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Programa Ícaro-Alcohol<sup>4</sup>

# Initial results of the preventive Ícaro-Alcohol Programme

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Harmful alcohol consumption among young people is a public health problem that needs important measures. Interventions in emergency department cases, such as crisis action, could be effective. The initial results of the Ícaro-Alcohol Program (detection of young people under 22 years attended in the emergency department for alcohol consumption, a Brief Motivational Intervention (BMI) and referral to a prevention reference service (PRS) and prevention programs) are presented. The program objective is to reduce the harmful use of alcohol.

Río Hortega University Hospital (HURH), Clínico Hospital (HCUV) and Medical Emergency Units (MEUs) were involved in the study developed in the city of Valladolid (Castilla y León, Spain). Training in program implementation was given to 53.8% of professionals (n=27) (73.3% HURH vs 45.6% HCUV), while 17.4% (n=41) were trained to develop BMI in the critical situation derived from the emergency (26.7% HURH vs 12.6% HCUV).

A total of 93 cases were treated by the hospital emergency services, and all the cases treated by the MEUs were referred to the hospital, between June and December 2017. There were 49 urgent cases, and interventions were carried out in 21 of them (43%). Afterwards, 8 cases were referred to the PRS (38% of 21 intervened; 16% of the total number of cases). Interventions and referrals were greater in the hospital with more trained professionals. The older youth cases arrived last at night. They had other health problems associated and were less likely to agree to referral. The referral times to indicated prevention programs were met, but not to universal and selective programs.

The action protocol is improved by focusing on children under 18, simplifying consent, improving BMI training, simplifying the intervention of professionals and carrying out individual preventive intervention from the PRSs immediately. The program will be implemented progressively in the rest of the provinces in Castilla y León.

**Keywords:** Alcohol, Prevention, Adolescents, Teenagers, Motivational intervention, Emergency

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## Resultados iniciales del Programa de prevención Ícaro-Alcohol

El consumo nocivo de alcohol en los jóvenes es un problema de salud pública sobre el que es necesario actuar. La intervención sobre los casos que acuden a urgencias es una actuación en crisis que puede ser efectiva. Se presentan los resultados iniciales del Programa Ícaro-Alcohol (detección de menores de 22 years atendidos en Urgencias/Emergencias por consumo de alcohol, Intervención Motivacional Breve (IMB) y derivación al Servicio de Referencia de Prevención (SRP) y a los programas preventivos, para reducir este consumo.

Participaron los Hospitales Universitarios Río Hortega (HURH) y Clínico (HCUV) y Unidades Medicalizadas de Emergencias (UME) de Valladolid capital. El 53,8% (n=27) de los profesionales recibieron formación sobre el programa (73,3% HURH vs 45,6% HCU) y el 17,4% (n=41) entrenamiento en IMB para realizarla in situ, aprovechando la situación "de crisis" derivada de la urgencia (26,7% HURH vs 12,6% HCUV).

Entre junio y diciembre de 2017 se atendieron 93 urgencias relacionadas con alcohol, las UME derivaron todas

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a los hospitales; 49 cumplían el criterio de case, se intervino en 21 (43%) y se derivaron 8 casos al SRP (38% de los que se intervino, 16% del total de cases). Las intervenciones y derivaciones fueron mayores en el hospital con mayor participación en la formación. Los cases de mayor edad acudían a horas más tardías, presentaron problemática asociada y accedieron menos a la derivación. Los tiempos de derivación a prevención indicada se cumplieron, pero no a los programas universales y selectivos.

Se mejora el protocolo de actuación centrándose en los menores 18 years, simplificando el consentimiento, mejorando la formación en IMB simplificando la intervención de los profesionales y realizando la intervención preventiva individual desde los SRP de forma inmediata. El programa se implantará progresivamente en el resto de provincias de Castilla y León.

**Palabras clave:** Alcohol, Prevención, Adolescentes, Intervención Motivacional, Urgencias, Emergencias

## INTRODUCTION

The data from the 2016/17 ESTUDES<sup>1</sup> (survey on drug use in Spanish secondary schools) show that students in Castilla y León (Spain) aged between 14 and 18 years drink alcohol more often and more intensely than the national average. The age at which they start drinking is early (approximately 13.5 years) and related to problematic alcohol consumption in the future<sup>2</sup>. In the previous month, 71.1% of the students had consumed alcohol, 36.1% had episodes of binge drinking, 26.6% drank every weekend and 26.1% had gotten drunk the month before. Although the evolution of drinking in this population is positive<sup>3</sup>, prevalence remains very high and several studies present increased pediatric emergencies<sup>4</sup>, even against a decrease in the use of other drugs<sup>5</sup>.

There is a national indicator of hospital emergencies related to the consumption of psychoactive substances. Gathered annually for the Hospital Complex in León, the Hospital Río Carrión (Palencia) and the University Hospitals Río Hortega and Clínico (Valladolid), this information indicated that in 2017, of the 1,945 emergencies related to drinking alcohol, 5.8% (n=115) occurred in children younger than 18 years old<sup>6</sup>.

Various reviews<sup>7</sup> suggest that motivational intervention in the Emergency Unit can reduce drinking among young people, indicating<sup>8</sup> that the context of Emergencias can provide an opportunity to reach adolescents who drink via brief interventions<sup>9</sup>, the information itself given being insufficient to cause changes in alcohol consumption<sup>10</sup>. In addition, treating an adolescent in Emergency Care constitutes a "cri-

sis situation" that can increase the family's awareness and worry, consequently facilitating a change in habits<sup>11</sup>.

Studies on adults also propose using emergencies to carry out brief interventions and reduce alcohol use<sup>12-16</sup>, indicating that they are cost-effective<sup>7,17</sup>, feasible and acceptable<sup>18,19</sup>. However, there are studies posing the need to investigate the medium- and long-term effects further<sup>20,21</sup>, to specify screening according to the different profiles<sup>22</sup> and to define the intervention better<sup>23</sup>. There are even studies that consider prevention in emergency units to be a utopia<sup>24</sup>.

In Castilla y León, the Network for Drug Use Prevention carries out family prevention interventions based on the level of risk, as suggested by international agencies (European Monitoring Centre for Drugs and Drug Addiction, 2017). They include multi-component family intervention programs that have been shown to be the most effective<sup>25-27</sup>: universal prevention (*Moneo Program*), selective prevention (*Dédalo Program*), 11 specific prevention programs and an awareness-raising workshop for adolescents between the ages of 15 and 17 years that drink (*OH.com*).

The healthcare system performs few interventions and referrals to specific prevention programs through the accident and emergency structure, in spite of dealing with families whose sons and daughters have problems with alcohol consumption. That is why the Ícaro-Alcohol Program will initiate a preventive activity through intervention in Emergency Units and strengthen it by referrals to prevention reference services (PRs) and to prevention programs.

The objective of our study was to perform a pilot study to define an evidence-based intervention proposal and adapt it to the true situation in Castilla y León, to implement it progressively in the remaining provinces.

## METHODS

This was a descriptive study of the assessment of the protocol and process for implanting the Ícaro-Alcohol Program in state hospitales (Hospital Universitario Río Hortega/HURH and Hospital Clínico Universitario/HCUV) and in the medical emergency healthcare unit (MEU) service in Valladolid (the capital of the province and of the autonomous community). The protocol was the intervention protocol carried out by the work group formed between the Regional Health Ministry and the Regional Commission on Drugs. Whenever possible, Chi<sup>2</sup> with or without Yates correction or ANOVA was used for ratio comparisons; significance was set to  $p < 0.05$ .

The Program covers the detection, crisis intervention and referral of the cases of individuals younger than 22 years old treated by the Emergency Healthcare Services

whose medical emergency is related to alcohol consumption. For Program purposes, it is enough for the professional to detect signs and symptoms of drinking, without analytical confirmation: strong smell of alcohol, loss of stability, altered speech, etc.).

tions were compatible with normal work load. Case definition (Table 1): all minors aged younger than 16 years and the cases with ages between 16 and 21 years having serious alcohol intoxications, or with moderate intoxications and a risk factor (Table 2).

### Reference population

The province of Valladolid has 2 health areas. According to the Spanish National Statistics Office (*INE* is the Spanish acronym), the population of individuals between 10 and 21 years of age in 2017 was 54,402 (27,751 males and 26,651 females); the population between 14 and 18 years was 17,856 (9,136 males and 8,720 females).

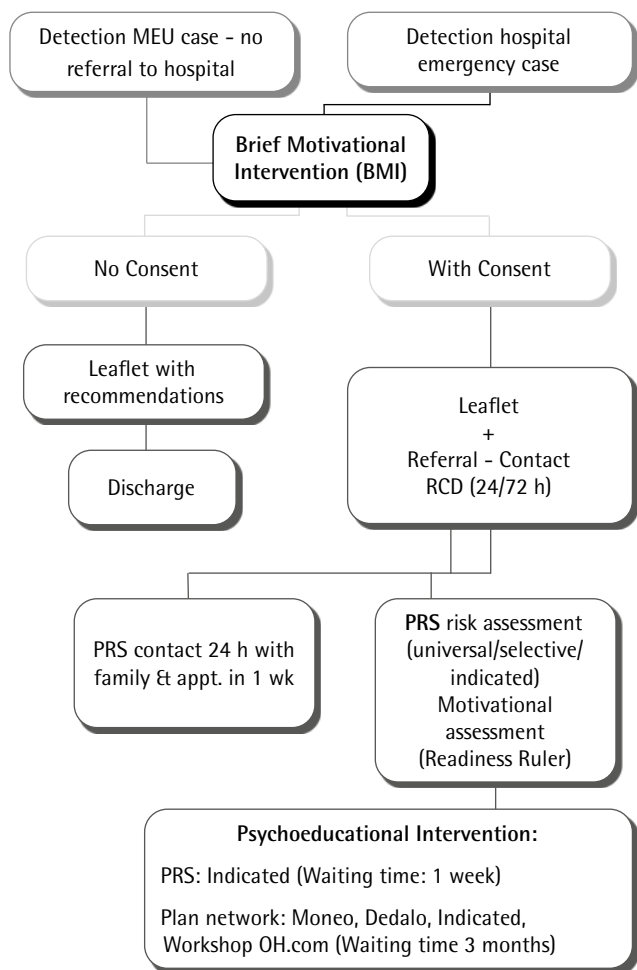
### Target population

Intermediate population: the healthcare professionals in the Emergency Services and in the MEUs that needed training about the Program objectives and the Brief Motivational Interventions (BMIs) planned.

Final population: the work group agreed on this, evaluating age and seriousness of the problem so that interven-

Table 1		Case Definition: moderate and serious emergencies related to alcohol consumption
TYPE OF CASE	CRITERIA	
SERIOUS	EVERYONE < 16 years old, regardless of the seriousness of the alcohol intoxication. Adolescents aged between 16 and 21 years with: SERIOUS ALCOHOL INTOXICATION and at least 1 RISK FACTOR MODERATE ALCOHOL INTOXICATION with > 1 RISK FACTOR	
MODERATE	Adolescents between 16 and 21 years of age with: SERIOUS ALCOHOL INTOXICATION, without any RISK FACTORS. MODERATE INTOXICATION and only 1 RISK FACTOR	

Table 2		Classification of the alcohol intoxications and risk factors considered
TYPE OF ALCOHOL INTOXICATION	CHARACTERISTICS	
MILD	Slight alteration in judgment, disinhibition, relaxation, mild sedation, altered coordination, euphoria, pseudo-excitation, optimism and increased sociability.	
MODERATE	Brief stupor (incipient obtundation, slow response to stimuli, low attentiveness...), ataxia, altered psychomotor skills; altered perception and judgment, aggression; confusion; or irresponsible behavior, deterioration of physical or intellectual functions.	
SERIOUS	Alcohol level >1.5g/dl or evident risk of alcoholic coma; depressed breathing (<10 breaths/min, SO <sub>2</sub> <90), bronchial aspirations; hypoglycemia/shock; Glasgow <10 (stuporous, comatose...); no cough reflex or nauseated; acidosis metabolic acidosis; BP<90 mmHg; need to use sedation and/or mechanical restraint; focal neurological deficits (not including ataxia, dysarthria and nystagmus); associated somatic pathology (chest or abdominal pain, dyspnea...) or atypical drunkenness (because of its characteristics or intensity: with psychotic manifestations, aggression, agitation, hallucinations, maniac-depressive, delusional, convulsive...).	
RISK FACTORS		
<ul style="list-style-type: none"> <li>· Repetition of the behavior: 2 or more intoxications/month, the month being considered as the time between intoxications.</li> <li>· Associated with the use of other substances (declared or confirmed by analysis).</li> <li>· Personal and/or family history of substance abuse disorder or other mental disorders.</li> <li>· Everything involving legal proceedings: traffic accidents, assault, work accidents self-harming actions or attempts.</li> <li>· Severe traumatism: those that "cannot be discharged immediately."</li> <li>· Requires admission to observation/ward.</li> <li>· Social repercussions with lack of fulfillment or abandonment in the academic/work/family/free time setting.</li> </ul>		



**Figure 1** Algorithm used in the Ícaro-Alcohol Program

### Description of the Intervention Protocol

The pilot program, in addition to taking clinical action on the undesirable consequences of alcohol consumption (intoxication, injuries, unconsciousness, disorientation...), incorporates a BMI in the crisis situation that being treated in an Emergency Unit represents. This BMI attempts to increase, for both the families and their children, the perception of risk involved in drinking. The BMI also focuses on improving referral via the informed consent to the Prevention Reference Service (PRS) for assessment by a psychologist and later participation in the prevention programs available based on the individual's risk level.

The informed consent form is required to be able to establish the relationship and the transfer of data between the national healthcare system and the PRSs that depend in Castilla y León on the Regional Commission on Drugs (RCD),

which is part of the Department of Family Counselling and Equal Opportunity Services. (Figure 1).

### 1. Intervention in Emergency Services

The intervention is carried out in the time that the patient is in the MEU and/or Emergency Department, and during the treatment process, being implemented as complementary treatment. The healthcare professional intervenes with the families, and with the cases, as long as the individual is conscious and can communicate. The professional handles the BMI using the WHO-recommended methodology described with the acronym FRAMES (Table 3), bearing in mind the rejection or not of referral to the PRSs and signed written informed consent.

All families, including those that did not sign the authorization to participate, are given an informative leaflet (psychoeducational material), prepared by the work group (available at: <https://www.saludcastillayleon.es/ciudadanos/es/icaro-alcohol/familiar/informacion-drogas-familias-adolescentes>) with information about the risks of drinking and contact information for the PRS in case the families not giving consent initially later decide to get in touch with the service.

### 2. Case referral and PRS assessment

A person in charge at each hospital center or at the MEUs notifies the Regional Commission on Drugs (RCD) for Castilla y León about the cases within 24 hours (unless it is a weekend or a holiday) or 72 hours (weekends and holidays); the RCD refers the case to the PRS that same day using a computer, with telephone confirmation of reception. The PRS makes contact within the following 24 hours, with the families, setting up an appointment in the following week and assessing the motivation of both the family and the child aged less than 22 years old (using the Readiness Ruler) and the risk level identified (universal, selective and indicated cases). This makes it possible to select the prevention programs in which they could participate. The established deadlines for convoking the families or the minors are: less than 3 months for universal cases (Moneo and Dédalo Programs and OH.com Workshop in the Prevention Network) and selective cases; and 1 week for indicated cases (in the PRS itself).

### Implementation process

1. *Training stage:* Before (March to June 2017) the beginning of the pilot program, an awareness-raising, training and skill development process was developed for the

Table 3	FRAMES
<p><b>FEEDBACK / RETRO-ALIMENTACIÓN</b></p>	<p>Personally relevant information and <i>objective</i> Communication. Objective data on the emergency and on the impact of drinking on the development of adolescents and youngsters. <i>"What has happened is... (Diagnosis)</i></p> <p><i>The cause of your problem (loss of consciousness / accident / injury...) was alcohol"</i></p> <p><b>What do you think about it?</b></p>
<p><b>RESPONSIBILITY / RESPONSABILIDAD</b></p>	<p>The minor and the family get involved in the process. To admit and accept that they are responsible for their behavior and that they are the ones that will make the decisions about future drinking. Do not use <i>"I think that..." / "It worries me that..."</i> Such statements can cause resistance, and lead to keeping and defending current drinking habits.</p> <p><b>"Do you feel worried about what has happened? Do you know why it has happened? Do you want to do something so it doesn't happen again? It's your choice."</b></p>
<p><b>ADVICE / CONSEJO</b></p>	<p>Permission is sought to talk about how important prevention is to prevent problems. Impartial, objective and clear advice. Provide information pamphlet.</p> <p><b>"The best way to stop it from happening again is for you to agree to talk to a professional. They can help you manage to keep this from happening to you again.</b></p> <p><i>If you agree, they'll call you and set up an appointment.</i></p> <p><i>If you don't want to now and you change your mind later, this information can help you."</i></p>
<p><b>MENU OF OPTIONS / OPCIONES DE CAMBIO</b></p>	<p>You have alternatives: maybe you don't want to do anything, or want to talk at home and "read him/her the riot act" (forbid going out for a time or take the cell phone away, etc.), or to look to the GP or a teacher for support, but if you sign the authorization now, you can also go into a Prevention Program.</p>
<p><b>EMPATHY / EMPATÍA</b></p>	<p>Confrontation, labels and blaming or criticizing are avoided. With an understanding focus towards the situation and the adolescent's feelings and those of the family:</p> <p><b>"I understand that you're feeling bad and that maybe now is not the best time, but this can be a chance to change.</b></p> <p><i>I understand that it's hard to accept that alcohol is a problem, and that you don't want your parents to find out... Don't worry; the interview is confidential.</i></p> <p><i>It's difficult for parents to accept these situations, but in the end you can be satisfied knowing that you've made the right decision."</i></p>
<p><b>SELF-EFFICACY / AUTOEFICACIA</b></p>	<p><b>"You can take steps to prevent it from happening again"</b> and recognize capabilities and achievements, as well as personal skills and resources. Aspects that will be reinforced in the PRS later.</p>

healthcare professionals (physicians and nurses) in the reference centers involved. The action protocol was explained in an initial clinical session, while the BMI content was learned in a later workshop, in which the trainers were professionals from the Psychiatry Service and from the PRS. Demonstrative videos of typical situations were made, differentiated by age groups and attitudes of collaboration, so that the videos could be used for training (available for all Castilla y León professionals at the website [www.icaroalcohol.es](http://www.icaroalcohol.es)).

2. *Pilot stage:* During the second semester of 2017 (1 June to 31 December), case detection was carried out for the Ícaro-Alcohol Program in the Emergency Services at the university hospitals in Valladolid and in the MEUs in the city of Valladolid.

**Registry systems and work groups to evaluate the process**

1. *Indicator for hospital emergencies related to the consumption of psychoactive substances.* This indicator,

established by the Spanish Observatory on Drugs and Addictions (Spanish acronym: *OEDA*), gathers data on all the emergencies related to the use of any psychoactive substance, including alcohol. The RCD reviewed all the emergencies due to alcohol consumption by individuals aged less than 22 years at the Universitario Clínico and Río Hortega Hospitals in Valladolid.

2. *Emergency Healthcare Management information system.* This system provides data on the cases seen and codified by a physician at 112 [the call center for the Emergency hotline] as alcohol intoxication, by the MEUs as well, which has nursing and medical professionals.
3. *Ícaro-Alcohol Program information system.* For program follow-up, there is a computer application, in which the following, most relevant, variables are gathered:
  - Data on the emergency: sex, date and time of the emergency (defined as morning, from 8:00 to 14:00 h; afternoon, from 14:00 to 21:00 h; night, from 21:00 to 2:00h; and early a.m., from 02:00 to 8:00 h), seriousness, basic tests requested, resolution of the emergency, brief intervention performed, and informed consent (signed or not signed) for referral to the PRS.
  - Data on the PRS evaluation: date of contact and other data from the initial interview.
4. *Work groups:* mixed groups, taken from the Regional Commission on Drugs for Castilla y León and the central services of the Castilla y León Healthcare System (Spanish acronym: *SACYL*) and Emergency Services, with professionals from the services involved at both hospital centers: Emergencies, Pediatrics and Psychiatry, especially in the child-youth areas and the Valladolid PRS. They have held periodic meetings to prepare the protocol and then gather the quantitative data, analyze the processes, identify the critical points and later adapt the intervention protocol, improving the coordination processes.

## RESULTS

### 1. Training Stage

There were 9 clinical training sessions (1 hour each) in Emergency Services and Pediatrics, which 127 nurses and physicians attended out of a total of 236 professionals in the 2 services, representing 53.8% of all the professionals; with 73.3% in the HURH; 45.6% in the HCUV and 18.8% in Emergencies ( $p < 0.000$ ). The training was reinforced with 4 *BMI training workshops (2 hours each)* in Emergency Services

		Professionals	Receiving information	Participating in workshop
HURH	N	101	74	27
	%		73.3%	26.7%
HCUV	N	103	47	13
	%		45.6%	12.6%
Emergencies	N	32	6	1
	%		18.8%	3.1%
Total	N	236	127	41
	%		53.8%	17.4%

and Urgencies and Pediatrics at the hospitals, in which 41 professionals (17.4% of the total) participated; 27 staff members belonged to the HURH, 13 to the HCUV and 1 to Emergency Services; at 26.7%, the percent of professionals from HURH urgencies was significantly greater ( $p < 0.01$ ) than the 12.7% from HCUV or the 3.1% from Emergency Services (and less in that participation only happened with 1 professional). There were also information sessions in the Psychiatry Services, which were not taken into consideration because Psychiatry is not involved in the process, unless there is psychological comorbidity. (Table 4).

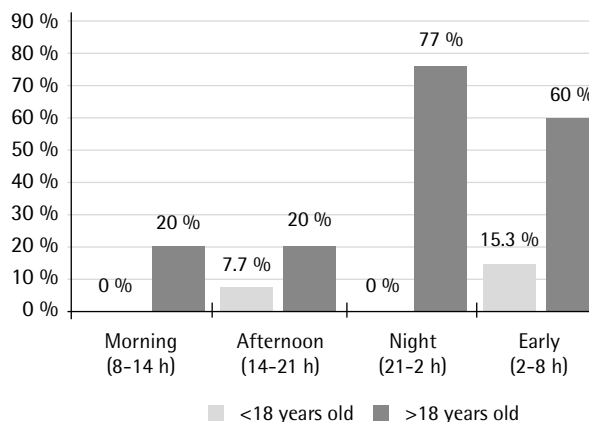


Figure 2

*Time distribution of emergencies satisfying the case criteria by age groups*

	Hospital urgency indicator	Satisfying case criteria	Cases with brief intervention in Emergency Services	Referrals to the Prevention Reference Service (PRS)
<b>PEDIATRIC</b> ( $< 14$ years)	3 (1♂ and 2♀)	3 (1♂ and 2♀)	1 ♀	1 case (1♀, selective prevention)
<b>ADULT</b>				
14-15 years	16 (9♂ and 7♀)	16 (10♂ and 6♀)	6 (2 ♂ and 4♀)	2 cases (1♂y 1♀ universal prevention)
16-17 years	23 (15♂ and 8♀)	9 (8♂ and 1♀)	8 (6♂ and 2♀)	3 cases (3♂, universal prevention)
18-21 years	51 (32♂ and 19♀)	21 (10♂ and 11♀)	6 (1♂ and 5♀)	2 cases (1♂, universal prevention; 1♀, indicated prevention)
<b>TOTAL</b>	<b>93 (57♂ and 36 ♀)</b>	<b>49 (29♂ and 20♀)</b>	<b>21 (9♂ and 12♀)</b>	<b>8 cases (5♂ and 3♀)</b>

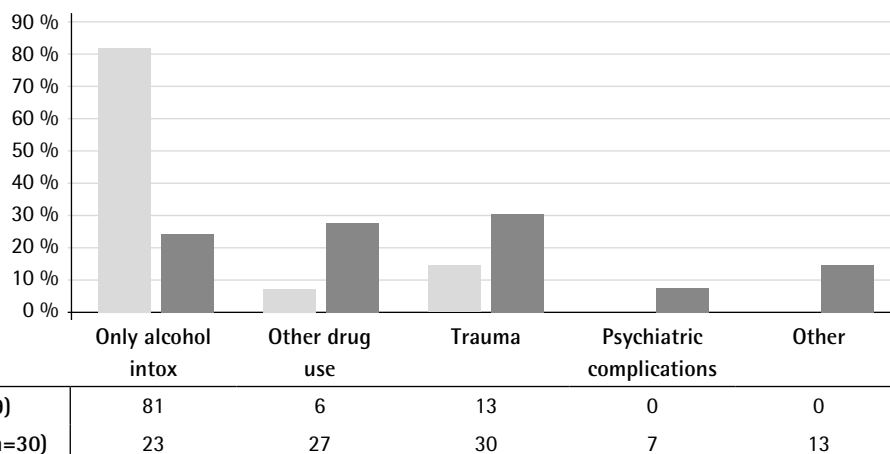


Figure 3 Presence of other diagnoses in hospital emergency cases by age group

## 2. Cases detected and with intervention by Healthcare Emergency Services

The cases identified varied according to the dates on which they occurred: 87.5% happened on important dates in holiday periods (weekends during summer vacation, St. John's Eve at the beginning of summer, the festivals on 15th August, patron saints' festivals, Halloween and Christmas). The time schedule of Emergency Service treatment in cases for which the BMI was given and the Río Hortega Hospital Emergencies were notified (n=16) varied depending on the age group. (Figure 2).

The Emergency Healthcare Services and the Medical Emergency Units (MEUs) detected 11 cases (22% of the cas-

es captured), which were all referred and with which interventions were carried out in the hospital. The indicator of hospital emergencies detected 93 urgencies involving individuals aged less than 22 years, of which 49 satisfied the case criteria. The 18-21 year age group was the most numerous with respect to urgent treatment (n=51), but those satisfying the case criteria fell to 41.2% (n=21); in the 16-17 year age group (n=23), it was 39.1% (n=9), while in the 13-15 year age group (n= 19), 100% satisfied the case criteria.

In 21 of the cases (43% of the cases), a brief intervention was carried out by Emergency Services and 8 of these families (38%) consented to PRS referral. The prevention team then contacted them (they represented 16% of the total potential cases detected in urgent treatment). The oth-

er 13 cases refused the referral, 69.2% of the cases being aged 16 years or older. (Table 5).

No statistically significant differences were found in the percent of cases of hospital urgencies between the HCUV and HURH hospitals (48 urgent episodes [32♂ and 16♀] in the HCUV, of which 50.0% [15♂ and 9♀] satisfied case criteria, compared to 45 urgent episodes [25♂ and 20♀] in the HURH, of which 55.6% [14♂ and 11♀] satisfied case criteria). However, statistically significant differences ( $p < 0.002$ ) were indeed found in the percents for the cases in which professionals intervened: in the HCUV, there was an intervention in 20.8% (2♂ and 3♀), compared with 64% (7♂ and 9♀) in the HURH. It is noteworthy that the HURH did not manage to achieve any referrals, while 8 cases were referred (5♂ and 3♀; 32% referrals or 50% of those that received interventions) to the PRS from the HURH.

In the hospital-treated urgent situations that satisfied case criteria, other emergency-related reasons in addition to alcohol intoxication were found. These additional motives were found more frequently in individuals older than 15 years (81%, compared to 23% of the minors 15 years old or less). The most frequent were other consumptions (27% vs 6%), trauma (30% vs 13%), psychiatric complications (7% vs 0%) or other reasons (13% vs 0%), which included seizures, tachycardia and sexual abuse. It is worth mentioning that cannabis was the main drug indicated by those that presented consumption of multiple drugs. (Figure 3).

### 3. Waiting time

With respect to delay in transmitting information, the deadlines established in the protocol were met in 100% of the cases: notification from the Emergency Services to the RCD in 24–72 hours, from the RCD to the PRS in 24/48 hours, and the PRS contacted the family in the next 24 hours to set up the date and time for the assessment appointment the following week. However, participation in the universal and selective prevention programs revealed a delay of more than 5 months, while for indicated prevention it was only 1 week, fulfilling the deadline established.

## DISCUSSION

Based on the alcohol consumption data (ESTUDES<sup>1</sup>) in the last few days for binge-drinking (♂32.3%; ♀31.0%) or intoxication (♂21.2%; ♀22.3%), we could expect 5,660 situations of harmful consumption or intoxications for the Valladolid areas (focusing only on the 14–18 year group). However, only 93 were detected, representing 0.02% of the 10–13 year group, 0.22% of prevalence in the 14–18 year group and 0.30% in the 18–21 year group. Consequently,

the demand for treating problems derived from drinking is low, as other studies have indicated<sup>6</sup>. A possible explanation is that the mildest cases never get treated by the Emergency Services or hospital urgencies, or that they are discharged by the non-medical units of 112 [Emergency hotline]. In addition, other studies have shown that interventions arising from emergencies only reach a part of the population of adolescents and younger children that drink<sup>12–15</sup>, which poses the need to coordinate the Ícaro-Alcohol Program with other community interventions for prevention. -

The data from the pilot shows that, up to the age of 15 years, the percent of cases is similar for boys and girls (47.4%♀), while the cases are more frequent for boys (62.5%♂) in older individuals (>15 years). These data agree with studies that find a greater frequency of binge-drinking among the younger girls, aged 14 and 15 years<sup>28</sup>.

The method of hospital access contrasts with that found in other studies<sup>4</sup>. In those studies, there is a larger proportion of cases (up to 81.9%) that are transferred to the hospital by ambulance; however, in our pilot experience, the majority of the cases came to the hospital on their own, and only 22.4% were referred from the MEUs.

The pilot data indicate a low rate of intervention by Emergency Services: 57% of the cases did not receive any type of specific intervention. There are multiple barriers to implementing this type of intervention in Emergency Services, which are more prepared to treat intoxications than to promote health<sup>8</sup>. There are significant differences in the participation in training between the hospitals, corresponding to lower intervention and referral percents, which have been identified as a key element in intervention effectiveness<sup>8</sup>. The professionals involved have suggested that this lesser level of involvement is also defined by the involvement of the management teams, which has been greater in the hospital with a better intervention rate; consequently, this is also an element that has to be considered in the program. Turning our focus to the limited number of families giving their consent for referral to the PRS after the intervention (38%), this might be due to the fact that the families do not perceive drinking as risky behavior and/or that the BMI was not carried out with sufficient quality, whether from the professionals' lack of involvement in the program, lack of time or lack of skills, as various studies indicate<sup>29,8</sup>. The work group professionals have posed the need to simplify the intervention, as well as the informed consent to reduce resistance. These problems might be solved by improving BMI training for the professionals, simplifying the intervention and the consent form and improving PRS knowledge.

The cases that did not give their consent or that later did not want to go to the PRS were all cases of individuals



with ages older than 15 years. This could indicate a drop in intervention effectiveness in older individuals; 1 of the possible causes identified by the emergency professionals is that older age groups show less sensitivity towards the intervention as they perceive drinking to be less serious. These evaluations from the professionals have led to the proposal that the program would be more efficient if the target population were reduced to individuals with ages under 18 years, even though other interventions reach up to those that are 21 years old<sup>30,31</sup>.

The waiting list to participate in the universal and selective family Prevention Programs and in the awareness-raising workshops for adolescents has exceeded the established deadlines. Consequently, it is necessary to carry out an early prevention intervention appropriate for each family's needs; this intervention has to take advantage of the opportunity to intervene in a crisis situation, making the referral to prevention programs and workshops later as complementary treatments.

As a result of the first phase of the Ícaro-Alcohol Program pilot, the mixed work groups have improved the action protocol, making incorporating it into Emergency Services more practical: it has been refocused on individuals younger than 18 years old, training has been structured and protocolized, involving management teams has been planned, the information leaflet has been improved, the informed consent and the intervention (only FRAE) have been simplified. Reducing the FRAME to FRAE decreases application time, facilitates involving the professionals and does not affect the essence of the intervention, given that it is an initial intervention aimed at offering contact with the PRS, which is where the options for change are proposed.

Lastly, the role of the PRS has been strengthened to that of an immediate educational intervention with families referred there. The intensity of the PRS intervention will depend on the risk detected.

The rotation of Emergency Services personnel constitutes a limitation for any field work. These staff changes make it difficult to raise awareness of the need to incorporate this type of actions in emergency situations, as well as making controlling them harder. Another limitation is that the cases detected by the basic Emergency Services Support Units (which take care of mild or moderate cases of intoxication in situ) have not been included. Experience and the need for treatment that goes beyond treating threats to life are leading to a change in mentality for the healthcare system, and it is a change in trend towards a more integrated, preventive treatment model, which this study has made it possible to outline and define for our cultural context, improving screening and interventions.<sup>22,23</sup>

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## CONFLICT OF INTERESTS

There are no conflicts of interest to declare.

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