

An Investigation to Assess whether the Food Hygiene Rating Scheme is a True Reflection of Microbiological Quality of Food Establishments

Propose of the Study

This research aims to investigate whether the Food Hygiene Rating Scheme (FHRS) aligns with microbiological levels in professional food premises using Aerobic Colony Count (ACC) results.

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Background

- Food safety is a global priority; foodborne illnesses are a serious threat and burden to public health.
- Many third world countries struggle to feed their populations, yet it has been found that in developed countries an individual is more likely to die from food poisoning than starvation.
- It was estimated that 1 in 10 people in the UK are affected by food poisoning each year.
- Around 20,000 people receive hospital treatment each year with 500 deaths; costing the health care services at 1.5 billion annually.
- The FHRS is a way of communicating the results food hygiene inspection scores to the public and aims to increase hygiene compliance within the food industry. However, there is limited evidence suggesting the FHRS is affecting microbiological levels as inspections are purely visual.

Approach

- The dataset used for this study was collected from The Environmental Health Food Safety Management Verification Surveys ran over two years 2013/2014; conducted on Food Business Operators (FBOs) registered within Powys, Wales.
- The survey's sampling criteria involved:
 - ⇒ The 2013 survey targeted food premises which matched a FHRS rating of 3 or independently a score of 10 in the confidence in management marking section.
 - ⇒ The 2014 survey sampled food premises matching a food hygiene rating of 0, 1 and 2 or a confidence in management score of 10 or higher.
- The researcher focused on ACC as this hygiene indicator organisms as it is commonly associated with poor hygiene practices.
- The sampling methods involved an EHP visiting catering establishments unannounced and taking three samples: 1 cleaning cloth and 2 environmental swabs of food preparation surfaces.

Results

- The figure below shows all three classes of ACC sample results with the FHRS premise ratings. As illustrated, broadly complaint premises (hygiene rated 3) had the highest percentages of unsatisfactory results. Overall, there is more unsatisfactory results than satisfactory in all three types of samples. There is no statistically significant association between ACC results and the FHRS ((B1 $p=.969$), (B2 $p=.729$) and (C $p=.729$)). Therefore, this dataset suggests FHRS does not significantly affect ACC results.

Recommendations

- Further research into this topic is required as the dataset is based on a small sample group ($n=117$) as it will ascertain a more reliable representation of the food industry.
- FHRS is lacking on microbiological quality controls as there are high percentages of broadly complaint or higher rated premises failed to meet satisfactory ACC levels. Therefore a microbiological quality category should be discussed to be introduced to the FHRS scoring criteria.
- Introduce microbiological quality sampling into food inspection.

