

Background:

In the past decade, according to recent literature, patients visiting the emergency department (ED) due to alcohol intoxication are becoming younger and more women are presenting. The aim of this study was to evaluate this evolution in characteristics of patients and analyse whether similar findings could be observed.

Methods:

A retrospective review of 1336 medical records was performed. All patients older than 16 years presenting to the ED with a primary diagnosis of alcohol intoxication in 2009 were compared with those presenting in 2014. If a patient presented multiple times within the study period, with each presentation meeting the inclusion criteria, each visit was considered as a separate case. Patients presenting with co-ingestion of other substances (apart from normal use of chronic medication), were excluded. Data retrieved from two tertiary university hospitals in Belgium were compared against each other. Three characteristics were investigated: age distribution, gender and blood alcohol concentration (BAC). Permission for this study was given by both hospital Ethics Committees.

Results:

University Hospital of Leuven (UHL) included 423 patients in 2009 versus 521 patients in 2014, respectively 0.77% and 0.96% (p=0.01) of all ED visits. University Hospital of Brussels (UHB) included 155 patients in 2009 versus 237 patients in 2014, respectively 0.23% and 0.33% (p=0.01) of all ED visits. Male-to-female ratio in UHL-patients showed a significant redistribution towards women: 2.09 in 2009 versus 1.50 in 2014 (p=0.02). This was due to a rise in following age groups: 16-20, 31-40 and 51-60 years old.

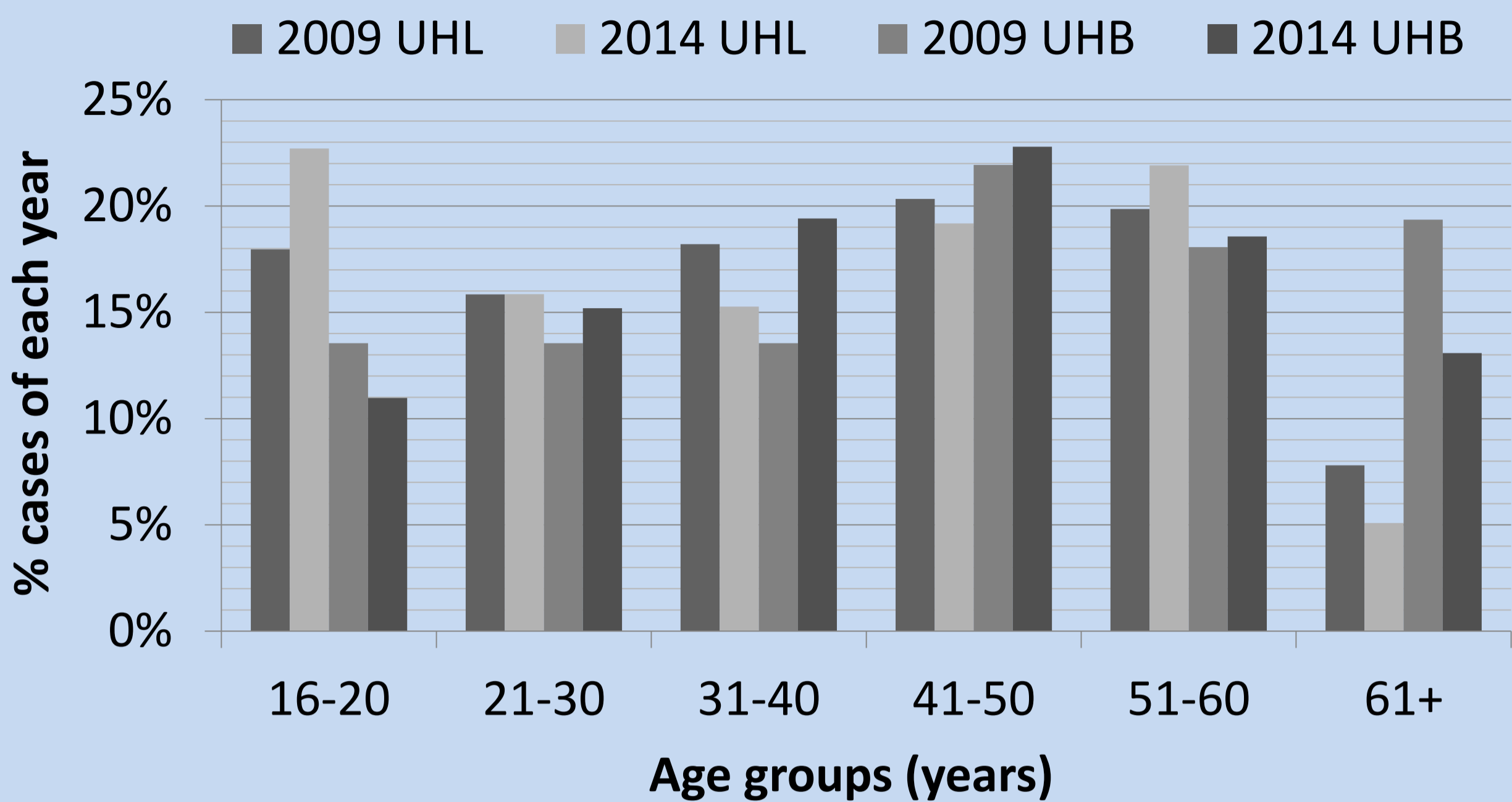


Figure 1: Age distribution of included patients.

Male-to-female ratio remained stable for UHB-patients: 1.87 in 2009 versus 1.66 in 2014 (p=0.59). Average BAC remained stable in both sexes and hospitals. More severe BAC-levels (>3g/l) diminished in male patients of UHL (p=0.01), but kept stable in women. UHB showed no change in more severe BAC-levels (>3g/l) of both sexes. Chi-squared test showed no change in distribution over age groups, although we observed a marked increase in age group 16-20 years old for UHL patients, which was not the case for UHB patients.

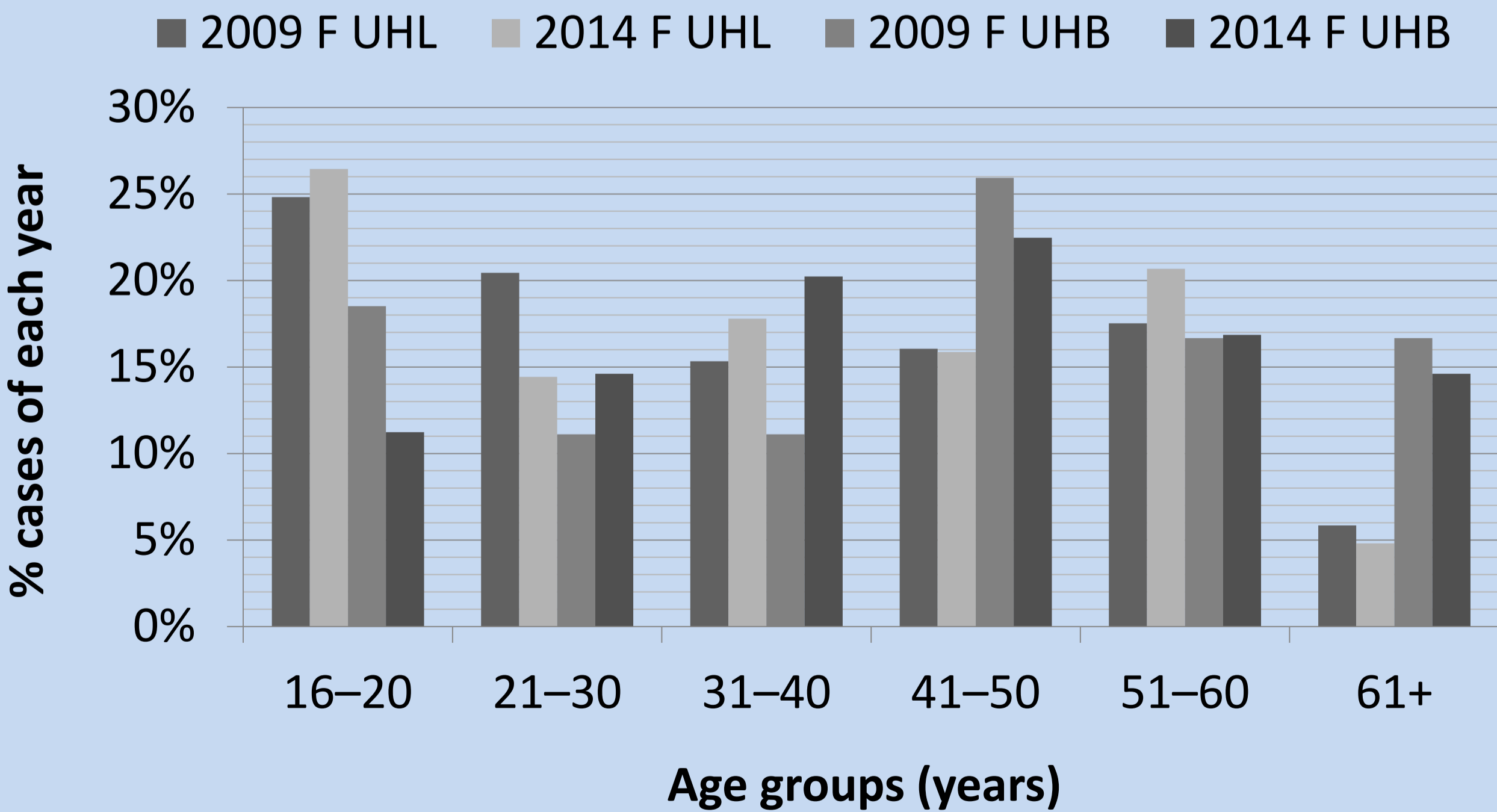


Figure 2: Age distribution of female patients.

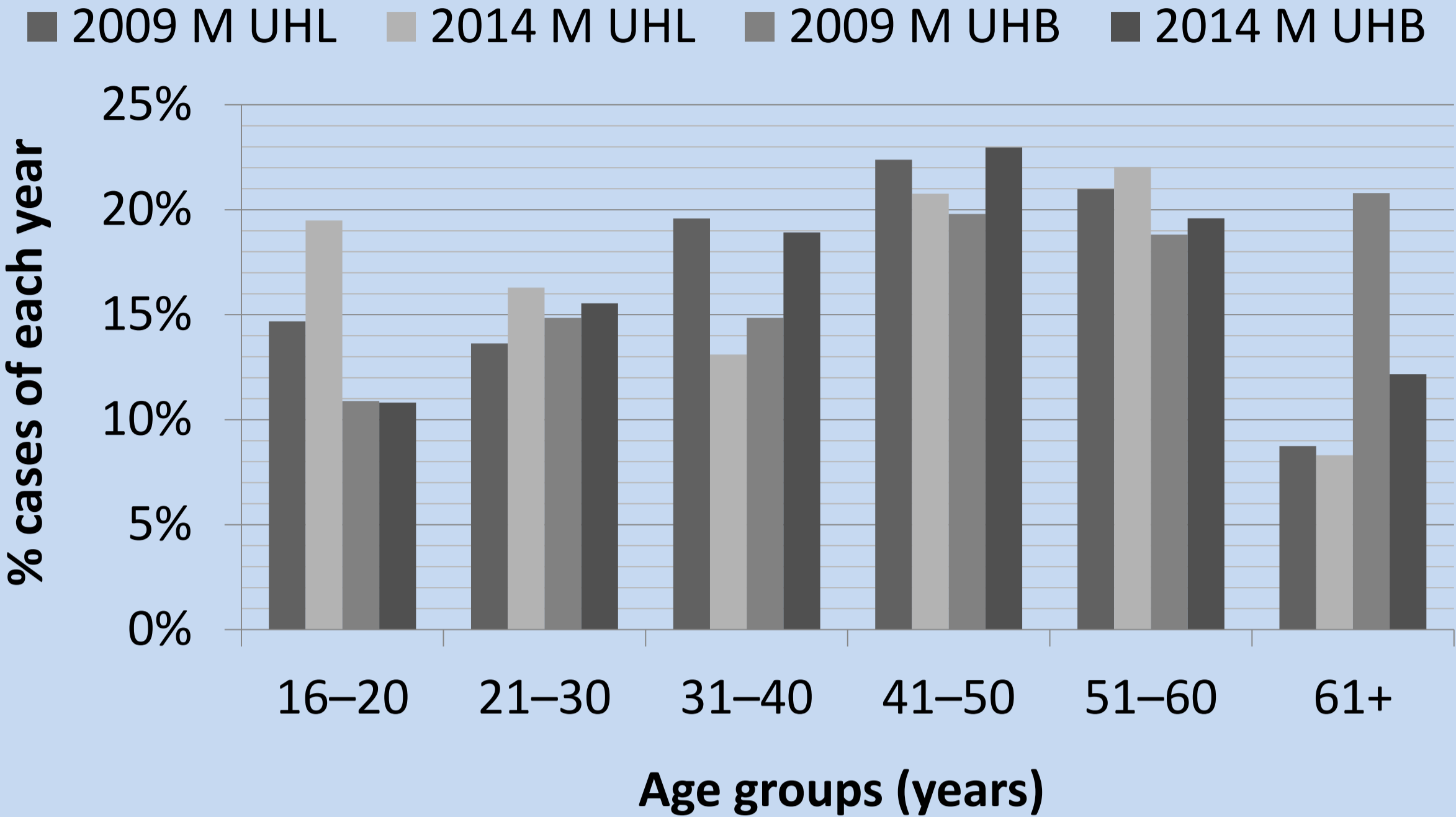


Figure 3: Age distribution of male patients.

Conclusion:

Since total alcohol consumption in Belgium decreased, but total number of alcohol intoxicated patients increased in both hospitals, there probably has been a change in alcohol consumption pattern. The rising phenomenon of social media and binge drinking could be an explanation for this change in consumption pattern, although further investigation is needed. Changes in the characteristics of patients visiting the ED due to alcohol intoxication still turns out to be demographic dependant, since the tendency of more young patients presenting could only be observed in one out of two hospitals. On the other hand, the rising tendency of more women presenting was observed in both hospitals, but only significant in one out of two. Implementing a screening method for alcohol abuse should be considered at the ED.