, et al. Satisfaction of patients visited in an allergology outpatients' clinic. Alergol Immunol Clin. 2004; 19: 145-152.

16 Kendall MJ, Toescu V, Wallace DM. QED: quick and early diagnosis. Lancet. 1996; 348: 528-529.

17 Ollero Baturone M. [Suitability and usefulness of hospital admissions]. Med Clin (Barc). 2001; 116: 655-657. Spanish.

18 Streuli RA. Generalists are needed more than ever! Pol Arch Med Wewn. 2012; 122 Suppl 1: 15-17.

19 Gertman PM, Restuccia JD. The appropriateness evaluation protocol: a technique for assessing unnecessary days of hospital care. Med Care. 1981, 19: 855-871.

20 McDonagh MS, Smith DH, Goddard M. Measuring appropriate use of acute beds. A systematic review of methods and results. Health Policy. 2000, 53: 157-184.

21 Fentiman IS. Two week wait for suspected cancer: milestone or millstone? Int J Clin Pract. 2005; 59: 1251-1252.

ARTYKUŁ ORYGINALNY

Oddział szybkiej diagnostyki jako alternatywa dla tradycyjnej hospitalizacji w publicznym szpitalu referencyjnym: badanie opisowe

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SŁOWA KLUCZOWE

anemia,
hospitalizacja,
nowotwór złośliwy,
oddziały szybkiej diagnostyki,
skierowanie

STRESZCZENIE

WPROWADZENIE Badania pokazują, że znaczna część pacjentów przyjmowanych na oddziały internistyczne mogłaby być poddana badaniom diagnostycznym w trybie ambulatoryjnym.

CELE Celem pracy była ocena tzw. oddziałów szybkiej diagnostyki (*quick diagnosis unit* – QDU) jako alternatywy dla doraźnej hospitalizacji diagnostycznej u pacjentów z potencjalnie groźną chorobą lub podejrzeniem nowotworu złośliwego.

PACJENCI I METODY W okresie od marca 2008 do czerwca 2012 na QDU przyjęto 1226 pacjentów. Pacjentów kierowano z oddziału ratunkowego, od lekarzy pierwszego kontaktu i z przychodni na podstawie ściśle określonych kryteriów. Dane kliniczne rejestrowano prospektywnie w bazie danych.

WYNIKI W grupie badanej było 634 mężczyzn (51,7%), średni wiek 60,5 ±17,5 lat. Średni czas do pierwszej wizyty wynosił 3,5 ± 5,3 dni. Większość pacjentów (65,7%) wymagało tylko 2 wizyt. Średni odstęp czasu od wizyty do ustalenia rozpoznania wynosił 12,2 ±14,7 dni. U 324 pacjentów (26,4%) stwierdzono nowotwór złośliwy. W 81,5% był to guz lity, w 19,8% chłoniak i w 4,3% różne nowotwory hematologiczne. Drugą najczęstszą diagnozą była anemia niezwiązana z nowotworem złośliwym (8,6% przypadków). Przyjęcie na QDU pozwoliło na uniknięcie hospitalizacji w celu przeprowadzenia diagnostyki w 71,5% przypadków, dzięki czemu zwolniono średnio 7 łóżek na oddziale internistycznym dziennie. W ankiecie badającej satysfakcję pacjentów, 97% respondentów odpowiedziało, że są w pełni lub bardzo zadowoleni, a dla 96% QDU stanowiło lepszą alternatywę od tradycyjnej hospitalizacji.

WNIOSKI QDU może stanowić realną alternatywę dla tradycyjnej hospitalizacji w diagnostyce pacjentów z podejrzeniem poważnej choroby, bez innych wskazań do hospitalizacji. Dzięki odpowiedniemu zarządzaniu i wsparciu QDU mogą zmniejszyć obciążenie oddziałów ratunkowych oraz zapotrzebowanie na łóżka szpitalne.

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