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COMPREHENSIVE CARE HOME UNIT: REDUCTION OF HOSPITAL RESOURCES DURING INFLUENZA OUTBREAKS

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ABSTRACT

Background: The Comprehensive Care Home Unit of the General Hospital of Villarrobledo is a unit formed by a geriatrician who sees people in nursing homes to improve their quality of care. The activity of the Unit has been analyzed, mainly with the objective of avoiding referral to the emergency room, avoiding hospital admissions, avoiding hospital readmissions and reducing the number of hospital admission days.

Methods: We retrospectively described the clinical activity of the Unit during the influenza outbreaks of seasons 2016/2017 and 2017/2018. We selected sociodemographical variables, functional assessment scales (Katz index, Barthel index and the Functional Ambulation Classification), and the Global Deterioration Scale. We registered mortality, type of treatment, oncological patients and patients with supplementary tests. The population was divided into four subgroups: hospital admission avoided, hospital re-admission avoided, referral to the emergency department avoided and reduction of admission days. The demographic characteristics were described, including the mode or mean of the variables. An economic report was made, and an analysis of cost per process according to the subgroups, means of Related Groups for the Diagnosis and degree of dependency measured by the Barthel index.

Results: We selected 112 patients, they had a mean age of 82.2 years, Katz G (34.8%), BI 28.8 (DE 34.9), FAC 0 (63.4%) and GDS 7 (22.3%). The most frequent disease seen was respiratory infection (63.2%), 71.4% received active treatment, 10.7% complementary tests were performed, 17.9% oncological and 17% mortality. Cost analysis: hospital readmission avoided (€ 4,128 per patient) and patients with total disability (BI 0-20, € 3,623 per patient) presented more economic saving. The economic savings were more than € 230,000.

Conclusions: The contribution of the Unit during periods of influenza outbreak is cost saving because of reduced numbers of admissions, numbers of readmissions, days of admission and emergency room visits.

Key words: Nursing homes, Flu, Influenza, Comprehensive Care Unit, Hospital resources.

RESUMEN

Unidad domiciliaria de atención integral: reducción de recursos hospitalarios durante brotes de gripe.

Fundamentos: La Unidad Domiciliaria de Atención Integral (UDAI) del Hospital General de Villarrobledo está formada por un geriatra que atiende a las personas institucionalizadas para mejorar su calidad asistencial. Se analizó la actividad de la UDAI, principalmente en el objetivo de evitar ingresos y reingresos hospitalarios, evitar visitas a urgencias y facilitar el alta hospitalaria prematura.

Métodos: Describimos de forma retrospectiva la actividad de la UDAI durante los brotes de gripe de las temporadas 2016/2017 y 2017/2018. Aportamos variables sociodemográficas, escalas de valoración funcional (índice de Katz, índice de Barthel y la Escala de Valoración Funcional de la Marcha), y la Escala de Deterioro Global. Registramos mortalidad, tipo de tratamiento, pacientes oncológicos y pruebas complementarias. Se dividió la población en cuatro subgrupos: ingreso hospitalario evitado, reingreso hospitalario evitado, derivación a urgencias evitada y reducción días de ingreso. Se describieron las características demográficas, incluido la moda o media de las variables. Se realizó una memoria económica, y un análisis de coste por proceso según los subgrupos, medias de Grupos Relacionados por el Diagnóstico y grado de dependencia medido por el Índice de Barthel.

Resultados: Se seleccionaron 112 pacientes, presentaban una edad media de 82,2 años, Katz G (34,8%), IB 28,8 (DE 34,9), FAC 0 (63,4%) y GDS 7 (22,3%). La enfermedad más frecuente fue la infección respiratoria (63,4%), recibieron tratamiento activo un 71,4%, se realizaron pruebas complementarias en un 10,7%, oncológico 17,9% y exitus 17%. Análisis de costes: el reingreso hospitalario evitado (4.128 € por paciente) y los pacientes con discapacidad total (IB 0 – 20, 3.623 € por paciente) presentaron un mayor ahorro de costes. El ahorro económico fue de más de 230.000€.

Conclusiones: La contribución de la UDAI durante los periodos de brote de gripe supone un ahorro de costes basado en disminuciones de hospitalizaciones, disminución de reingresos, acortamiento de estancias hospitalarias y reducción de derivaciones a urgencias.

Palabras clave: Residencia de ancianos, Gripe, Influenza virus, Unidad domiciliaria de atención integral, Recursos hospitalarios.

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INTRODUCTION

The Integrated Care Area of Villarrobledo (Albacete, Spain) has a catchment area of 65,754 people with a population over 65 years of age of around 19% of the total. It has eleven nursing homes with a total of 750 institutionalized people. In our society, the elderly account for more than 40% of hospital demand. In fact, complex elderly patients, those who are at level 3 of the Kaiser risk pyramid (patients with greater complexity and comorbidity, needing integral management as a whole, requiring professional care)⁽¹⁾, represent 80% of all health spending^(2,3). They go to the hospital twice as much as the general population, their average hospital admission days exceeds by almost 2 days the rest of the population and disability rate is 302.6 / 1,000 inhabitants, with an estimated public expenditure of 8 billion euros (0.74% of GDP)⁽⁴⁾.

In this care setting, we are compelled to look for new models of coordination that improve the quality of care⁽⁵⁾ and reduce health costs. For this reason, in the summer of 2016, the Comprehensive Care Home Unit (UDAI in Spanish form) of the General Hospital of Villarrobledo (Albacete, Spain) was created. UDAI consists of a geriatrician who attends institutionalized people to improve their quality of care in all aspects, so patients have specific comprehensive care in their home.

This formula was initiated in Spain in 1978 with the Geriatric Home Care Unit of the Red Cross Hospital⁽⁶⁾. This model also exists in Hospital Infanta Elena (Valdemoro, Madrid)⁽⁷⁾, and San Carlos University Hospital (Madrid)⁽⁸⁾. These previous experiences have shown that the coordination of geriatric home units with primary care and hospital doctors, allows a reduction in hospital admissions⁽⁹⁾ and inappropriate visits to the emergency room, whilst guaranteeing the same accessibility to hospital services^(10,11). Thus we have a model that facilitates hospital discharges and allows an alternative to hospital admission.

The influenza season of 2016/2017, from the second to the seventh week of the year, had a higher prevalence in Castilla-La Mancha than in the rest of Spain. 93% of the outbreaks took place in nursing homes and patients with flu had a median age of 87 years (RIC: 85-90). Regarding influenza cases in the total population, 19% required hospitalization and 3.2% died (all from nursing homes)⁽¹²⁾. Regarding the flu season of 2017/2018, from the last week of 2017 to the eighth week of 2018, the peak of the epidemic wave occurred in the third week (237.8 cases per 100,000 inhabitants)⁽¹³⁾. In Spain, since the beginning of the 2017/2018 season nine outbreaks of influenza have been reported, one in a health institution (type B virus), and eight in nursing homes: four associated with type B, three associated with type A virus not subtyped and one A (H3N2). 66% of severe hospitalized confirmed cases of influenza (CGHCG) were in people older than 64 years, followed by the 45 to 64 years (21%) group, and the median age of death was 82 years (IQR: 71- 88 years). Among patients belonging to recommended groups for vaccination, 54% of CGHCG and 49% of death cases had not received the influenza vaccine of the season⁽¹³⁾. These influenza outbreaks resulted in a significant overload for our health system, resulting in an increase in the number of patients treated in the Emergency Department and the number of hospital admissions⁽¹⁴⁾.

The objective of our study was to analyze the cost-benefit of UDAI during outbreaks of influenza.

MATERIAL AND METHODS

Population. We retrospectively described the activity of the UDAI during the influenza outbreaks in the seasons 2016/2017 and 2017/2018 in nursing homes of the Integrated Care Area of Villarrobledo (Albacete, Spain). We selected 112 patients out of 750 who lived in nursing homes; these 112 patients were those patients whose medical intervention by the UDAI allowed important expenditure of

hospital resources to be avoided, because it permitted one or more of the following results to be achieved:

- Hospital admission avoided: severe pathology (sepsis, pneumonia with pneumonia severity index > 90, stroke, and so on) in patients who did not benefit from invasive measures (severe dementias with total dependence, palliative and terminal patients)⁽¹⁶⁾.
- Hospital readmission avoided: patients with severe clinical worsening in the first 30 days after hospital discharge, in whom medical intervention by the UDAI prevented hospital readmission.
- Referral to the emergency department avoided: patients presenting acute urgent pathology. The majority of patients in the hospital admission and hospital readmission subgroups were also included in this subgroup, because most often they were referred to the emergency room for stabilization before entering (or reentering) and then being admitted to the hospital (or readmitted).
- Days reduction of admission: patients referred to the UDAI from the hospital ward to complete hospital medical care in nursing homes.

Variables. We collected, in order to describe in general terms the characteristics of the selected population, age, gender and the following scales of functional assessment: the Katz index⁽¹⁷⁾ to measure the basic activities of daily life (BADL), the Barthel Index (BI)⁽¹⁸⁾ to measure dependence, and the Functional Ambulation Classification (FAC)⁽¹⁹⁾ to measure gait. Also, we collected the Global Deterioration Scale (GDS)⁽¹⁹⁾ to measure the degree of dementia, the type of pathology for which the patient was treated, the type of treatment that was performed (active, palliative or mixed) and the type of drug (for the economic report), if they died in the nursing homes, if they were an oncological patient and the type of urgent supplementary tests that were requested (blood tests and blood and urine cultures).

Data analysis. The selected population was divided into four subgroups according to the reason for which the patient had been included in the study (hospital admission avoided, hospital readmission avoided, referral to the emergency department avoided and reduction of admission days). The main demographic characteristics of the population and the four subgroups were described, including the mode or mean of the variables. A cost-per-process analysis was carried out according to the four subgroups and according to the means of the Diagnosis-Related Groups (DRGs), as well as by subgroups according to the degree of dependence measured by the Barthel Index. Finally, a study was carried out to calculate the economic savings created by the UDAI. The economic savings were calculated as follows:

- Hospital admission and readmission avoided: through the DRGs published by the Health Service of Castilla-La Mancha (Spain) in 2013. For example, for a urinary tract infection it was € 2,079 and for a pneumonia € 2,568 (but the cost rises to € 8,378 in the case of respiratory sepsis).
- Reduction of admission days: (DRGs / number of days of average hospital admission) x estimated days saved. The number of days of average hospital stay in the Internal Medicine Service of our hospital was 8.53 days (2017).
- Referral to the emergency department avoided: the average cost of an emergency visit in our hospital was € 236.
- Transfer by ambulance: an ambulance with life support costs approximately € 277⁽²¹⁾, which would have been the ambulance type of choice for patients who avoided admission and reentry because they had functional deterioration and both respiratory and hemodynamic instability. We do not count the ambulances of the patients that had expected to go to the emergency room but were not admitted, because we do not know if they had been transported by ambulance or family car.

The total expenses of the UDAI were calculated by adding together the expenditure of human resources (medical payroll) and materials (blood test and blood and urine cultures, antibiotics, subcutaneous infusions and car mileage).

All data were stored and analyzed using SPSS 17.0 (SPSS, Inc., Chicago, IL) for Windows.

RESULTS

A total of 112 patients (population) were selected who were attended to by the UDAI during the influenza outbreaks in the seasons 2016/2017 and 2017/2018, their data are summarized in table 1. The population had a high average age (82.2 years) and 53.6% were women. Functionally, they had a total dependence for BADL (Katz G) 34.8%,

Table 1
Statistical data of patients in which an important expenditure of hospital resources was avoided, influenza outbreaks in the seasons 2016/2017 and 2017/2018.

Group		Population	Hospital admission avoided	Hospital readmission avoided	Referral to emergency department avoided	Reduction of admission days
N		112	37	17	79	36
Age (mean)		82.2 (SD: 10.9, R: 40-103)	84.3 (SD: 8.6, R: 55-93)	81.2 (SD: 11.2, R: 59-96)	82.6 (SD: 11.8, R: 40-103)	81.4 (SD: 8.2, R: 61-97)
Katz (mode)	G	G (34.8%)	G (32.4%)	G (47.1%)	G (32.9%)	G (36.1%)
	F	F (33.0%)	F (24.3%)	F (29.4%)	F (32.9%)	F (33.3 %)
BI (mean)		28.8 (SD: 34.9)	35.8 (SD: 38.9)	21.2 (SD: 30.2)	29.4 (SD: 34.8)	29.9 (SD: 36.1)
FAC (mode)		0 (63.4%)	0 (56.8%)	0 (76.5%)	0 (63.3%)	0 (61.1%)
GDS (mode)		7 (22.3%)	6 (32.1%)	7 (29.4%)	6 (24.1%)	3 (25.%)
Details in nursing homes		17.0%	29.7%	29.4%	19.0%	13.9%
Treatment	Active	71.4%	59.5%	58.8%	68.4%	75%
	Paliative	17.9%	27%	17.6%	20.3%	8.3%
	Mixed	10.7%	13.5%	23.5%	12.7%	13.9%
Oncological		17.9%	32.4%	17.6%	22.8%	11.1 %
Supplementary tests		10.7%	16.2%	11.8%	15.2%	5.6 %
Pathology	Pneumonia	63.4%	59.5%	58.8%	66%	61%
	Anemia	10.7%	13.5%	5.8%	12.7%	5.6%
	UTI	10.7%	8.1%	5.8%	12.7%	11.1%
	Cancer	8%	13.5%	5.8%	5%	2.8%
	Stroke	5.4%	5.4%	12%	2.5%	13.9%
	Diarrhea	1.8%	0%	12%	1.3%	5.6%

SD: Standard Deviation; R: Range; Katz G: Total dependence; Katz F: Total dependence except to eat; BI: Barthel Index; FAC: Functional Ambulation Classification; GDS: Global Deterioration Scale; UTI: Urinary tract infection.

severe dependence (BI 28.8) and they did not walk (FAC 0) in 63.4%. Cognitively they demonstrated severe dementia (GDS 7) 22.3%, and moderate-severe dementia (GDS 6) 21.4%. The majority received active treatment (71.4%), 17.9% were cancer patients and complementary tests alone were performed in 10.7%. The most frequent disease was respiratory infection (63.4%) and 17% of the total died. Analyzing by subgroups:

- Hospital admission avoided: 37 patients, most of them presented with very bad functional situations showing dependence for all the BADL (Katz G) in 32.4%, severe dependence (BI 35.8) and did not walk (FAC 0) 56.8%. Cognitively the largest group were those with moderate-severe dementia (GDS 6) with 32.1%, followed by those who did not present cognitive impairment (GDS 2, 21.6%). This was the subgroup with more oncological patients (32.4%), more palliative treatment (27%) and a greater percentage of deaths (29.7%).

- Hospital readmission avoided: this was the smallest group (17 patients). They demonstrated total dependence (Katz G) of 47.1% and severe dependence (BI 21.2). This was the subgroup with the highest percentage of patients who did not walk (FAC 0 in 76.5%). The majority had severe dementia (GDS 7) 29.4%. It was also the subgroup where less active treatment was carried out (58.8%) and more mixed treatment given (23.5%).

- Referral to the emergency department avoided: this was the biggest subgroup (79 patients). Most had a very bad functional situation (Katz G) 32.9%, severe dependence (BI 29.4), no walking (FAC 0) 63.3% and moderate-severe dementia (GDS 6) in 24.1%. The majority received active treatment (68.4%) and urgent supplementary tests were performed in 15.2%. The emergency service of the General Hospital of Villarrobledo attended 94.9 patients / day in 2016, and 101 patients / day in 2017. The UDAI avoided emergency visits in 79 patients during the outbreaks of influenza in 2017 and 2018, in 57 days of activity (1.4 patients/day).

- Reduction of admission days: subgroup of 36 patients (32.1% of the patients attended by the UDAI) with poor functional status (Katz G 36.1%, IB 29.9, FAC 0 61.1%) but better cognitive scores since the majority presented with only mild cognitive impairment (GDS 3) 25%, in fact 58.3% did not have dementia (GDS ≤ 3). This subgroup had less deaths (13.9%), less oncological patients (11.1%) and more active treatment was given (75%). Urgent supplementary tests were requested only in 5.6% of cases. The average stay for Internal Medicine (IM) of the General Hospital of Villarrobledo in 2016 was of 8.65 days, in 2017 it was reduced to 8.53 days.

Deaths in nursing homes have contributed to the reduction of the hospital mortality rate: in 2015 it was 5.4%, but since the UDAI was created (summer 2016) the rate has been reduced to 4.4%. During the study, 17% died (table 1), meaning that if UDAI had not existed, a total of 19 patients would have died in the hospital.

In table 2 the economic report of the UDAI is shown, with an initial saving of € 247,935 and an expense of € 14,799, from which we obtained a balance of total economic savings of € 233,136. If we compare the costs per process according to the four subgroups and according to average DRGs: hospital readmission avoided was the process where most was saved (€ 4,128), followed by hospital admission avoided (€ 3,217), reduction of days of admission (€ 698) and referral to the emergency department avoided (€ 236). In the analysis of income costs and readmissions avoided, patients with worse functional status (BI 0 - 20, total disability) had greater cost savings (€ 3,623 per patient) than those with a lower disability: € 2,506 (BI 61 - 90), € 2,475 (BI 91 - 100) and € 2,323 (BI 21 - 60).

Table 3 shows the similarities between the results of UDAI activity during the influenza outbreaks of 2017 and 2018: similar average age (81.1 and 83.2), patients with greater functional and cognitive impairment, similar mortality rates (17.3% and 16.7%) and

Table 2
Economic report of the Comprehensive Care Home Unit during the influenza outbreaks
in the seasons 2016/2017 and 2017/2018

Activity	Resources	Nº	Approximate cost per unit	Total	Cumulative total
Savings	Hospital admission avoided	37	€ 2,079 – 8,378 (DRGs, mean € 3,217)	€ 119,029	€ 247,935
	Hospital readmission avoided	17	€ 4,128 (mean)	€ 70,176	
	Referral to emergency department avoided	79	€ 236	€ 18,644	
	Reduction of admission days	36	€ 698 (mean)	€ 25,128	
	Use of ambulances	54	€ 277	€ 14,958	
Expenses	Full-time geriatrician	105 days		€ 11,707	€ 14,799
	Blood test	6	€ 29	€ 174	
	blood culture	11	€ 44	€ 484	
	Subcutaneous infusion	14	€ 24,94	€ 419	
	Intravenous antibiotics	212	€ 5.19 (mean)	€ 1,100	
	Mileage	1,307 km	0.7 € each km	€ 915	
Balance					€ 233,136

DRGs: Diagnosis-Related Groups.

Table 3
Comparison between influenza outbreaks in the seasons 2016/2017 and 2017/2018

Influenza outbreaks		Season 2016/2017	Season 2017/2018
Time		6 weeks	9 weeks
Activity days		24 days	33 days
Patients attended		10.9 patients/day	13.5 patients/day
Patients whose medical intervention allowed to avoid an important expenditure of resources		52 patients	60 patients
Age (mean)		81.1	83.2
Functional scales	Katz (mode)	F (32.7%), G (30.8%)	F (33.3%), G (38.3%)
	BI (mean)	31.6	26.3
	FAC (mode)	0 (59.6%)	0 (66.7%)
	GDS (mode)	6 (30.8%), 7 (17.3%)	6 (13.3%), 7 (26.7%)
	Deaths	17.3%	16.7%
	Activity treatmente	75%	68.3%
	Oncology	17.3%	15%
	Supplementary test	17.3%	5%
Hospital admission avoided		19	18
Hospital readmission avoided		13	4
Referral to emergency department avoided		37	42
Reduction of admission days		19	17

BI: Barthel Index; FAC: Functional Ambulation Classification; GDS: Global Deterioration Scale

percentage of oncology patients (17.3% and 15%). There has also been a progressive increase in patients seen by the UDAI (13.5 in 2018 compared to 10.9 in 2017).

The UDAI has allowed the reduction of the number of admissions, days of admissions, readmissions and visits to the emergency room of our hospital during the influenza outbreaks of 2017 and 2018, proving to be cost effective with an estimated economic saving of € 233,136 (table 2) during these flu outbreaks.

DISCUSSION

During the influenza outbreaks in the seasons 2016/2017 and 2017/2018, the UDAI treated 112 elderly patients, mostly with high dependence and severe dementia. The most frequent pathology was respiratory infection, the majority of these patients received active treatment in their nursing homes. This home care allowed us to reduce the number of admissions, days of admission, readmissions and emergency visits to our hospital. The greatest cost savings were in the hospital readmission avoided group and in patients with total disability.

The economic savings made by the UDAI invites us to reevaluate our current health system, directing us towards a model of Integral Care, taking hospital resources to the nursing homes, facilitating and strengthening the coordination among the nursing homes, primary care and hospital doctors, avoiding inappropriate visits to emergencies (which may even be considered according to the baseline characteristics of the patient), always guaranteeing the same accessibility to medical services. This saving had already been estimated when the UDAI project was initially presented, due to the comparison of previous experiences in other hospitals such as the General University Hospital of Getafe which saved, only taking into account the hospital admissions avoided, the significant amount of 619,512 €/year⁽²²⁾.

UDAI is contributing to improve the quality indexes⁽²³⁾ of our hospital:

- Reduction of hospital mortality rate: this reduction has been influenced by the UDAI, because during the outbreaks of influenza in 2017 and 2018, 17% of the 112 patients who were attended to by the UDAI and included in the study died in the nursing homes. All of them were patients with advanced dementia and immobility syndrome or terminal oncology.
- Reduction of readmissions and days of admission: UDAI, in coordination with IM, has contributed to the reduction of days of admission because it facilitated the early hospital discharge of 36 patients who completed their treatment at the nursing homes. Only 5 of these patients with early discharge died, but these deaths were expected because they were terminal oncological patients and not candidates for active treatment.

The UDAI avoided a greater increase in the average number of patients treated in the Emergency Department, because the UDAI avoided the referral to the Emergency Room of institutionalized patients in whom active treatment could be carried out in the nursing homes or in those who necessarily had therapeutic effort limited due their poor baseline situation⁽¹⁶⁾. The UDAI also helps to avoid overload in hospital outpatients clinics: that the geriatrician attends the revisions in the nursing homes translates to a saving in the use of ambulances, greater comfort for the patient and allows improvement of the S / F (Successive / First visits) ratio of our hospital: our S / F ratio in 2016 was 2.22 (higher than the average of Castilla-La Mancha which stands at 1.93). It also allows avoidance of referral duplications to other specialties such as Neurology, Internal Medicine and Psychiatry.

Note that in 2018 there have been less hospital readmissions than in 2017 as a result of improved communication between the hospital and nursing homes: patients are

discharged early (in 1 or 2 days), ensuring their stability and preventing them from getting sick on the ward. The increase in patients served by the UDAI in 2018 with respect to 2017 particularly stands out and is due to several factors:

- The greater knowledge of the patients on the part of the geriatrician: they need less medical consultation time.
- UDAI is now better known for IM and Emergency services, resulting in more patients being discharged and facilitating early discharge.
- There is greater confidence of the health personnel of the nursing homes to notify the UDAI in a medical emergency instead of referring them directly to the hospital.
- There is greater confidence of family members of terminal patients to perform treatment exclusively in nursing homes, due to previous satisfactory experiences with the same patient or other institutionalized patients attended by the UDAI.
- More physical means and resources are available.

In the subgroup of patients with hospital admission avoided, the second largest group were patients without cognitive impairment, but these were terminal oncology patients (they received exclusive palliative treatment) or patients with anemia (they were preferentially studied and treated in the Day Hospital there by avoiding hospital admission). Regarding the subgroup of patients with reduction of days of admission: this is the group with the best cognitive situation, which is logical since if they entered the hospital it is because their absence of dementia was an indication of appropriateness for invasive measures, in fact they are the subgroup with more active treatment than any other. In this group urgent complementary tests alone were requested in 5.6% due to their stability after hospital discharge, which also explains why this is the subgroup with less deaths.

The most frequent pathology was respiratory infection as was expected since it is a very frequent pathology in patients with dementia, these patients usually have associated neurogenic dysphagia which predisposes them to bronchoaspiration, and furthermore it is also more prevalent during outbreaks of influenza. In Spain, the annual incidence of pneumonia is 10.29 cases per 1,000 inhabitants per year in people older than 65 years, with the rate progressively increasing according to sex (higher risk in males) and age⁽²⁴⁾. The higher risk of pneumonia in males may explain the high percentage of men overall in the study.

This study does, however, present a series of limitations: it would have been more representative to obtain a randomized sample of the population, but the data are based on a selected population due to the limited volume of patients attended to by the UDAI. For future studies, it would be interesting to include UDAI data from other hospitals, and we could obtain a sample of the total population attended. In addition, it has not been possible to assess the economic savings stemming from the activity of other UDAI, during previous influenza outbreaks, because these data do not exist in the literature.

Therefore, the contribution of the UDAI during the influenza outbreak period of 2017 and 2018 reduced numbers of admissions, numbers of readmissions, days of admission and emergency room visits. It represents an important financial saving for our hospital and allows institutionalized patients to have access to hospital resources in their own environment.

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