A cross sectional study over 6 months in Emergency Department of UMMC, in patients between 12 to 60 years old, suspected or confirmed dengue fever who fulfill the inclusion criteria. A picture of the urine sample taken in a standardized photobooth, then processed using Adobe Photoshop™ to index urine colour into red, green and blue (RGB) colour space and be given a unique RGB value. The RGB values were then correlated using Pearson’s correlation with patient’s clinical and laboratory hydration indices.

RESULTS

There were strong correlations between urine osmolarity and urine specific gravity with RGB of urine colour. The blue component has the highest correlations with urine specific gravity and urine osmolarity. There were moderate correlations between RGB component and serum urea and ability to tolerate orally.

CONCLUSION

Urine colourimetry using mobile phones has high correlation with hydration status of dengue patients, making it a potential hydration status tool.