

Speaker Name	Statement
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High rates of financial crisis, food insecurity and detectable viral loads in those referred for nutrition support

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Introduction and Aims

- US research demonstrates an association between food insecurity and unsuppressed viral load ^(1,2)
 - Relationship potentially mediated by both biological and behavioural mechanisms.
 - Adherence to medication
 - Appropriate absorption of medication

But does this relationship cross the pond?

- Aim: To investigate relationships between nutritional and socio-economic factors with viral load.

Background

The Food Chain provide short-term interventions at a time of nutritional crisis

- ✓ Dietetic advice
- ✓ Grocery deliveries
- ✓ Prepared meal deliveries
- ✓ Bi-weekly Eating Together communal lunch
- ✓ Eating Positively interactive cookery and nutrition classes

Information provided at referral

Health

- CD4 and Viral Load
- Years since HIV diagnosis
- HAART Status
- BMI
- Co-morbidities and other medications

Background

- Accommodation status
- Accommodation stability
- UK residency status
- Number of dependants at same address

Financial

- Household income
- Employment status
- Income sources

Method

Data from accepted referrals between January to June 2015 was anonymised and collated.

Covariates included were:

Health	<ul style="list-style-type: none">• Body Mass Index*• HAART status• CD4 count• Years since diagnosis	Background	<ul style="list-style-type: none">• Accommodation stability• UK residency status• Number of dependants at the same address.	Financial	<ul style="list-style-type: none">• Number of previous referrals• Household income• Income sources• Employment status
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*BMI was grouped as - $<18.5 \text{ kg/m}^2$ - Underweight
- $18.5 - 24.9 \text{ kg/m}^2$ - Normal
- $\geq 25 \text{ kg/m}^2$ - Overweight

Undetectable viral load was classified as **<50 copies / ml**

Chi-squared tests performed to explore relationships between variables.

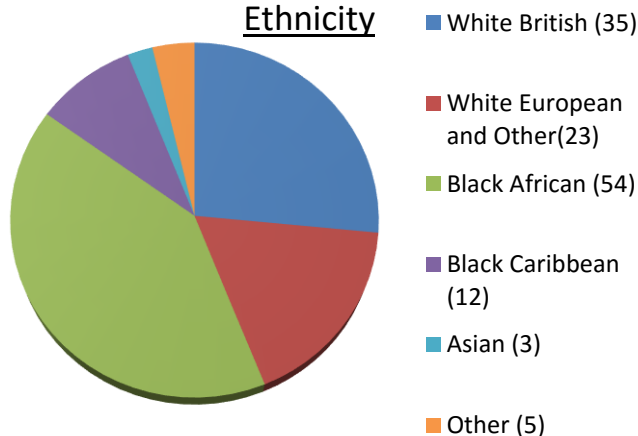
High rates of financial crisis, food insecurity and detectable viral loads in those referred for nutrition support

Results - Demographics

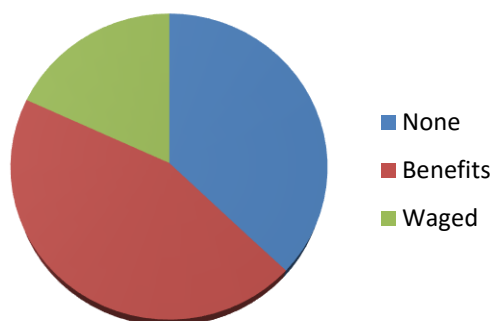
132 participants were included in the analysis;

- 59.8% Male
- Mean BMI; 25.3 (± 6.0)
- 87.9% treated with HAART
- 34.4% had a detectable VL
- 60.2% lived in stable accommodation
- 67.2% had no dependants

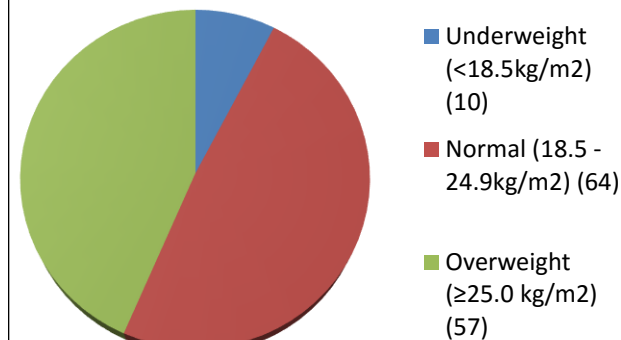
Ethnicity



Income Source



Body Mass Index

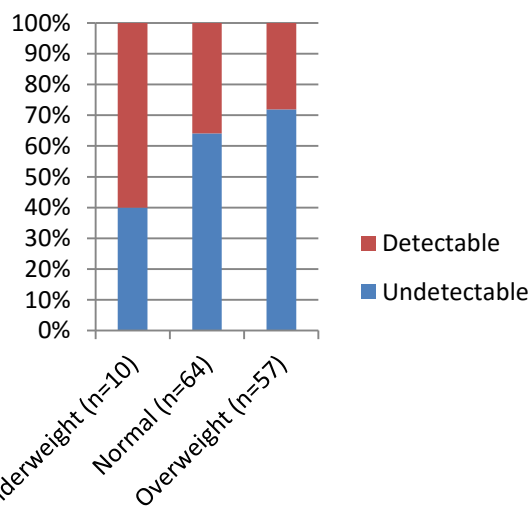


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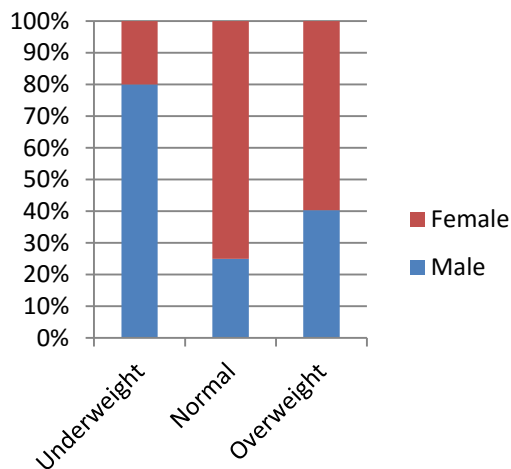
Results

- ❖ A detectable VL was not seen to be independently associated with any factor.
- ❖ Those with a combination of low BMI, white ethnicity and male gender were most likely to have a detectable viral load.
- ❖ HAART use associated with an undetectable VL ($p < 0.001$)
- ❖ Overweight was associated with African ethnicity ($p < 0.001$)

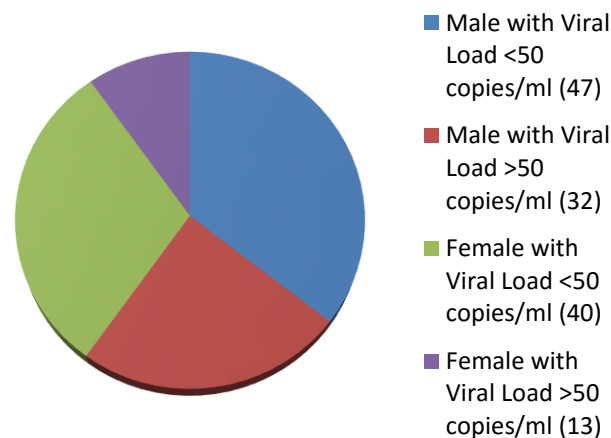
% in each BMI category with detectable VL



% male and female in each BMI Category ($p < 0.001$)

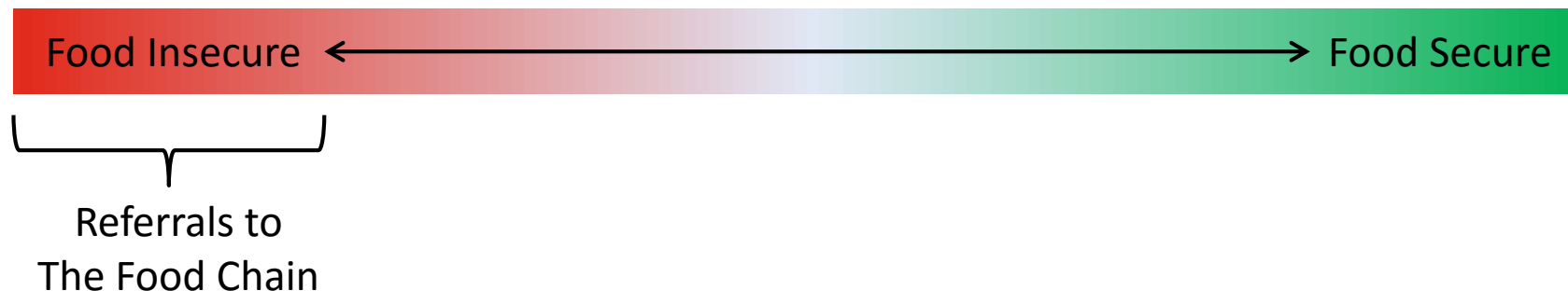


Gender and Viral Load



Limitations

- ❖ Population sample not reflective of the spectrum of food security



- ❖ Results not statistically significant
 - Small sample size
 - Difficult to demonstrate meaningful contrasts within data
- ❖ Data from different referrers
 - Accuracy of data provided
 - Differences in 'point of referral'

Conclusions

- Differing health and social care in the UK and USA may explain contrasts in relationship between VL and FI
- With 37.1% receiving no income and at high risk of food insecurity, there is potential to negatively impact VL.
- Additionally, with 43.6% being overweight, education supporting a healthy diet is a priority in the context of long term health outcomes.

Further research must employ a wide range of methodology to reflect the multi-factorial nature of food security

References: 1. Feldman MB, Alexy ER, Thomas JA, Gambone GF, Irvine MK. The Association Between Food Insufficiency and HIV Treatment Outcomes in a Longitudinal Analysis of HIV-Infected Individuals in New York City. *Journal of Acquired Immune Deficiency Syndrome*. 2015;69(3):329-37.

2. Wang EA, McGinnis KA, Fiellin DA, Goulet JL, Bryant K, Gibert CL, et al. Food Insecurity is Associated with Poor Virologic Response among HIV-Infected Patients Receiving Antiretroviral Medications. *Journal of General Internal Medicine*. 2011;26(9):1012-8.

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