# FOOD SAFETY SUPERVISOR SCHEME EVALUATION

RESULTS SUMMARY REPORT

NSW GOVERNMENT Food Authority

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## Summary

The Food Safety Supervisor (FSS) scheme is a training and education initiative aimed at improving the food safety culture in the retail/food service sector, and through this improvement, reducing the incidence of foodborne Illness (FBI) outbreaks attributed to this sector.

By recognising that food safety education among food handlers is essential to help safeguard consumers from foodborne illness, in 2009 the NSW Food Authority (the Food Authority) introduced a food safety training program – the FSS scheme, with the primary objective of upskilling food handlers in this sector.

To implement the FSS scheme, the *Food Act* 2003 was amended to require that at least one FSS be employed by NSW retail and food service businesses serving food that is:

- ready-to-eat
- potentially hazardous, and
- not sold and served in the supplier's original package

From 1 October 2010, all affected businesses in NSW needed to:

- appoint one FSS trained by a Registered Training Organisation (RTO)
- keep a copy of their FSS certificate on the premises at all times
- This requirement became mandatory as of 1 October 2011.

An FSS must be trained by a RTO approved by the Food Authority. FSSs receive training in prescribed units of competency within the National Vocational Education and Training system and must then obtain a FSS certificate (provided by the RTO once approved by the Authority).The affected food businesses must keep a copy of the FSS certificate on the premises at all times.

## Background

### Foodborne illness in Australia

A recent study led by the Australian National University reported approximately 4.15 million cases annually of foodborne illness in Australia, resulting in approximately 32,000 hospitalisations and 86 deaths (*Foodborne illness in Australia: Annual incidence circa 2010,* Kirk et. al., 2014).

"This equates to each Australian experiencing an episode of foodborne gastroenteritis approximately every five years. While foodborne gastroenteritis is often not serious, it results in considerable costs to society through medical costs and days of work lost" (Kirk et. al., 2014, p. 30).

## Evaluation methodology

In accordance with the Food Authority's overarching program evaluation framework, a plan was developed in 2013 to evaluate the effectiveness of the FSS scheme. The primary focus of the evaluation was to assess what effect the implementation of the FSS scheme has had on food safety (particularly food handling) knowledge and practices within affected businesses. The evaluation also sought to assess the Food Authority's RTO management system, to ensure it is working as intended.

In order to obtain relevant data for the evaluation, separate projects were run across the following components:

1. Component 1 examines data generated by the Food Authority's RTO management system that monitors RTO compliance with administrative requirements placed upon them by the Food Authority. Data from the monitoring program was extracted and analysed on the following three key indicators:
    a) Audits of compliance against conditions of approval (onsite audits, audit questionnaires and website checks).
    b) Complaints related to RTO conduct or performance.
    c) Information provided on the National Register of Vocational Education and Training (VET), i.e. RTO registration details with Australian Skills Quality Authority ASQA.
2. Component 2 is a retrospective study of retail and food business inspection reports before and after the FSS scheme came into effect. The Food Authority gathered inspection data from four local government councils that had completed inspections using the Food Premises Assessment Report (FPAR) checklist, prior to and after the FSS requirements became mandatory.
3. Component 3 seeks to measure FSS's food safety knowledge, attitude, beliefs and intentions before and after attending training by conducting pre and post-training surveys of food handlers at classes provided by approved RTOs.

## Component 1 – RTO compliance monitoring

### RTO management system

RTOs and their trainers are regulated by ASQA and must meet national training provider requirements set by it. NSW is a signatory to these national arrangements. In addition, the Food Authority also regulates RTOs providing FSS training through an approval process that is designed to control the consistency and quality of training offered under the FSS program. RTOs and their trainers must demonstrate they meet the Food Authority's criteria to be considered for approval. Once approved, RTOs must comply with the Conditions of Approval (CoA).

The Food Authority has developed an RTO management system to monitor the performance of RTO's, consisting of RTO website reviews, course material reviews and electronic and face-to-face inspections. The objective of these tools is for the Food Authority to satisfy itself that approved RTO's are acting in accordance with the necessary CoA.

The Food Authority's RTO compliance policy addresses non-compliance by seeking to ensure that appropriate action is taken against RTOs found to be in breach of the CoA. The appropriate compliance action is determined by assigning a risk rating to a non-compliance event and determining the appropriate compliance tool to be administered proportionate to the risk rating.

The types of action taken to address non-compliance (in ascending order) are as follows:

1. **Mediation and conciliation:** Mediation and conciliation is the first step in investigating RTO non-compliance and provides the opportunity for the RTO to explain a non-compliance event.
2. **Notice of intention to suspend approval:** A notice of intent to suspend an RTO is served if it is believed that the RTO is acting in contravention of CoA for the RTO program. This may be the appropriate first step for "very high", "high" and "medium" non-compliance events.
3. **Notice of suspension of approval:** This is served as an escalation to a notice of intention to suspend approval. It is served if the Food Authority is not satisfied with the actions taken by the RTO to rectify the alleged non-compliance event or if the RTO fails to provide a submission to the Food Authority by the 14 day response timeframe provided on the notice.
4. **Notice of intention to cancel approval:** This is served if an RTO is knowingly acting in contravention to a requirement of the *Food Act 2003* or Food Regulation 2010 in a serious manner. It can often be served as an escalation to a suspension, or can be served as a first step to compliance action.
5. **Notice of cancellation of approval:** This is served as an escalation to a notice of intention to cancel approval. It is served if the Food Authority is not satisfied with the actions taken by the RTO to rectify the alleged non-compliance event or if the RTO fails to provide a submission to the Food Authority by the 14 day response timeframe provided on the notice.
6. **Notice of intention to vary or impose conditions of an approval:** The Food Authority has the power under cl 16J (i) of the Food Regulation 2010 to vary a condition of approval, or impose additional conditions on an RTO.

## Project methodology

RTO compliance is monitored through the collection and assessment of data gathered via three processes:

1. Audits of compliance against CoA (onsite audits, audit questionnaires and website checks).
2. Complaints related to RTOs.
3. Information provided on the National Register of VET.

This project used compliance data gathered using these three methods to document compliance results and actions undertaken for the period of 19 March 2013 to 28 March 2014.

## Results

Forty-four non-compliance events were identified for the period 19 March 2013 to 28 March 2014; involving 22 RTO's from the total base of 123. The majority of non-compliance events (86%) were resolved through mediation and conciliation, with only 1 suspension and 1 cancellation issued to an RTO over 2013-14. The figure of 22 RTO's is less than the total of 26 listed in Table 1 as some compliance events involved the same RTO (i.e. escalation of action on the same offence or multiple offences involving the same RTO). Table 1 displays key results.

**Table 1. Compliance action taken as a result of monitoring**

| Types of compliance action | Number of compliance events | Number of RTOs in breach |
|---|---|---|
| Mediation and conciliation (M/C) | 38 (86%) | 20 |
| Notice of intention to suspend approval (NOIS) | 3 (7%) | 3 |
| Notice of suspension of approval (NOS) | 1 (2%) | 1 |
| Notice of intention to cancel approval (NOIC) | 1 (2%) | 1 |
| Notice of cancellation of approval (NOC) | 1 (2%) | 1 |
| Notice of intention to vary or impose Conditions of Approval (VC) | 0 | 0 |
| Total | 44 | 26 |

- Mediation and conciliation accounted for 86% of all compliance events (n = 38) which was applied to 20 RTOs.
- Non-compliances that resulted in regulatory action being taken accounted for 14% (six notices) of compliance events with four RTOs served with notices during this period.
- 5% (two notices) of the regulatory action taken resulted in actual suspension or cancellation; this was applied to one RTO on two occasions for two different issues.

The top reasons for compliance action in the 2013–2014 compliance period relate to three specific CoA (Table 2 shows CoA breached for each non-compliance event):

1. Training and advertising materials inaccurately represented the requirements of the *Food Act 2003* and Food Regulation 2010.
2. In most cases technical inaccuracies in the training materials for this reason **went above** legislated food safety requirements (e.g. *"food must be reheated to 75°C or above"*). Therefore there is no food safety risk associated with these inaccuracies.
   A common theme was the use of the word "must" (e.g. *"frozen food must be stored at -18°C"*).
3. In other cases food safety legislative references in a NSW context were incorrect or not present, or references made to the Australia New Zealand Food Standards Code were incorrect. A common issue encountered was RTOs providing inaccurate or incomplete information on their websites regarding which businesses in NSW must appoint an FSS.
4. RTOs were not adequately notifying enrolling students that personal information would be provided to the Food Authority.
5. In the majority of breaches a disclosure was present but it was generic, such as *"your personal details will be provided to a state government authorised body"*.
6. FSS certificates were not being issued within five working days of assessing students as competent for the prescribed FSS units.
7. Mediation and conciliation with RTOs who have breached this CoA indicate there are often legitimate reasons why certificates are not issued within five working days. Consideration should be given to extending this limit to 10 working days.

**The most serious breach encountered during the 2013–2014 audit cycle** found that an approved RTO had a 'non-current' registration status as an RTO with ASQA, as well as no scope for the units of competency required for the FSS program. Given the severity of this breach this RTO was promptly served with a notice of intention to cancel and given 14 working days to make submissions to the Food Authority. No submission was received and as a result this RTO was cancelled.

One complaint related to trainer performance. This concerned a trainer allegedly advising students that all food handlers in NSW require a FSS certificate and falsely claiming the status of an authorised officer. Once notified to the RTO this trainer was immediately terminated.

**Table 2. Reasons for compliance action and type(s) of compliance action taken**

| FSS program conditions of approval (COA) | Type of compliance action | | | | |
|---|---|---|---|---|---|
| | M/C | NOIS | NOS | NOIC | NOC |
| Conduct Food Safety Supervisor training for the purposes of issuing Food Safety Supervisor certificates only with trainers agreed to by the Authority in writing | | 2 | 1 | | |
| Notify the Authority in writing of any change of details | 3 | | | 1 | 1 |
| Not use recognition of prior learning (RPL) for the purposes of issuing a Food Safety Supervisor certificate | | | | | |
| Not issue a Food Safety Supervisor certificate for circumstances under which the Authority will issue a Food Safety Supervisor certificate (as published on the Authority's website | | | | | |
| Use the Authority's SmartForm system to issue Food Safety Supervisor certificates to competent students | 1 | | | | |
| Comply with the Authority's procedures with regard to the security of certificate print images | 1 | | | | |
| Issue the Food Safety Supervisor certificate within 5 working days of assessing the student as competent for the prescribed Food Safety Supervisor units | 5 | | | | |
| Not subcontract any training conducted for the purposes of issuing an Food Safety Supervisor certificate to any non-approved RTO, or to a trainer that has not been accepted for your RTO by the Authority | 1 | 1 | 1 | | |
| In compliance with privacy laws, notify enrolling students that personal information will be provided to the Authority | 8 | | | | |
| Limit class sizes to 15 students where face to face delivery of training for the purposes of issuing a Food Safety Supervisor certificate is conducted | | | | | |
| Store blank Food Safety Supervisor certificate stationery in a secure location | 2 | | | | |
| Keep a record where a replacement Food Safety Supervisor certificate is issued (e.g. if original has been lost or damaged) | 3 | | | | |
| Pay any amount due to the Authority under the Act by the specified time | | | | 1 | 1 |
| Not produce training or advertising material that inaccurately represents the requirements of the Food Act 2003 and Food Regulation 2010 | 13 | 1 | | | |
| Other (RTO approval criteria, training quality and performance, 'certificate of competency' being issued, impersonating a EHO) | 1 | | | 1 | 1 |
| Total | 38 | 4 | 2 | 3 | 3 |

Note: The figures presented in column for the notices NOIS, NOS, NOIC & NOC in Table 2 differ from Table 1. This is due to some notices containing multiple conditions of approval breaches and therefore multiple reasons for compliance action.

## Component 2 – Retail and food service business compliance audit

### Background

Critical to evaluating the FSS scheme is assessing what impact it has had on food safety and handling practices within affected businesses. Given the overall aim of the scheme is to reduce the incidence of foodborne illness by upskilling food handlers and improving food safety culture, it is necessary to attempt to measure the extent to which food handlers are compliant with safe food handling practices, both before and after FSS implementation.

This is a difficult quantum to measure – there are few readily available metrics that provide insight into whether the skills and knowledge attained by FSSs is resulting in improved food safety and handling practices within businesses over a sustained period.

In all instances, the project component involved a comparison of food business inspection results:

- before the introduction of the FSS Scheme, and
- 12 months following the FSS requirements becoming mandatory.

### Project methodology

The Food Authority collected inspection data from four local government councils (two regional and two Sydney metropolitan councils) that had completed inspection checklists known as the Food Premises Assessment Reports (FPAR). Data was collected from 572 retail and food service food businesses across these four local council areas. Questions in the FPAR are based on the legislative requirements of Food Safety Standards 3.2.2 and 3.2.3 that are mandated for retail and food service businesses. These Standards focus on assessing important foodborne illness risk factors such as food temperature control, food handler hygiene and cleaning and sanitation. Data from the period October 2010 – June 2012 was used to ensure that the impact of the FSS scheme could be measured prior to and post the 1 October 2011 commencement date.

There are nine subsections in the FPAR, each with a number of questions that are allocated points if non-compliance is observed. Council Environment Health Officers (EHOs) are required to allocate the appropriate number of points depending on the severity of non-compliance identified. The overall score of a business is then totalled to get the sum of the non-compliances observed; with the more points a business receives indicating a higher degree of non-compliance.

For the purpose of this study, the overall difference in total score before and 12 months after FSS implementation was calculated to show the number of businesses that improved, declined or stayed the same. If the calculated difference was positive then a value of one (1) was awarded to the business, if the difference was negative then a value of negative one (-1) was awarded, and if there was no difference then a zero (0) was awarded to the business.

Secondly, the overall mean scores received by the businesses before and after FSS implementation was calculated and analysed to identify if the change in score was statistically significant using a t-test analysis (at 95% confidence level). Finally, the scores for each subsection of the FPAR were totalled to identify if there were changes in any specific area.

## Results

**Almost one-quarter of businesses did not have an FSS 12 months after the requirement became mandatory**

Of the total 572 businesses included in this study, 23% (n=134) did not have an FSS appointed 12 months after the requirement became mandatory[1]. For the purpose of this study, inspection results from those businesses with an FSS (77%, n=438) and without have been included to assess if there is any variation in findings.

**Businesses with an FSS show greater improvement in overall compliance than those without an FSS**

The study was designed to determine whether having an FSS has an effect on the overall performance of the business. Table 3 displays results for overall compliance for businesses with an FSS and for those without an FSS.

**Table 3. Overall compliance of businesses with an FSS compared to those without**

| | FSS held by business | FSS not held by business |
|---|---|---|
| Improved performance | 257 (59%) | 64 (48%) |
| Declining performance | 128 (29%) | 62 (46%) |
| No change | 53 (12%) | 8 (6%) |
| TOTAL | 438 | 134 |
| TOTAL | 572 businesses | |

**Businesses with an FSS demonstrated improved compliance across FPAR subsections compared to businesses without an FSS**

A comparative analysis was completed to identify the specific areas in the FPAR where businesses had improved or declined in performance, 12 months after the FSS requirements became mandatory. The nine sub-sections of the FPAR are: Food handling, health and hygiene, cleaning and sanitation, animals and pests, design and construction, maintenance, labelling, general and miscellaneous.

To show the validity in compliance improvement from each of the nine subsections of the FPAR, descriptive statistical analysis (t- test[2]) was performed on the scores of those businesses that had an FSS and for those without an FSS. These results indicate that the presence of a certified FSS is positively correlated to an increase in overall compliance of the businesses. The following two graphs (Figures 1 and 2) present the mean scores from each of the nine subsections of the FPAR. For those businesses that had an FSS, improvements in compliance for all nine FPAR subsections was observed (indicated by having a lower mean score 12 months after FSS requirements became mandatory).

[1] Confirmed by EHO assessing presence of FSS certificate at routine inspection.

[2] A t-test's statistical significance indicates whether or not the difference between two groups' averages most likely reflects a real difference in the population from which the groups were sampled. A *statistically significant* t-test result is one in which a difference between two groups is unlikely to have occurred because the sample happened to be atypical.

**Figure 1. Mean FPAR subsection scores for businesses with an FSS (before and after FSS scheme implementation)**

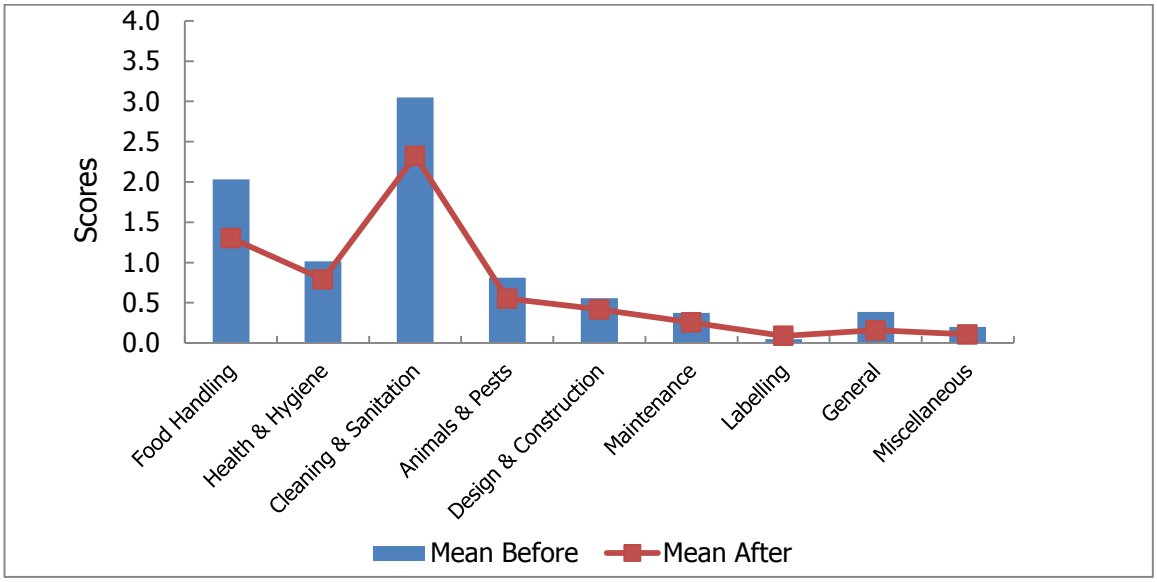
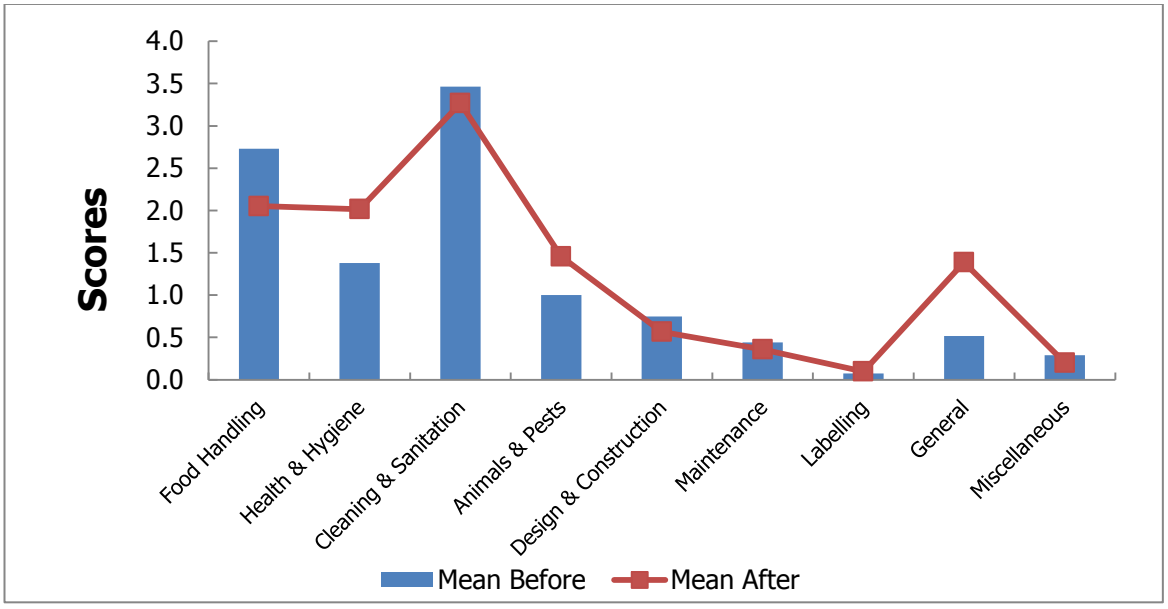



**Figure 2. Mean FPAR subsection scores for businesses without an FSS (before and after FSS scheme implementation)**




For those businesses without an FSS, improvement was only seen in four subsections (food handling, cleaning and sanitation, design and construction, and miscellaneous) of the FPAR. Mean scores decreased for all other subsections (health and hygiene, animals and pests, maintenance, labelling and general).

The t-test analysis when comparing the two means also favoured those businesses that had appointed an FSS. Detailed t-test analysis on both sets of data (with and without an FSS) was conducted for three FPAR sub-

categories (food handling controls, health and hygiene and cleaning and sanitation)[3]. A significant difference was detected in the FPAR categories of cleaning and sanitation and food handling for those businesses with an FSS, 12 months after the requirement became mandatory. However, a significant difference was not observed for the FPAR sub-category of health and hygiene for those businesses with an FSS for the same period. A significant difference is observed when the critical t value is smaller than the t-calculated value. This is displayed in Table 2.

**Table 4. t-test analysis for selected FPAR categories**

| **With an FSS (n = 438)** | | | **Without an FSS (n = 134)** | |
|---|---|---|---|---|
| | **Food Handling** | | **Food Handling** | |
| | Before FSS | After FSS | Before FSS | After FSS |
| Mean | 2.03 | 1.30 | 2.73 | 2.05 |
| t calculated value | 3.7072 | | 1.9601 | |
| Critical t value | 1.9654 | | 1.9780 | |
| | **Health and Hygiene** | | **Health and Hygiene** | |
| | Before FSS | After FSS | Before FSS | After FSS |
| Mean | 1.01 | 0.79 | 1.38 | 2.01 |
| t calculated value | 1.5768 | | -1.5955 | |
| Critical t value | 1.9654 | | 1.9780 | |
| | **Cleaning and Sanitation** | | **Cleaning and Sanitation** | |
| | Before FSS | After FSS | Before FSS | After FSS |
| Mean | 3.05 | 2.32 | 3.46 | 3.27 |
| t calculated value | 4.0695 | | 0.5932 | |
| Critical t value | 1.9654 | | 1.9780 | |

This finding is further supported by comparison of the mean scores for these FPAR sub-categories before the FSS became mandatory to after. For businesses that have an FSS, the mean scores after implementation of the FSS are lower in all three FPAR sub-categories, indicating an improvement in performance. In contrast, the mean scores for businesses that do not have the FSS are higher, indicating poorer performance in these FPAR sub-categories over the 12 month period for this work.

For those businesses without an FSS, improvement was only seen in four subsections (food handling, cleaning and sanitation, design and construction, and miscellaneous) of the FPAR. Mean scores decreased for all other subsections (health and hygiene, animals and pests, maintenance, labelling and general).

[3] These areas carry more high-risk non-conformances as identified by a greater number of data items with 8 points. Also, FSS training is primarily focused in these three areas, hence why they were chosen for detailed analysis.

## Component 3 – Food Safety Supervisor survey

### Background

From September to December 2013, the Food Authority conducted a survey of FSSs at accredited training courses provided by Food Authority approved RTOs. The survey involved students completing pre and post training assessments when undertaking their FSS training.

A total of 165 students voluntarily participated in the survey, covering training courses undertaken at 10 Food Authority approved RTOs.

### Project methodology

**RTO Participation**

The Food Authority invited all approved RTOs to be part of the survey and 10 RTOs volunteered to participate.

The Food Authority asked for RTOs to participate with both face-to-face and online classes: one RTO volunteered to collect survey data for online classes and nine RTOs conducted the assessment at face-to-face training classes.

**Pre and post training assessment**

The pre-training assessment was designed to assess a student's food safety knowledge on the content of:

- Training unit SITXFSA101 – use hygienic practices for food safety;
- Training unit SITXFSA201 – participate in safe food handling practices; and
- Questions to assess the student's beliefs and attitudes towards food safety.

The post-training assessment was designed to assess a student's food safety knowledge on the content of:

- Training unit SITXFSA101 – use hygienic practices for food safety;
- Training unit SITXFSA201 – participate in safe food handling practices;
- Questions to assess the students beliefs and attitudes towards food safety; and
- Questions to gather profiling data.

Questions were designed considering two primary factors:

- All elements and performance criteria of the accredited training course content; and
- Food Standards Code requirements that are assessed by local government EHOs at routine inspections of retail and food service businesses.

**Assessment result analysis**

Two separate scores were calculated based on assessment results: a food safety knowledge score and an 'attitude towards food safety' score. These scores were calculated for both the pre-training and post-training assessments.

When calculating scores on assessment of knowledge, each question was scored with a maximum of one point. For questions where there were multiple correct answers, the marks were awarded as a fraction of one. Marks were not taken from the total score if they were incorrect.

When calculating attitude scores, five attitude questions were scored with a maximum of one point, and four questions were scored on a hedonic five point scale (from “strongly agree” (+2) to “strongly disagree” (-2)). This allowed for negative scores to be calculated.

Statistical analysis of the results was conducted by external consultants Statistical Process Improvement Consulting and Training Pty Ltd, assessing:

- If there was a change in knowledge or attitude by using a matched two-sample t-test at a significance level 0.05.
- If prior knowledge, attitude or profiling information was statistically significant in terms of explaining the change in knowledge or attitude by using multiple linear regression models.

## Results

**Over 90% of the students received higher knowledge scores after FSS training**

Of the 165 students:

- 151 (91.6%) received a higher score on the knowledge assessment after the training;
- Six (4.6%) had an unchanged knowledge assessment score; and
- Eight (4.8%) had a lower knowledge score after training.

**More than half of the students scored higher with respect to attitude after FSS training**

For ‘attitude towards food safety scores’:

- 91 students (55.1%) had a higher score after training;
- 55 (33.3%) were unchanged; and
- 19 (11.5%) had a lower score.

**Table 5. Summary of Knowledge and Attitude percentages**

| | Knowledge | | Attitude | |
|---|---|---|---|---|
| | Mean | SD* | Mean | SD |
| Pre Training | 75.2 | 14.5 | 85.3 | 22.6 |
| Post Training | 91.1 | 9.1 | 92.3 | 14.4 |

* SD = Standard Deviation.

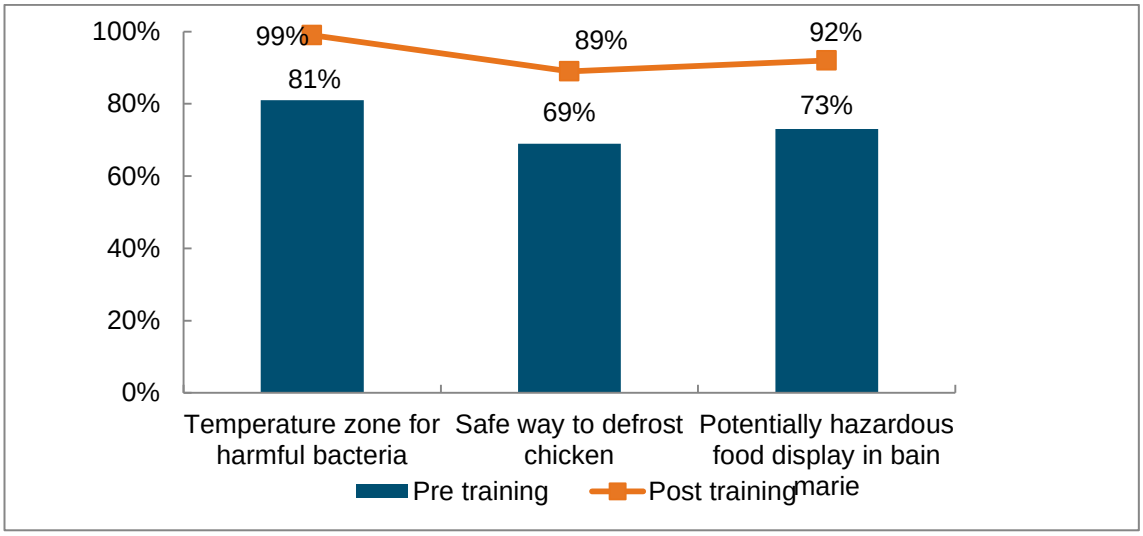
Table 6 shows an improvement in both knowledge and attitude following the FSS training as the mean scores for both measurable has increased. Table 6 further shows that variation between scores for both knowledge and attitude has decreased following the training. Whilst this study has a small data set, it is showing improvement knowledge and attitude of students following the FSS training.

**FSS training improved knowledge in specific areas concerning food hygiene and safe food handling practices**

While the analysis above explored overall performances of the students based on pre and post training knowledge and attitude, further analysis was done on several questions from the two training assessments to show if immediate improvement was visible in key areas concerning food hygiene and safe food handling practices.

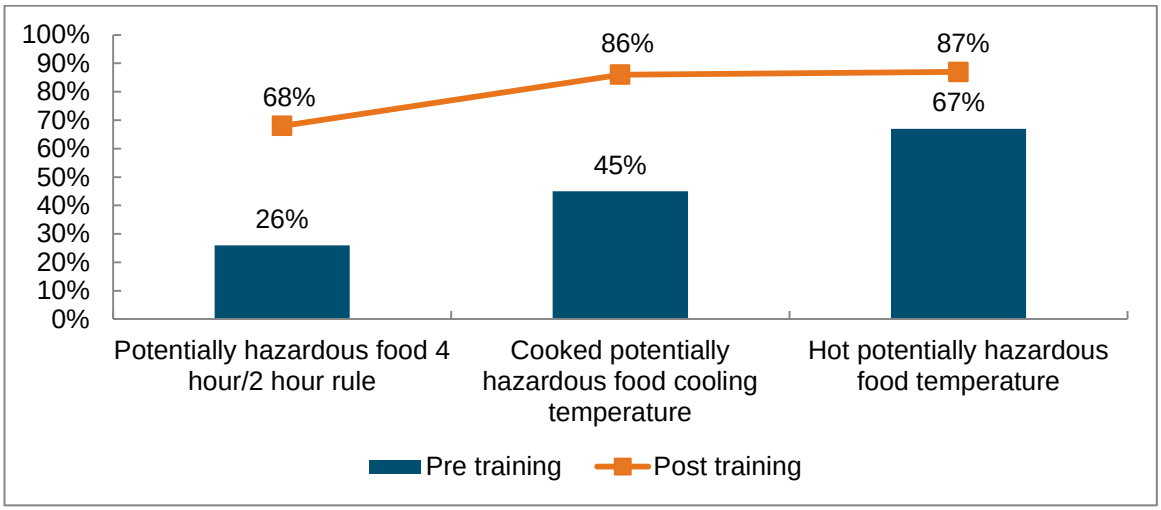
To prevent foodborne diseases, it is important to determine gaps relating to food safety knowledge amongst food handlers. The survey results indicated that prior to the training, many food handlers were not aware of proper cooking and food storage temperatures. Incorrect practices in this area could lead to bacterial growth and subsequent foodborne illness outbreaks. The following graphs represent several of the individual assessment questions and the percentage of students that answered the questions correctly in the pre and post training measures.

**Figure 4. Comparison of knowledge in food hygienic practices pre and post FSS training**




Similar trends were noticed with the second training unit “Participate in safe food handling practices”. Students were more aware of the safe temperature zone and the 4 hour/2 hour rule for Potentially Hazardous Food (PHF) after FSS training. For example, awareness of appropriate cooling temperature for cooked PHF increased by 41%. Only 45% of the students chose the correct response prior to the FSS training, whereas 86% chose correct response after the training. Another two questions that showed marked improvement (>20%) in knowledge were the 4 hour/2 hour rule for PHF’s and the appropriate temperature requirement to keep the hot PHFs at.

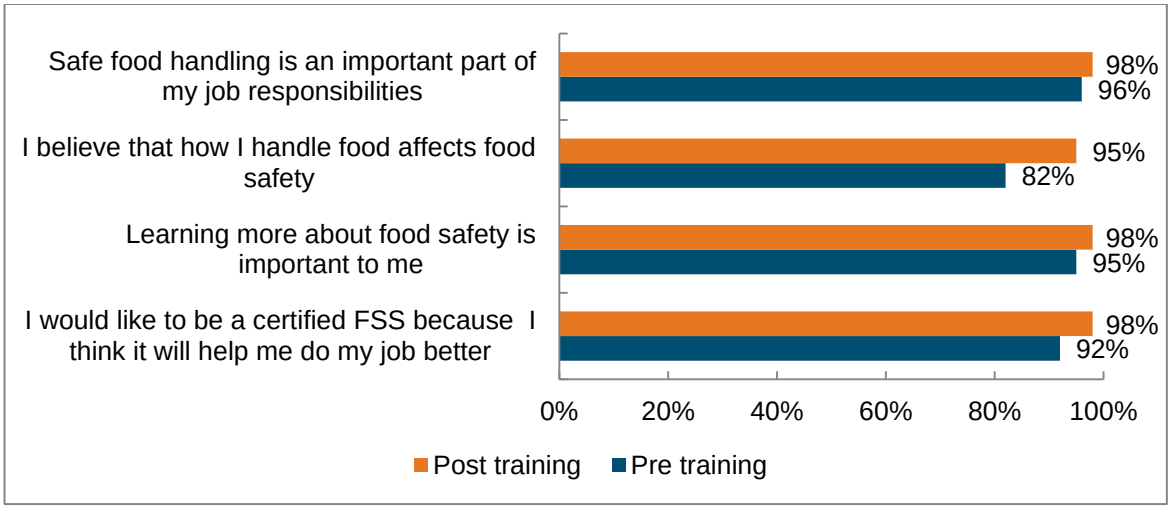
**Figure 5. Comparison of knowledge in safe food handling practices pre and post FSS training**




### Majority of students believe "safe food handling" is part of their job responsibilities

Students were asked to provide their beliefs on a number of safe food handling statements in the pre and post training assessments. Over 95% of the students strongly agreed or agreed that it was their responsibility to handle food safely. After completing the assessment 95% of the students believed that how they handle food affects food safety, as compared to pre-training (82%). More students (98%) indicated that learning about food safety was important to them after the training.

**Figure 6. Student participants believe in safe food handling prior to and after FSS training**




### Increased confidence in capability following training

Students were asked their thoughts on being a certified FSS and 98% believed that being a certified FSS would help them to do their job better. Many of the students (99%) also believed that after completing the training course, they have learnt safer ways of handling food and 97% of the students indicated they will be able to make positive food handling changes in their workplace.

## Evaluation

### Result analysis

The overarching aim of the FSS review project was to examine, 12 months after the implementation of the FSS scheme, what impact it has had on food safety knowledge and practices in retail food businesses. While analysis of the results of the project components provides an indication on the impacts of the scheme, the full impacts are unlikely to be evident following evaluation after only 12 months of the scheme's operation.

However, some guarded inferences may be made from the review. The results of Component 2a show moderately greater increases in compliance performance over the 12 month evaluation period for those businesses with an FSS, compared to those without. Similarly, businesses with an FSS who showed a decrease in compliance performance did so at a lower rate than those businesses with an FSS. These results were also evident across eight out of the nine individual subsections of the FPAR, with the ninth (Labelling) not an area required to be covered during FSS training.

Generally, these findings indicate that surveyed retail food businesses compliance with food safety standards increased after the scheme was introduced. However, it is not possible to definitively say that this was a direct result of the FSS scheme, or to measure the magnitude of the impact of the scheme on observed increases in compliance performance.

Similarly, the findings of Component 3 clearly indicate that food handler's knowledge of correct food safety and handling practices increased post-FSS training. However, this does not give an indication as to whether the knowledge and practices acquired through FSS training are being adequately implemented at retail food businesses, or if they are being imparted by the FSS to other food handlers in a food business.

### Review limitations

At face value, the results of the review do indicate that the FSS scheme has improved food safety knowledge and practices among trained FSS staff and that compliance has increased since the scheme was implemented. However, there are clear limitations in any definitive inferences that can be drawn from these results.

Firstly, the fact that the FSS scheme had only been mandatory for 12 months prior to the evaluation being conducted means the scheme's full impact, in both improving food handler knowledge and reducing foodborne illness outbreaks, is not reflected in the results. While the FSS was mandatory at the time the evaluation was conducted, many businesses amongst the councils surveyed still had not appointed an FSS. Furthermore, those that had appointed an FSS may only have done so relatively recently when the evaluation was conducted, and may not have had ample opportunity to use their acquired knowledge to improve food safety and handling practices within their food business.

## RTO Management System

The results of Component 1 demonstrate that the Food Authority's FSS RTO Management System (RTO system) is working as planned. This is evidenced by the majority of concerns being resolved by mediation and conciliation, with regulatory action only required for serious breaches. The complaint risk analysis strategy allowed the Food Authority to proactively monitor an RTO that posed an increased risk of being in breach of conditions of approval, enabling the Food Authority to promptly instigate regulatory action for a serious non-compliance event.

The results also indicate that the complaint system is working as planned, with training participants, EHOs and Food Authority staff all having utilised the complaint process. As a result the Food Authority has been able to deal with alleged breaches of approval conditions and trainer performance, using this data to inform future monitoring activities.

Encouragingly, the majority of alleged non-compliance issues identified were able to be addressed through mediation and conciliation activities. This illustrates the willingness of approved RTOs to work with the Food Authority, demonstrating that the integrity of the FSS program is of dual interest to both RTO and the Food Authority.

While the RTO system appears to be largely working as intended to identify and address areas of RTO non-compliance, there are still areas of the system that can be improved.

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