

# WORLD KIDNEY DAY: FIVE YEAR ANALYSIS OF HEALTH AWARENESS EVENTS IN UK

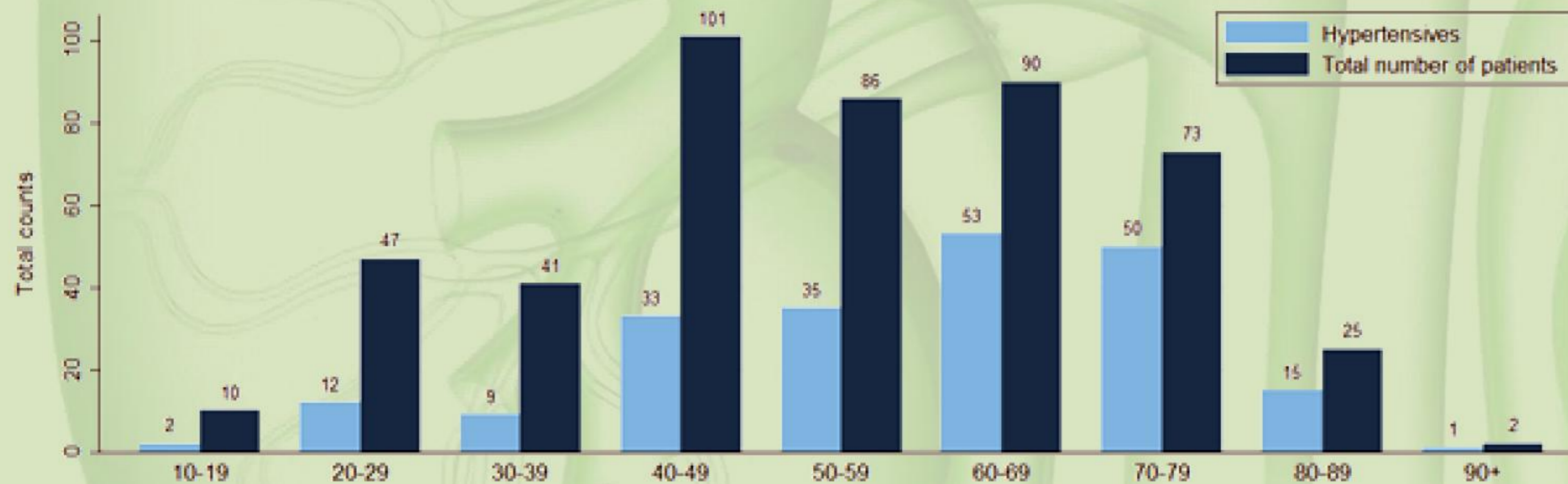
Shah S<sup>1</sup>, Agarwal K<sup>1</sup>, Nelapatla R<sup>1</sup>, Pandya B<sup>1,2</sup>

<sup>1</sup>Faculty of Health and Life Sciences, University of Liverpool, Liverpool, UK

<sup>2</sup>Nephrology Department, Aintree University Hospitals, Liverpool, UK

## INTRODUCTION

Celebrated annually on the second Thursday in March, World Kidney Day (WKD) aims to spread awareness and educate individuals with regards to kidney disease and their general health. From 2009 onwards, we have held health awareness clinics for the public at various sites in Liverpool, UK. Individuals were able to come for a free health check-up and get professional advice about kidney disease and healthy lifestyle. The prevalence of hypertension, diabetes and resultant pathologies is high amongst the population<sup>1</sup>. Health awareness events such as this enable us to catch 'at-risk' patients whilst helping to prevent long term complications.



## AIMS AND OBJECTIVES

The aim was to review the general health (blood pressure; blood glucose; blood cholesterol; urine abnormalities and heart rate) in Aintree University Hospital staff and the general population in and around Liverpool, from the details available from WKD events.

## METHODS

Participants attending various WKD events at hospital, shopping malls and railway stations in Liverpool over the last 5 years volunteered for various health tests: blood pressure (electronic blood pressure monitor), random capillary blood glucose (CBG) (blood glucose meter), random blood cholesterol (blood cholesterol meter), urinalysis (automated urinalysis machine) and manual heart rate assessment. Participants were advised to provide mid-stream urine samples for dipstick analysis with instructions on how to do so.

## REFERENCES

1. The Blood Pressure Association. ([www.bpassoc.org.uk](http://www.bpassoc.org.uk))

## RESULTS

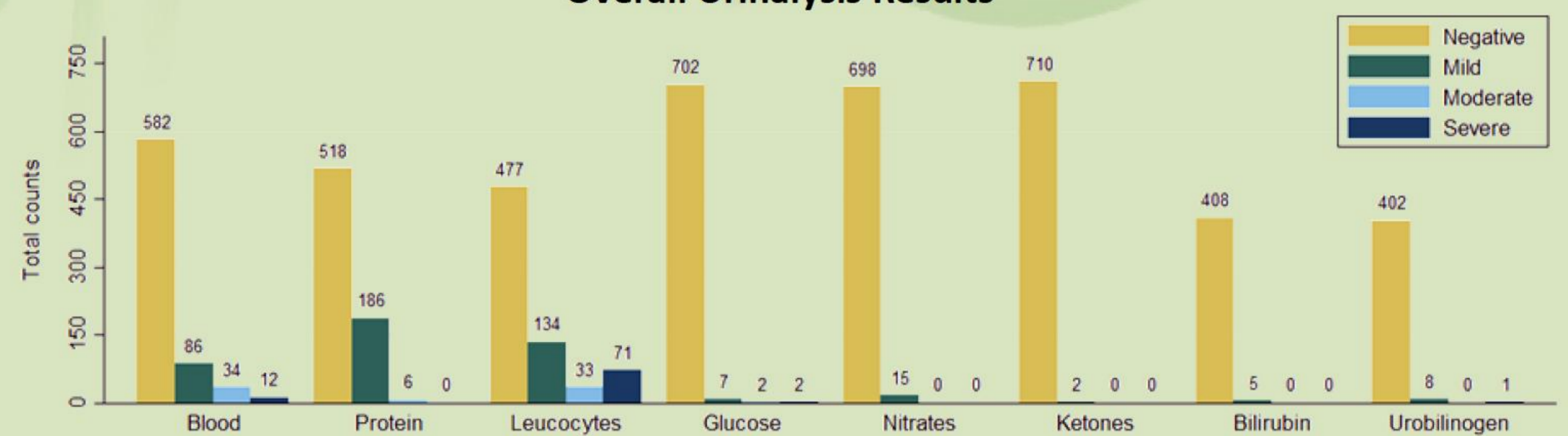
There were a total of 903 records of visits available between 2009 and 2013 (table 1) with a F:M ratio of 3:1; of these, 43 returned to the clinic on numerous occasions. The median age was 54.2 (IQR:42.8-68.3).

Table 1 - Summary of Patient Characteristics by Year of Visit and Overall

Variable	Total (N=903)	Before 2011 (N=333)	2011 (N=271)	2012 (N=205)	2013 (N=94)	P-value
Age at visit, median (IQR)	54.2 (42.8 - 68.3)	-	53 (41.6 - 67.4)	52.2 (43.1 - 68.6)	63.3 (43.5 - 72)	<b>0.041</b>
F:M	525:182	121:40	180:67	162:43	62:32	0.106*
Hypertension, n (%)	372 (47.8)	162 (53.5)	116 (54)	59 (31.8)	35 (47.3)	<b>&lt;0.0001</b>
Systolic, median (IQR)	137 (123 - 152)	140 (124 - 156)	141 (127 - 155)	129 (118 - 142)	138 (122 - 150)	<b>0.0001</b>
Diastolic, median (IQR)	80 (73 - 89)	82 (73 - 90)	82 (73 - 91)	79 (72 - 85)	80 (73 - 90)	<b>0.013</b>
Heart rate, median (IQR)	76 (68 - 86)	-	76 (68 - 83)	77 (69 - 88)	76.5 (70 - 83)	0.134
BGM, median (IQR)	5.2 (4.6 - 5.9)	5.4 (4.7 - 6.0)	4.9 (4.5 - 5.7)	5.4 (4.7 - 6.2)	4.6 (4.1 - 5.4)	<b>0.0001</b>
Normal, n (%)	475 (72.7)	155 (80.3)	149 (73)	136 (75.1)	35 (46.7)	<b>&lt;0.0001</b>
>10mmol/L, n (%)	8 (1.2)	0 (0.0)	2 (1.0)	3 (1.6)	3 (4.0)	<b>0.039*</b>
Cholesterol, median (IQR)	5.03 (4.5-5.7)	-	-	5.0 (4.5 - 5.6)	5.3 (4.6 - 6.0)	<b>0.024</b>

A total of 372 participants (47.8%) were found to be hypertensive (>140/90). The median BP was 137 (IQR:123-152) over 80 (IQR:73-89) mmHg respectively. Age was found to be a significant risk factor for developing hypertension with a greater likelihood of hypertension in older patients (figure 1). Over 16% of participants had a systolic pressure  $\geq 160$  mmHg or a diastolic pressure  $\geq 100$  mmHg. We also found 4 patients that may be classified as having hypertensive urgency (>200 mm Hg).

Figure 1 (above) – Breakdown of Hypertensive Cases with Age at Visit; and 2 (below) – Overall Urinalysis Results



Data from urinalysis showed that 18.5% had some degree of haematuria and 27% some degree of proteinuria (figure 2). 1.5% of patients had severe haematuria (+++) and some form of proteinuria. There were signs of leucocyturia in 33.3% of patients whilst 2.2% patients had haematuria, proteinuria and leucocyturia. Fifteen patients showed positive (+) nitrate results suggestive of infection. Median cholesterol was 5.03 mmol/L (IQR:4.5-

5.7) with a level >6.5 found in 8.7% of patients. CBG was normal in 73% of patients whilst 8 individuals had glucose >10 mmol/L (median 5.2; IQR:4.6-5.9).

## CONCLUSION

The above analysis shows that hypertension, urine abnormalities and hypercholesterolaemia are prevalent throughout the community. Regular events like this help to discover undiagnosed patients and increase confidence in the community, thus improving health check-up attendances. It also helps identify and prevent severe consequences of undiagnosed and prevalent risk factors in the community.