

# Vegetarian Weaning: A content analysis of the Accuracy and Quality of advice available on the Internet.

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## Background

It is widely recognised that a healthy diet and lifestyle can enhance quality and longevity of life (Heidemann *et al.*, 2008; NHS, 2017). Some individuals may choose to follow alternative diets such as vegetarianism to enhance their health (Patience, 2013). The number of UK vegetarians is rising (Thane & Bates, 2000 & Clarys *et al.*, 2014) therefore information regarding vegetarian weaning is needed to support the critical growth and developmental periods of infancy (Genova & Guyda, 2007 & Ferrara *et al.*, 2017).

The Internet is often identified as a primary source of data for individuals seeking health information (Leiffers *et al.*, 2014 & Kennedy *et al.*, 2016) particularly in relation to infants (Bensley *et al.*, 2014). Whilst accurate information on vegetarian weaning is available in health publications and on the WHO, DoH and NHS websites, the quality and accuracy of nutritional advice relating to vegetarian weaning found on the Internet is largely unknown therefore, the aim of this study was therefore to analyse the accuracy and quality of advice regarding L<sub>0</sub>VW, available to UK parents online.

## Methods

A Cross-Sectional analysis of n=20 systematically sampled webpages. Two research tools assessing the overall accuracy and quality on webpage information were devised based on validated online health information quality instruments and nutritional guidelines from the UK leading advisory bodies; WHO, NICE, BDA & NHS.

To obtain an authentic example of websites available to UK parents, the first 20 webpages of results from three keyword searches were used. "Vegetarian Weaning", "Vegetarian Infants" and "Weaning onto a Vegetarian Diet". Webpages ranged across 4 categories; HCW, HCl, VW and PW. 60% of webpages were from UK origin compared to 40% overseas webpages.

## Results

The combined overall score for accuracy and quality was health care professionals 70%, non-health care professionals 51%. Information provided by health care professionals, scored 80% for accuracy and 62% Quality. Non health care professionals scored 52% for accuracy and 50% for quality.

Table 1: Comparison between the Overall Accuracy of HCP and NHCP Webpages

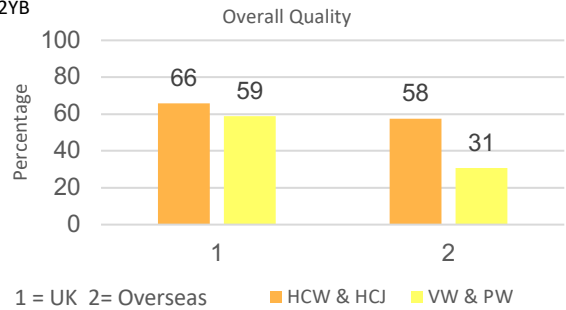
Category	(HCP) HCW/HCl %	(NHCP) PW/VW %	Significance	Null Hypothesis
Credibility	98	47	P=0.0001	Reject
Evidence Base	85	67	P=0.0671	Retain
Reliability	67	37	P=0.0101	Reject
Validity	64	25	P=0.0061	Reject
Readability	57	56	P=1.0000	Retain
Overall Total	80	52	P=0.0020	Reject

The average accuracy score was 67%, significant differences of webpages were observed between health care professional sites (HCP) and those from non health care professional sites (NHCP). The average scores were 80% and 52% respectively. FRE scores showed only 20% of webpages met the ONS (2017) website reading ease recommendation.



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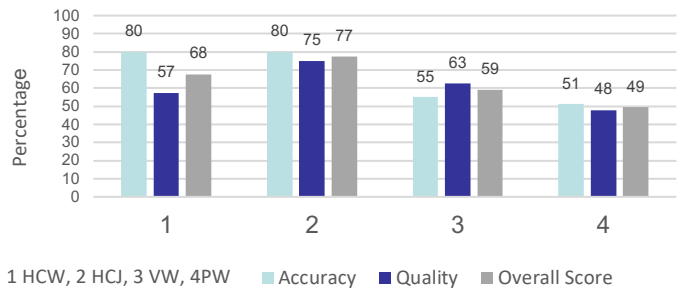
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## Results Continued:

The content of nutritional information forming the overall quality also ranged significantly, HCP scored 62% whilst NHCP Scored 50%. The origin of NHCP was important, the overall quality score of NHCP UK was 59% compared to NHCP from overseas sources 31%.

## Accuracy and Quality Score by Website Groups



## Discussion and Conclusion

The combined overall score for accuracy and quality was 70% for HCP and 51% NHCP. The HCP webpages were of higher accuracy and quality than NHCP webpages.

Overall scores varied between the four categories, whilst HCW/HCl had higher overall scores, the likelihood of parents accessing, understanding and obtaining sufficient information was low due to complex information and unobtainable FRE reading scores on 80% of webpages. Statistical analysis tests for the overall quality were not significant.

In conclusion, although webpages tended to cover protein, iron and planning, they did not reflect the recommendations of the authoritative bodies; DoH (1988), WHO (2004 & 2005), NICE (2014), BDA (2016) & SACN (2017). Improvements could be made to develop specific standards/quality control methods, to improve overall accuracy and quality of online information in relation to L<sub>0</sub>VW.

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