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## P320 -Auditing the use of water-soluble vitamin supplementation in haemodialysis patients against European Renal Best Practice and Renal Association guidelines.

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### Background

During 2016, the Renal Association (RA) (1) published draft guidance to support the routine supplementation of water-soluble vitamins (WSV) in haemodialysis (HD) patients. The evidence grade for this recommendation is '1C', that is: a strong recommendation; albeit 'low-quality evidence'. In addition, the European Renal Best Practice (ERBP) (2) recommends daily supplementary amounts of each WSV; with the caveat that 'more robust evidence' is necessary.

### Aims

1. To investigate local compliance to the RA (1) draft guideline on routine supplementation of WSV in HD patients
2. To determine whether supplementary WSV intakes of a local HD sample meet ERBP (2) recommendations

### Method

Cross-sectional data were collected retrospectively from all HD electronic patient records in June 2018. Patient identifiable labels were removed for analysis. The patients' drug lists were filtered to include only products containing WSV. Folic acid and cyanocobalamin, used for treating deficiencies of vitamins B9 and B12, were removed from the drug filter allowing those patients who were also on a WSV to remain in the analysis.

For each nutritional product used in this audit, the quantities of individual WSV they contained were acquired. There were occasions where a product was prescribed 2 or more times per day or where combinations of different products were used. In every instance, the WSV content of all daily nutritional supplements per patient was totalled.

The totalled daily WSV supplementary intakes were analysed by calculating the mean, median, mode and standard deviation for each WSV. The mean intake of each WSV was compared against ERBP (2) recommendations.

### Results

At the time of data collection, there were 450 HD patients (including 18 on home HD). The mean age of this population was 65 years (range: 18-90 years). 67 (14.6%) of HD patients were prescribed a product containing WSV.

Of this sample of 67 patients, there were 8 different nutritional products and 18 combinations of these products used. The most commonly used products were a renal multivitamin (42% of prescriptions) and a pre-made high-energy high-protein supplement (19% of prescriptions). The results for supplementary WSV intakes measured in mg/day are illustrated in Figure 1 and those measured in µg/day are illustrated in Figure 2.

Of the analysed sample, 15.5%, 46.6% and 48.3% had daily intakes within ERBP (2) recommended intakes for vitamins B1, B6 and B9, respectively. 12.1% of this sample met the ERBP (2) daily supplementary recommended intakes for vitamins B2, B7 and C. No patients met the ERBP (2) recommended intakes for vitamins B3, B5 and B12. Figure 3 shows the percentages of the sample for each WSV, who were below, in line with, or exceeded ERBP (2) recommendations.

#### Conclusion

This audit describes that only a minority of HD patients in practice are routinely prescribed supplementary WSV. Almost 50% of patients that receive WSV supplementation have been identified as having an intake lower than ERBP (2) recommendations.