

Food safety: HACCP awareness and legislation

Providing safe food to the consumer remains, in part at least, the responsibility of the food service provider. There is an added obligation on behalf of authorities to ensure that any establishment serving food to the general public does so in a manner that complies with the regulations, and to monitor compliance thereto. These regulations are detailed in both the Health Act, No. 63 of 1977 and the Foodstuffs, Cosmetics and Disinfectants Act of 1972. Furthermore, standards have been developed to guide food service establishments in providing food safe for human consumption.

The Hazard Analysis Critical Control Point (HACCP) system has been gazetted as part of the Foodstuffs, Cosmetics and Disinfectants Act. This legislation covers 12 sectors and their categories of food-handling enterprises, including food preparation and catering (from caterers to restaurants) and street-vended foods. To date no sector is obligated by law to introduce a functioning HACCP system.¹ In order for the Minister of Health to date a particular sector for the mandatory introduction of a HACCP system, submissions by that industry or by the Directorate Food Control of the Department of Health must be motivated to the Health Minister.

HACCP is an internationally recognised system of food safety management. Its focus is on process control and the prevention of identified hazards in a particular establishment.^{2,3} There are 7 documented principles of HACCP (Table I) which, together with the preliminary procedures, make up the 12 steps to HACCP.

It is well documented that the application of HACCP in small and medium-sized enterprises (SMEs) has caused concern and has been questioned.^{2,4} The European Union introduced a regulation in January 2006 requiring all food businesses to implement a 'food safety system based on HACCP principles' in an attempt to eliminate individual national amendments.³ The Codex Food Hygiene Committee has produced guidance documents to assist what they term small and less-developed businesses (SLDBs) in interpreting and implementing HACCP.⁴

HACCP is not a 'stand-alone' system but forms part of the overall total quality management system of an establishment (Fig. 1). Its successful implementation is determined by solid and robust prerequisite programmes.⁵

The absolute requirement of improving food safety standards internationally as well as the delayed legislation for the introduction of HACCP in catering businesses has in itself provided the SLDBs with an opportunity to prepare for the eventual introduction of HACCP. This approach would enable SLDBs to 'get their house in order' by means of functioning prerequisite programmes and training. It is therefore imperative that we attempt to establish what the prevailing situation and practices are in South Africa and to determine what caterers know and understand about food safety.

The authors of the article 'Small and micro enterprises – aspects of knowledge, attitudes and practices

Table I. The Codex protocol for the application of HACCP principles⁴

1	Preliminary procedures	Assemble HACCP team
2		Describe product
3		Identify intended use
4		Construct flow diagram
5		On-site confirmation of flow diagram
6	Principle 1	List all potential hazards
		Conduct a hazard analysis
		Consider control measures
7	Principle 2	Determine critical control points (CCPs)
8	Principle 3	Establish critical limits for each CCP
9	Principle 4	Establish a monitoring system for each CCP
10	Principle 5	Establish corrective actions
11	Principle 6	Establish verification procedures
12	Principle 7	Establish documentation and record keeping

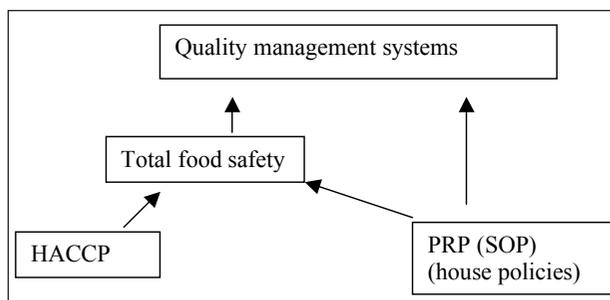


Fig. 1. Food safety within a quality management programme (PRP = prerequisite programme; SOP = standard operating procedure).⁶

of managers' and food handlers' knowledge of food safety in the proximity of Tygerberg Academic Hospital (Western Cape)⁷ published in this edition of *SAJCN* document the HACCP awareness of managers of such enterprises as well as selected aspects of the knowledge, attitudes and practices of the respective food handlers regarding food safety.

The authors found that managers had a positive attitude towards food safety, hygiene and food quality. It may, however, have been premature to have questioned them on their understanding of HACCP and implementation of the HACCP principles. Valuable as the findings of this study may be, it might have been more appropriate if the authors had tested the overall *readiness* of the establishment to implement HACCP rather than the introduction of HACCP by evaluating the knowledge and attitude. Although the authors did not use questions relating to all the aspects of food hygiene, it is generally accepted that questions on basic food hygiene should cover critical temperatures of hot or cold ready-to-eat foods, acceptable refrigerator temperature ranges and cross-contamination as well as time of at-risk foods in the danger temperature zone and hand washing.⁸

Unfortunately, since legislation concerning this sector for the introduction of a HACCP programme has not been promulgated, enforcement by environmental health officers (EHO) is against regulation 918 (30 July 1999),⁹ which governs general hygiene requirements for food premises and the transport of food rather than the introduction of the HACCP principles. The authors reported that of the facilities inspected by EHOs only 45.1% received a written report. The reference of the EHO's report would be against Regulation 918 and it would therefore be unrealistic to expect the EHO report to give specific advice on HACCP. Thus the relevance of law enforcement is for compliance with Regulation

918 and not with the introduction of a HACCP process.

Nevertheless, one of the worrying findings reported by the authors is that less than one-third of all facilities provided training. The authors also showed that 68.8 - 75.5% of managers received no formal training. This is particularly important since the available recent literature² indicates that training of managers is more effective in translating the knowledge to behavioural changes than training of food handlers.

Irrespective of the above, it is by no means too early to create awareness of hygiene standards in view of the impending legislation surrounding HACCP, particularly with regard to SLDBs. The mere intervention in the form of a questionnaire to report food handling practices may in itself have a positive influence on improving the knowledge, attitudes and practices of the subjects tested.

It is generally accepted that further research is required in South Africa and internationally on the upgrading of food hygiene practices in food service establishments and in formulating a usable model for the implementation of HACCP principles so that they become practised rather than being paid 'lip service' to only. In this regard, a recent review has concluded that very little evidence of progress occurred within the catering business in the European Union,⁴ and further research on the readiness of food service establishments for the introduction of HACCP would be of great value and is urgently needed.

Lenore Fuller

Lecturer, Department of Human Biology
Division of Human Nutrition
University of Cape Town

1. GNR. 908: Regulations relating to the application of the Hazard Analysis and Critical Control Point System (HACCP System) www.doh.gov.za/department/dir_foodcontrol.html (last accessed 27 June 2003).
2. Egan MB, Raats MM, Grubb SM, et al. A review of food safety and food hygiene training studies in the commercial sector. *Food Control* 2007; 18: 1180-1190.
3. Bas M, Yuksel M, Cavusoglu. Difficulties and barriers for the implementing of HACCP and food safety systems in food businesses in Turkey. *Food Control* 2007; 18: 124-130.
4. Taylor E. A new method of HACCP for the catering and food service industry. *Food Control* (in press).
5. Sun Y-M, Ockerman HW. A review of the needs and current application of hazard analysis and critical control point (HACCP) system in foodservice areas. *Food Control* 2005; 16: 325-332.
6. Mortimore S. How to make HACCP really work in practice. *Food Control* 2001; 12: 209-215.
7. Marais M, Conradie N, Labadarios D. Small and micro enterprises – aspects of knowledge, attitudes and practices of managers' and food handlers' knowledge of food safety in the proximity of Tygerberg Academic Hospital, Western Cape. *South African Journal of Clinical Nutrition* 2007; 20: 52-61 (this issue).
8. Bas M, Ersun AS, Kivanc G. The evaluation of food hygiene knowledge, attitudes, and practices of food handlers' in food businesses in Turkey. *Food Control* 2006; 17: 317-322.
9. GNR. 918: Regulations governing general hygiene requirements for food premises and the transport of food. 30 July 1999.