Not having the security of a food source that is nutritious, affordable, and reliable is a denial of basic needs, a failure of our society. It is a preventable condition that leads to many other health consequences, and a condition that brings its own suffering and distress. The focus of this project was to identify whether permanent residents of caravan parks located within the City of Greater Dandenong experience lack of food security, and recommend potential strategies to address the problems identified. Food security refers to:

- access by all people at all times to enough food for active, healthy life. At a minimum this would include having acceptable, nutritionally adequate and safe foods available and the ability to acquire food in socially acceptable ways without resorting to emergency food supplies or coping strategies (Kendall & Kennedy 1998).

The World Health Organization (WHO) has identified food security as a priority area for action (WHO 1986, 1997). Food security was traditionally recognised as an issue faced by third world countries, however, it is now recognised as a public health issue within industrialised countries (Food and Agricultural Organization of the United Nations 2003). More recently, there has been increasing interest in studying food security.
security in urban populations of industrialised countries as evidence mounts to suggest that even in the midst of plenty there are subgroups in the population who are food insecure (Holbern 2002; Starkey, Kuhnlein & Gray-Donald 1998; Tingay et al. 2003).

Accepted risk markers for lack of food security in urban areas are:

- Areas of disadvantage
- People with low incomes
- People without permanent homes or homeless
- Single parent families
- People who are isolated
- Newly arrived migrants
- People with physical or mental health problems (Strategic Inter-governmental Nutrition Alliance 2000).

In Australia, the 1992 National Food and Nutrition Policy of Australia (Commonwealth Department of Health 1992) identifies the following key issues as imperative to food security:

- social justice;
- quality of the food supply;
- community participation and accountability;
- the food and nutrition system and its wider interaction; and
- ecologically sustainable development (Commonwealth Department of Health, Housing and Community Services 1992).

The public health nutrition strategic framework document, Eat Well Australia, (Strategic Intergovernmental Nutrition Alliance 2000) identifies health gain initiatives for vulnerable groups and specifically:

- promoting organisational change in services;
- influencing broad social policy; and
- addressing structural barriers to safe and healthy food.

The Australian National Nutrition Survey (1995) estimated that 5% of all Australians aged 16 years and older experienced lack of food security during the previous 12 months. Booth and Smith (2001) suggest that this figure is actually an underestimate due to bias within the sample process. The groups who were at a higher risk of issues with food security, such as the homeless, were not included in the survey.

Queensland, the Northern Territory, New South Wales and Tasmania are currently the only states in Australia that have food and nutrition policies that include a goal to address food security (NSW Centre for Public Health Nutrition 2002; Northern Territory Government 2001; Queensland Public Health Forum 2002; Tasmanian Community and Health Services 1994). In Victoria, the most recent policy is from 1995 where ‘Nutrition for Health’ is one of the four key areas for action. This identifies a number of population groups at risk of undernutrition and includes low income households, homeless people, and older people among others. Since that time the Victorian Department of Human Services (DHS) has identified improving food security for vulnerable groups as a priority area for action (Victorian Department of Human Services 1997).

There have been few projects in local government areas in Australia addressing food security. Darebin (Cox & Ballinger 1999), Fitzroy (Cox & Wood 1992), Penrith (Reay & Webb 1998) and South Sydney (South Sydney City Council 1995) are the only local government areas that have attempted to explore and address this issue. Outcomes of these projects found that to address the food security of communities, action needs to be linked to other local
government activities such as housing strategies and urban planning.

In 2001, the Victorian DHS and VicHealth acted on the priority area of food security by providing project grants to two local government authorities in Victoria with population demographics indicating a higher number of people at risk of lack of food security than the state average. The evaluation of these projects identified possible local strategies to enhance food security in vulnerable groups and the need to link food security to a range of other community activities as essential to addressing the issue (Wood, Swinburn & Burns 2003).

Objectives of the Project
The objectives of the project were:
• To determine the food security status of permanent residents in the caravan parks in the City of Greater Dandenong; and
• To identify sustainable strategies for the Greater Dandenong City Council and local service providers to consider implementing to address the food security issues in this vulnerable group.

Permanent residents of caravan parks may be considered within the broader definition of tertiary homelessness: “People living in single rooms in private boarding houses on a long-term basis - without their own bathroom, kitchen or security of tenure” (Council to Homeless Persons 2001).

Although permanent residents of caravan parks do not strictly meet the definition of tertiary homelessness, they do share similar issues as this group including:
• The absence of or threat of loss of shelter;
• Physically inadequate accommodation;
• Lack of social and familial support networks; and
• Restrictive access to alternative housing.

Many caravan park residents choose to live in this type of accommodation rather than in boarding houses as it gives them a greater level of independence and privacy. This allows them the opportunity to prepare their own meals but they have no security of tenure and the standard of accommodation is often physically inadequate. The City of Greater Dandenong was chosen as a suitable location for this project due to the higher occurrence of risk markers for lack of food security compared with other Melbourne metropolitan local government areas.

City of Greater Dandenong
The City of Greater Dandenong (CGD) is located approximately 50 kilometres south east of the Melbourne Central Business District and has a population of approximately 130,000. It is a culturally diverse locality with 54% of residents born overseas and the number of recently arrived immigrants settling in the area continuing to rise (Greater Dandenong City Council 2003). See Box 1 for further demographic details.

Box 1
• The preferred first language of 55% of residents is non-English.
• There are more than 8,000 single parent families (27% of families in CGD).
• Approximately 10,000 people live alone.
• 14% of residents aged 15 to 24 years are unemployed compared with the metropolitan average of 9%.
• Unemployment rate of 8.8% compared with the metropolitan average of 5.6%.
• Median weekly disposable income was $295 (73% of metropolitan median) (Greater Dandenong City Council 2003).

Methods
The project had two components, a survey of lead agencies and a questionnaire of permanent residents of caravan parks. Ethics approval was obtained from La Trobe University Human Ethics Committee.
Lead agency personnel

Key informants in the lead agencies were identified in consultation with the Health Planner at Greater Dandenong City Council. The key personnel were from local council services, external services for specific community groups and Emergency Food Relief Providers. These included: Child and Family services; Youth services; Older persons services; Migrant Resource Centres; Citizens Advice Bureaus; Community Health Services’ dietitians; and religious and benevolent groups.

The objectives of the survey were to:

- Elicit knowledge of food security and factors that influence or contribute to lack of food security;
- Establish referral patterns and knowledge of local emergency food relief services; and
- Identify potential strategies to address lack of food security.

Key personnel were contacted by telephone and invited to complete a qualitative questionnaire. An introductory letter, consent form, and survey were emailed to the interviewees and they were followed up by a telephone interview. The interviewer then asked 10 questions from an interview schedule to elicit knowledge of the term ‘food security’, to identify if service providers had clientele who lived in caravan parks, and if they believed these clients experienced lack of food security. The interviewees were asked what issues they thought might contribute to food security, if they had a process for referral for emergency food relief; and if their service offered specific services for clients experiencing lack of food security. All data were collated and common themes identified and analysed. (Hawe, Degeling & Hall 1990).

Residents of caravan parks

Four caravan parks in the City of Greater Dandenong have residents who live there permanently. These sites are all located on arterial roads with 673 caravan and cabin sites in total. Table 1 provides a summary of the size and distance to local shopping districts from each site.

<table>
<thead>
<tr>
<th>Facility</th>
<th>Number of sites</th>
<th>Distance from shopping centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>51</td>
<td>0.7 km</td>
</tr>
<tr>
<td>B</td>
<td>71</td>
<td>10.0 km</td>
</tr>
<tr>
<td>C</td>
<td>147</td>
<td>0.1 km</td>
</tr>
<tr>
<td>D</td>
<td>404</td>
<td>8.0 km</td>
</tr>
</tbody>
</table>

Maps of each facility were obtained and each site numbered sequentially. The World Health Organization’s 30 cluster sampling method was used to calculate a sample size of 240. This sampling method is particularly suited to surveys over different geographical locations. Cluster sampling divides the population into groups, or clusters. Thirty clusters were selected randomly to represent the population, and then all caravans within the selected clusters are included in the sample (Australian Bureau of Statistics 2004; International Fund for Agricultural Development 2002).

Participants were personally approached at their place of residence and asked to complete a short survey by a member of the project team. The interviewer explained the purpose of the survey, and provided a copy of the project information and a consent form. The resident survey comprised 26 questions including basic demographic details, questions about how they accessed food and a series of statements used in the 1997 New Zealand National Nutrition Survey to measure their level of food security (Quigley & Watts 1997). Residents were excluded if they were under 18 years of age or had not lived at the facility for more than four weeks. Table 2 provides a summary of the distribution of completed surveys.
Table 2: Distribution of resident surveys completed

<table>
<thead>
<tr>
<th>Park</th>
<th>Target</th>
<th>Surveyed</th>
<th>Refused</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8</td>
<td>10</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>B</td>
<td>16</td>
<td>5</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>C</td>
<td>48</td>
<td>16</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>D</td>
<td>168</td>
<td>52</td>
<td>63</td>
<td>53</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>83</td>
<td>89</td>
<td>90</td>
</tr>
</tbody>
</table>

Results

Lead agency surveys

Lead agency surveys were completed by 11 key informants. The questionnaire was designed to elicit qualitative data. Not all respondents were familiar with the term ‘food security’, however, they were familiar with the concept of people not being able to access food for a variety of reasons. Most thought that the clients they saw who lived in caravan parks had experienced lack of food security. All respondents indicated that personal financial difficulties contributed to this, and some identified physical disability as a contributing factor. Table 3 is a summary of the range of factors respondents identified as contributing to the lack of food security.

Table 3: Factors that contribute to lack of food security

<table>
<thead>
<tr>
<th>Lead Agency Results - Factors that contribute to food insecurity of permanent residents of caravan parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
</tr>
<tr>
<td>Disability and physical limitations</td>
</tr>
<tr>
<td>Transport</td>
</tr>
<tr>
<td>Accommodation</td>
</tr>
</tbody>
</table>

All the respondents had some knowledge about the local emergency food relief services available, however, the extent of this knowledge ranged from a thorough understanding, to a haphazard referral to whichever organisation the service provider was aware of. Three agencies offered specific services, such as cooking, and shopping and budgeting classes, and aimed these at target groups usually related to age and culture.

Suggestions about future strategies to address lack of food security include:

- Establishing other services in the area, such as shelter for homeless and after hours' emergency services.
- Encouraging free/affordable food delivery services, particularly for the elderly.
- Improving communication to link service providers
- Improve public transport access and frequency
- Addressing support services available for migrants (and migration conditions)
- Improving education, such as cooking skills and nutritional knowledge

Residents

A total of 83 residents agreed to participate in the survey. Table 4 provides a summary of demographic data results from the questionnaire, which shows the unique differences between sites.

The survey consisted of 26 questions to ascertain the residents’ demographic profile, how they accessed food, and if they experienced lack of food security. One hundred percent of the population surveyed answered these questions. The combined data report 15% of residents experienced lack of food security in the last year. Five percent of respondents stated that they had often eaten less due to lack of money and 13% stated they sometimes ate less due to lack of money. This finding was consistent across parks A, C and D, however, 100% of park B residents surveyed responded that they never experienced lack of food security. Park B had the smallest number of survey participants. Figure 1 shows the combined food security survey results.
Six percent of residents at parks B and D, 4% at park C and none at park A reported having financially dependent children. Despite the high number of newly-arrived migrants residing within the City of Greater Dandenong, the data revealed that the majority of caravan park residents were Australian-born or had an Anglo-Saxon background. Fifty-seven percent of the combined population report being born in Australia, 19% combined population were born in England, and 7% were from New Zealand. The remaining population reported their country of birth as Europe, Egypt, Fiji, and El Salvador. This is not consistent with the multicultural nature of the City of Greater Dandenong City Council discussed above.

Eighty four percent of respondents stated that they always eat properly. Of the respondents who indicated that they could not always afford to eat properly, all were retired or not working, 69% were female and most were aged 61-80 years. Reasons for this included lack of public transport and physical difficulties walking and/or carrying shopping.

Residents who said that food often ran out in their household due to lack of money were most likely to be women (79%) and aged between 41-60 or 61-80 years. Sixty percent of residents who said they often or sometimes eat less because of lack of money

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**Table 4: Demographic data of surveyed group of resident**

<table>
<thead>
<tr>
<th>N=Sample</th>
<th>Park A</th>
<th>Park B</th>
<th>Park C</th>
<th>Park D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>100%</td>
<td>100%</td>
<td>80%</td>
<td>28%</td>
</tr>
<tr>
<td>Female</td>
<td>0%</td>
<td>20%</td>
<td>12%</td>
<td>72%</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 21 years</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>21-40 years</td>
<td>0%</td>
<td>20%</td>
<td>38%</td>
<td>0%</td>
</tr>
<tr>
<td>41-60 years</td>
<td>60%</td>
<td>30%</td>
<td>38%</td>
<td>23%</td>
</tr>
<tr>
<td>61-80 years</td>
<td>40%</td>
<td>50%</td>
<td>26%</td>
<td>62%</td>
</tr>
<tr>
<td>80+ years</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>15%</td>
</tr>
<tr>
<td>Source of income</td>
<td>Salary</td>
<td>20%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Govt pension</td>
<td>20%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>60%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single</td>
<td>10%</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Married/De Facto</td>
<td>20%</td>
<td>20%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Divorced/Separated</td>
<td>70%</td>
<td>60%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
were female. Most were aged between 41-60 or 61-80 years.

Sixty three percent of respondents who said that the variety of food they ate was often or sometimes limited by lack of money were female. The proportion of respondents who rely on others to provide food when they run out was shared evenly among males and females. Eighty three percent of residents who said they rely on emergency food relief such as food banks were male.

Females (56%) were more likely to feel stressed by not having enough money for food than males (44%). Residents who responded positively to this question were more likely to be married (44%) or divorced (31%) and aged 41-60 years (37.5%) and 61-80 years (37.5%).

The proportion of male and female respondents who felt isolated by not having enough money for food was split evenly. Most were aged either 41-60 years (43%) or 61-80 years (36%). Most were not working or retired.

The project group was aware of the possible bias in the survey due to inherent differences between the residents who participated in comparison to those who refused. The demographic data gathered provide a snapshot of the population at the time of the survey, however, due to the sample size it is difficult to determine whether this is representative of the entire population of each caravan park. Random sampling start points were identified in order to minimise any bias associated with data collection.

**Discussion**

The project team has been able to identify the level of understanding of the term food security by lead agency personnel and determine their referral patterns. It has also been able to ascertain the level of food security of permanent residents of caravan parks located within the City of Greater Dandenong.

**Lead agency personnel**

The data suggest varying degrees of knowledge on the subject of food security. The knowledge and opinions of lead agency personnel varied greatly according to their client group. For example, one agency stated that lack of food security was not an issue to new migrants as food was central to their culture and well catered for within their cultural community, whereas other service providers commented on the issues of lack of money, poor knowledge of new foods, inability to speak or read English, and transport difficulties affecting new migrants’ access to food.

Data on how many of the agencies had clientele within the parks varied depending on the agency’s collection of addresses. The lead agencies’ knowledge of emergency food providers was varied. Some had an extensive knowledge of services available, some were able to name one or two services, but were unsure of location, access criteria, and operating hours. One respondent was unable to identify any. The provision of an information sheet of all emergency food service providers, times of operation, transport options and access criteria, would assist service providers and residents to access these appropriately.

Despite a range of contributing factors being identified, these factors were not consistently identified by all respondents indicating gaps in knowledge around the issue of food security. In order for an integrated approach to food security issues to be implemented these gaps must be addressed. Education for service providers would increase knowledge of issues that influence food security. Networking among service providers at the local level would open lines of communication to discuss these issues and encourage joint strategies. This would also facilitate the identification of emerging issues impacting on food security and allow a coordinated response to be initiated by service providers.

Through the lead agency survey it also became evident that service providers had...
differing knowledge of their clientele and their circumstances. There are privacy issues to be considered, however, the recording of some information about the service users would be beneficial, particularly in identifying emerging issues impacting on food security.

Respondents were able to suggest some strategies to improve food security, for example, the provision of free or affordable food delivery for the elderly residents, improved local transport to food outlets, budgeting classes, cooking skills and shopping. The challenge is to ensure that these strategies are acceptable to the community and accessible by those in need. This could be achieved by facilitating community ownership over the planning and implementation of strategies to address food security.

Local government is well placed to lead this process. They have the mandate through the development and implementation of municipal public health plans. Local government also has a clear role in advocating for the needs of its residents and has the capacity to create opportunities for community participation and social engagement. It can address the built environment and physical surrounds and acts as a service provider to vulnerable groups through its meals on wheels and home and community care (HACC) services.

Residents
Although the estimated level of lack of food security across the parks was 15%, it ranged from 0% at park B to 24% at park C. It should be noted that there were only five residents surveyed at park B and all responded negatively to all food security questions, reporting that they were food secure. These responses appeared to be in contrast with the observations of the researchers who were invited inside the caravans of three of these residents. Observations noted lack of food, inadequate storage facilities, and poor cooking facilities. This raises the possibility that the level of lack of food security is an underestimate.

There were noticeable differences between the populations at each of the caravan parks. Eighty percent of residents surveyed at parks A, B and C were single or divorced men aged 40 years and older, whereas the population of park D were predominantly female and aged 60 years and older. Park C also had a significantly higher number of younger people aged 21-40 years. A common thread across all sites was that 63% of respondents lived alone.

Park D was situated 8 kilometres from the central shopping centre and had the greatest proportion of residents aged 61 and older. Forty two percent of respondents relied on transport other than their own vehicle to access food outlets. Thirty percent indicated they had difficulty getting to and from grocery stores. Many commented on the distance required to walk from their home to access public transport, particularly those who lived at the farthest point from the entry to the park. The greatest distance from the front gates to a resident’s site was 1 kilometre. Even residents of parks located closer to food outlets expressed difficulties getting to and from grocery stores - 10% at park A and 20% at park B.

The variety of circumstances in each of the parks indicates the necessity for addressing the issue of food security in different ways. Further consultation with residents at each of the caravan parks would be valuable in terms of identifying appropriate strategies to address food security at each site. Among the suggestions made by residents were regular access to a community bus to provide transport to and from food outlets and the establishment of community gardens. In order for these or any strategies to be effective, it is necessary that the residents have ownership over the project. It was suggested that a ‘champion’ or project leader be identified at each site in order to ensure the successful implementation of any such initiative.

The findings of both the lead agency and resident surveys must be considered with
planning an integrated local response to food security issues experienced by caravan park residents and within the wider population. In order to address the immediate food security issue of clients effectively, service providers must have a thorough understanding of the issues that contribute to the problem and knowledge of emergency food relief and preventative services available. To address food security at a community level a broader understanding is required. Studies such as this investigation contribute to the process by providing feedback from the people actually experiencing lack of food security, estimating the proportion that actually access their services, and identifying practical strategies to address food security by those in need. Until service providers have a more thorough understanding of these issues an effective response to food security issues cannot be achieved.

**Conclusion**

This project has provided a snapshot of the level of food security issues experienced among permanent residents of caravan parks located within the City of Greater Dandenong. Information obtained through consultation with local agencies highlights a limited understanding of food security and the factors that affect it. This indicates a need to ‘up skill’ service providers on this issue.

The research team recommends the following strategies to improve food security for permanent residents of caravan parks in the City of Greater Dandenong:

- Increase knowledge about food security among local service providers;
- Establish a communication network between local service providers in order to work collaboratively to address food security issues, including the identification of emerging issues;
- Encourage local service providers to gather further information about their clients in order to identify emerging issues and possible strategies to address food insecurity;
- Develop a local directory of all emergency food service providers including times of operation and maps of public transport routes to assist service providers and residents to access available services;
- Consult with caravan park residents and management for input into strategies to address food insecurity locally;
- Investigate the viability of building a community garden in a suitable venue; and
- Provide a regular community bus to transport isolated residents to a suitable shopping venue.

Many of these strategies would be applicable across other local government areas where food security is an issue.

**Acknowledgments**

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Food Security and Permanent Residents of Caravan Parks


Correspondence to:
Catherine Donaghue
Public Health Unit
Glen Eira City Council
PO Box 42
Caulfield South, Victoria, 3162
AUSTRALIA
Email: cdonoghue@gleneira.vic.gov.au