



GERIATRIC EMERGENCY MEDICINE
EMERGENZE-URGENZE NEL PAZIENTE ANZIANO

Verona, 16-17 maggio 2014



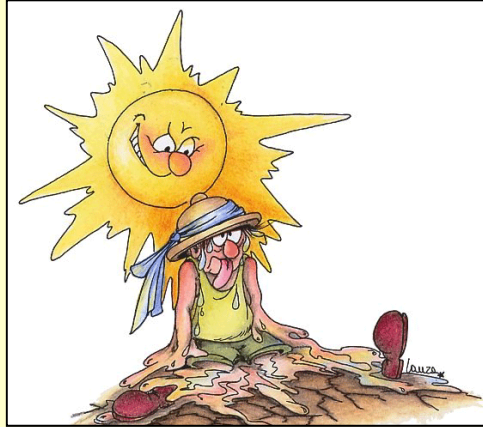
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The number of Emergency Department visits for psychiatric emergencies in the elderly is strongly associated with mean air temperature. Results of an eleven years survey.

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The context

A number of disorders, such as renal colics, stroke, atrial fibrillation and others, is epidemiologically related with seasonality and microclimatic variations.

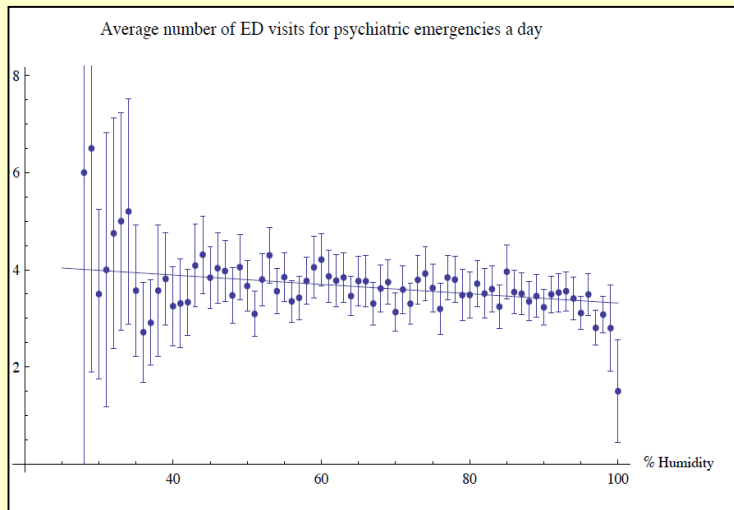
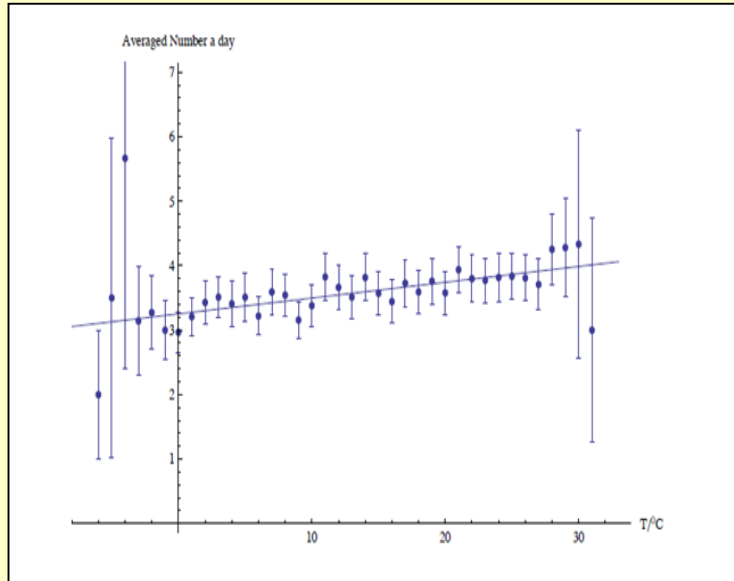


Parma and its province (2013)



- In Parma 190,522 residents
- In the whole Province 447,251
- Males 47%, Females 53%
- Immigrants 13.5%.
- Elderly (> 65 yrs) 23,1%
- Ageing index: 174,5 elderly / 100 young (0-14 yrs)

ED visits for psychiatric emergencies in Parma



We have previously demonstrated that psychiatric emergencies follow a significant seasonal variation, showing a strong positive association between number of daily ED visits and mean daily air temperature ($R=0.82$; $P<0.001$), and an inverse association with mean daily air humidity ($R=-0.52$; $p<0.001$). [11,786 cases recorded during years 2002-2010]

G. Cervellin et al.
Emergency Care Journal 2014(in press)

***“Certi vecchi sono come gli elefanti.
Di tanto in tanto si eccitano e
diventano selvaggi”***

Charles Dickens, Il Circolo Pickwick, 1836

Age groups (years)	Females	Males	Total
0-10	0	1	1
11-20	352	192	544
21-30	1036	1020	2056
31-40	1449	1838	3287
41-50	1382	1470	2852
51-60	874	530	1404
61-70	475	280	755
71-80	310	205	515
81-90	213	128	341
91-100	15	16	31
	6106	5680	11786

Methods

- **All ED visits for psychiatric emergencies were retrieved from the Hospital database during the years 2002 to 2012.**
- **The total number of ED visits was 900,204 throughout the period, 14,764 of which for emergency psychiatric problems.**
- **Among these, 791 patients aged 65-75, and 850 patients aged more than 75 years were identified.**

In our facility Emergency Physicians usually do not ask for psychiatric evaluation for patients affected by dementia

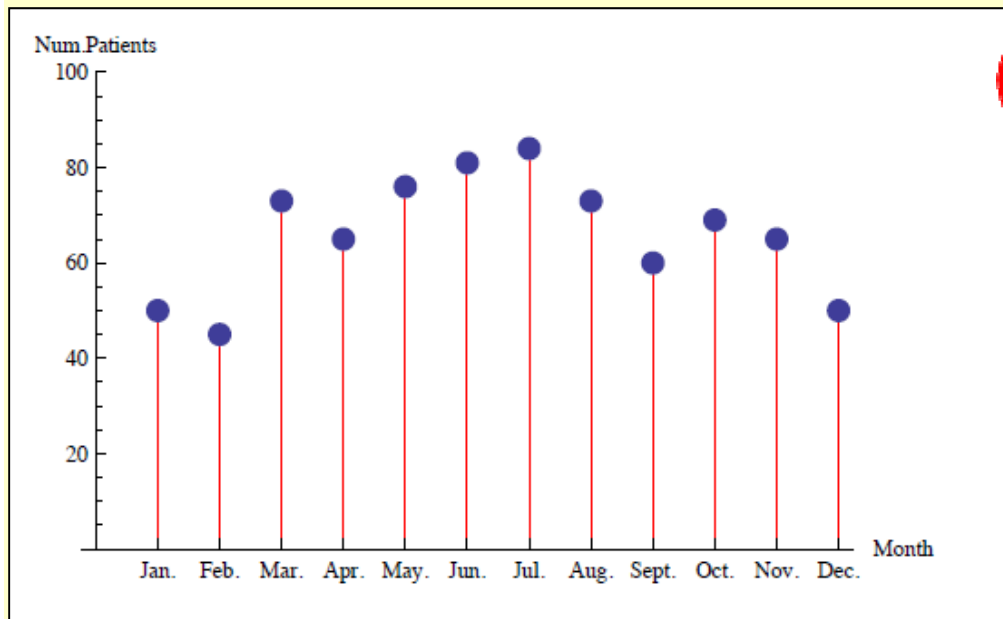
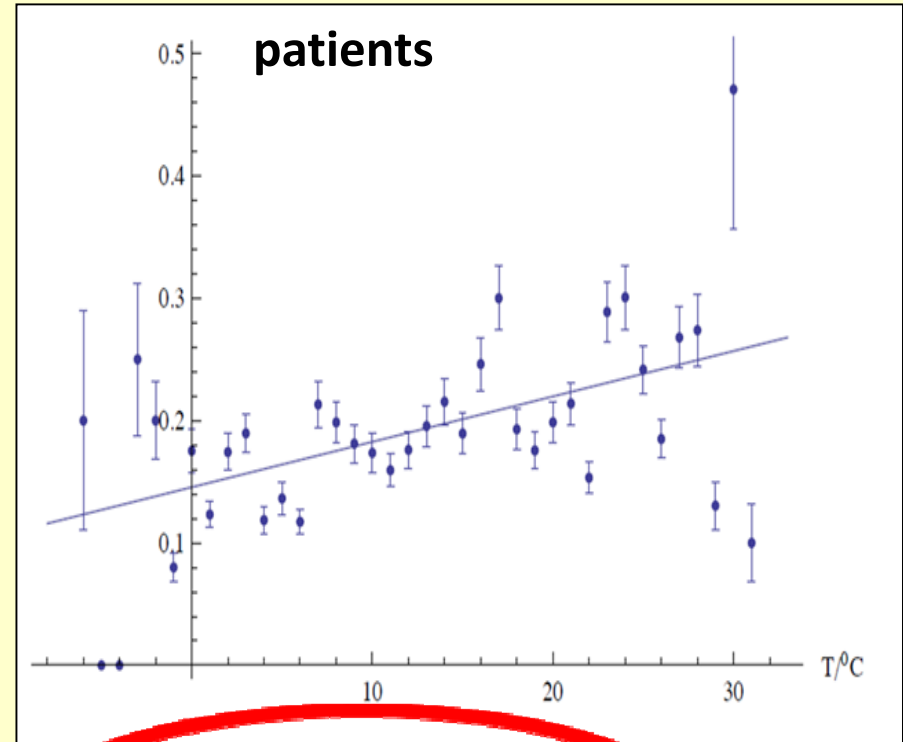
ALT!!

DIVIETO D'AGGRESSO!!



Patients 65-75 yrs

Total: 791
Males: 316
Females: 475
Discharged: 427
Admitted: 364



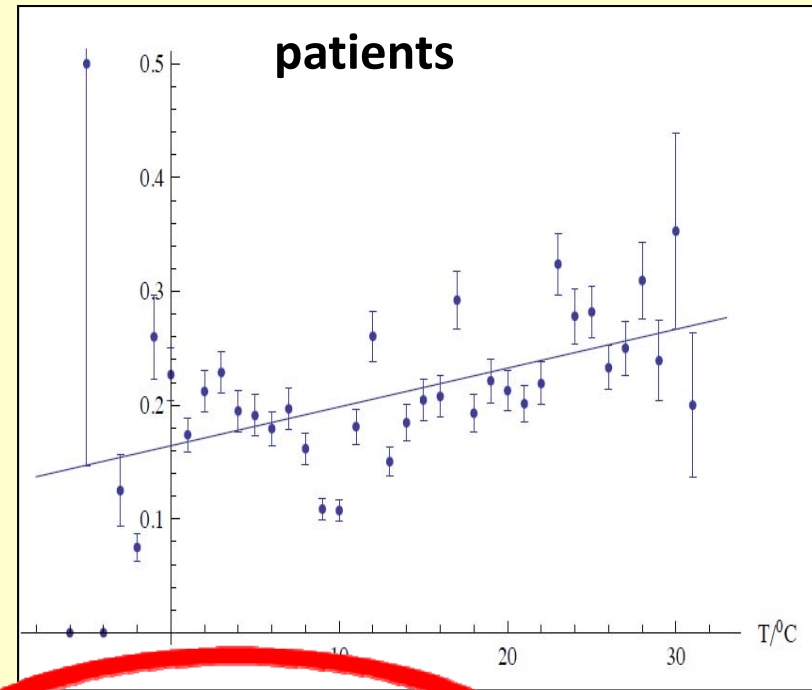
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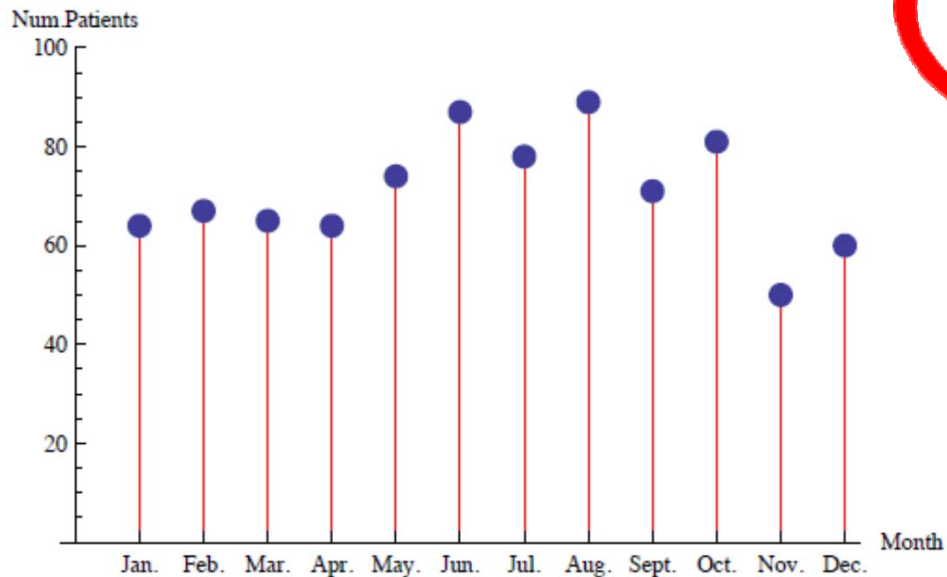
	Estimate	Standard Error	t-Statistic	P-Value
1	0.145526	0.0134372	10.8301	5.82603×10^{-27}
y	0.00370918	0.000820788	4.51904	6.39066×10^{-6}

Patients >75 yrs

Total: 850
Males: 337
Females: 513
Discharged: 415
Admitted: 435



P: <0.001
R: 0.60
(T= 0° – T= 30°) + 62,25%

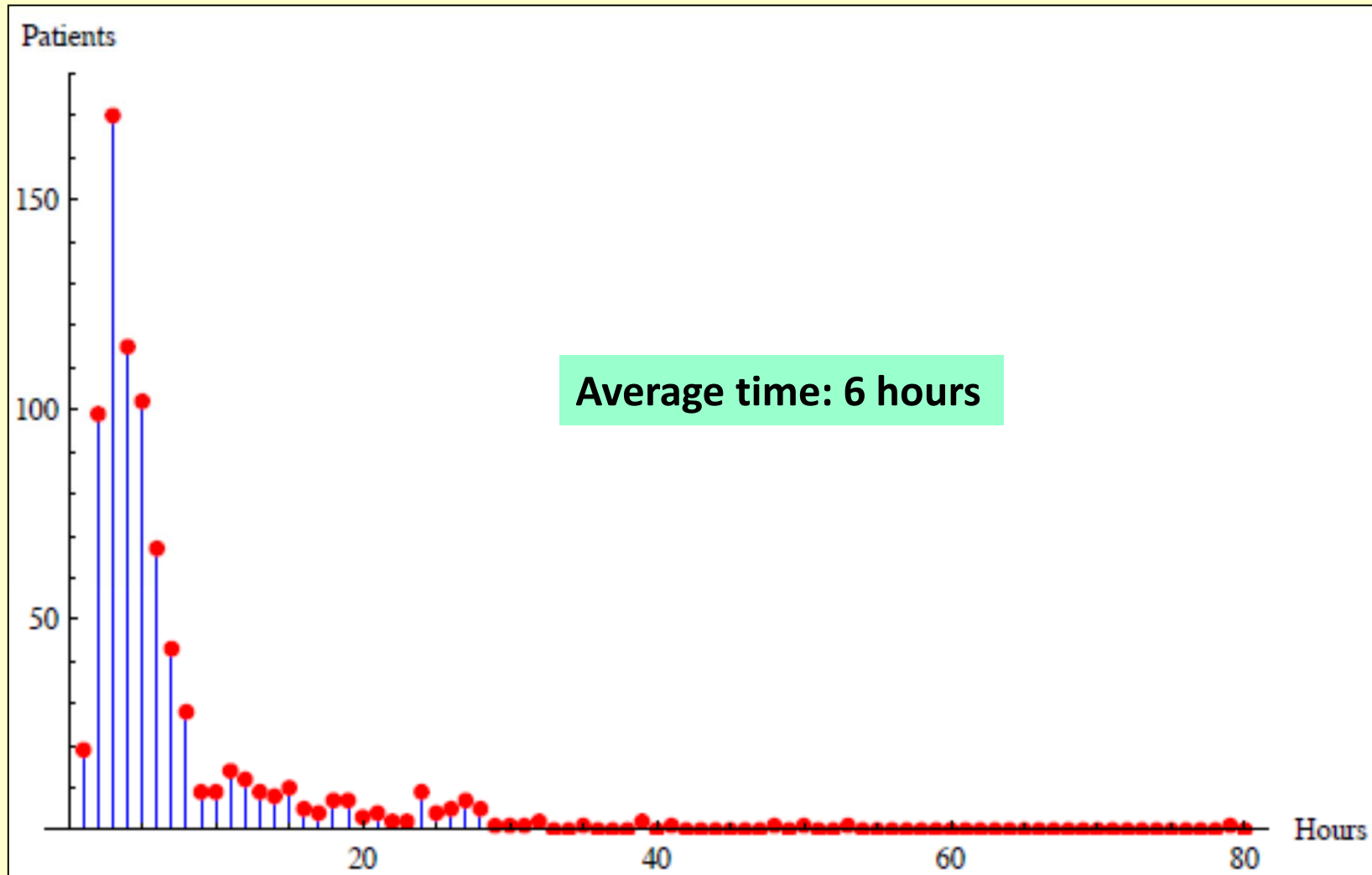


FittedModel [0.00341014 y + <<20>>]

fit1d = %["ParameterTable"]

	Estimate	Standard Error	t-Statistic	P-Value
1	0.164349	0.0137375	11.9635	1.95076×10^{-32}
y	0.00341014	0.000839129	4.0639	0.0000491824

Distribution of processing time in ED



Conclusions (1)

- **We found a strong seasonal distribution of emergency psychiatric visits for elderly people, peaking in summer and at the beginning of spring.**

Conclusions (2)

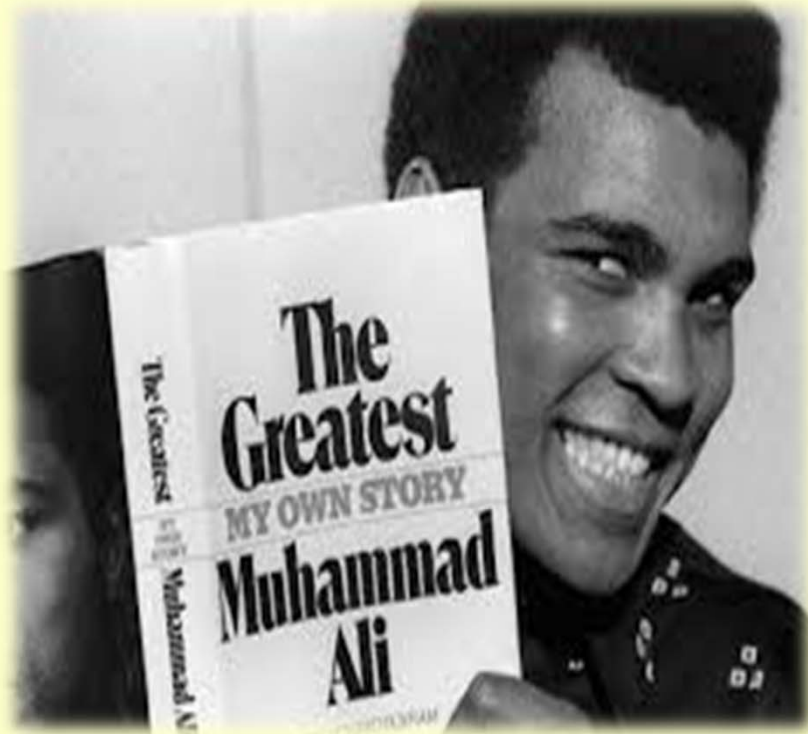
- **For both analyzed age groups, the linear regression analysis showed a strong positive association between number of daily emergency psychiatric visits and mean daily air temperature (for age group 65-75, $R=0.57$; $P<0.001$; for age >75 , $R=0.60$; $P<0.001$).**

Conclusions (3)

- **In our ED we have observed a slight decrease of total visits during summer months in the last fifteen years, with July and August exhibiting a 5 to 8% lower prevalence than March or November. Therefore, we can not explain our findings in terms of correlation with increase of total ED visits.**

Conclusions (4)

- **Since most of the patients are unaware of the risks from temperature/humidity exposure, suitable psycho-education counseling should be combined with outpatient care programs.**
- **Future research should also be focused on the impact of other environmental variables, and evaluate risk assessment and precautionary perspectives on specific disorders.**



**A man who views the world the same
at fifty as he did at twenty has
wasted thirty years of his life**
Muhammad Ali (Cassius Clay) Louisville, 1942