

## Correspondence

### Domestic recycling of kitchen wastes: an additional health hazard for householders?

Sirs,

The domestic kitchen is a dangerous place. Deficiencies in kitchen hygiene conspire with potential pathogens on raw foodstuffs to contaminate working surfaces, utensils and prepared foods, increasing the risk of foodborne infection.<sup>1,2</sup> Hand hygiene is largely ineffective in many households; the hands of food preparers are incriminated in ~40% of domestic food poisoning incidents.<sup>3,4</sup> Many studies have tracked the spread of intestinal pathogens from raw foods to work surfaces, utensils and hands, with subsequent contamination of fresh and previously cooked items.<sup>5,6</sup>

UK domestic waste production is ~20.8 kg per household per week. The putrescible fraction, ~15% of this total, is a current government target for composting to reduce reliance on landfill disposal. This is a European economic and environmental priority supported by several European Community (EC) Directives, and driven by demanding recycling targets, many UK local authorities now promote domestic food waste recycling. In an informal survey of 102 UK households that recycle food wastes, 62 (61%) respondents kept kitchen waste bins within the kitchen environment, in a cupboard or by the door, whereas the remainder stored bins at a distant location (Table 1). Fourteen households shared waste bins with other households. Bins were rarely, if ever, sanitized. Only 11 households reported cleansing of food waste bins, which was at best irregular and probably inadequate. Bins were emptied weekly ( $n = 57$ ) or fortnightly ( $n = 22$ ).

Food waste bins become heavily soiled on their internal and external surfaces. Contamination may be particularly heavy on the handle and around the lid area, and hands are

contaminated when the container is used, predisposing to cross-contamination of foods for consumption. Only 24 of 89 respondents reported handwashing after every contact with a food waste bin, and 53 admitted handwashing on an irregular and infrequent basis only. Twelve respondents never washed their hands after contact with the food waste bin. Although no substitute for hand hygiene, bin liners may reduce the soiling of primary containers but are prohibited by many local authorities because these compromise composting processes. Although predicated on sound environmental reasoning, the expansion in kitchen waste recycling schemes for UK householders exacerbates kitchen hygiene problems, with dedicated food waste bins becoming potent reservoirs of contamination that perpetuate a cycle of contamination, multiplication and dissemination.<sup>7</sup>

There is some anecdotal evidence of a rise in foodborne infection associated with food waste recycling. Although epidemiological relationships are difficult to demonstrate, 10% of respondents report sporadic cases of foodborne infection, with an apparent increase in frequency following the introduction of food waste recycling. Public health professionals must be aware of the potential impact of domestic food waste recycling, and deficiencies in kitchen hygiene, that may be associated with increases in foodborne intestinal infection. Education is a key step in prevention. High standards in kitchen hygiene are essential, and local authorities wishing to promote the recovery and composting of kitchen wastes should include simple hygiene instructions in their accompanying literature.

### Competing interests

None.

### References

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**Table 1** Locations for storage of food waste recycling bins: 102 households

Bin in the immediate kitchen vicinity	62
Inside the kitchen	13
By kitchen door	49
Bin stored away from the kitchen vicinity	40
In the garden	19
Outhouse or garage	3
Communal bin storage area	18

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### Understanding women's knowledge of breast cancer screening

Sirs,

We read with interest the recent study on women's knowledge of breast cancer risk and breast screening.<sup>1</sup> Despite the attention that breast cancer receives in the media, most women still have an inaccurate perception of their lifetime risk. We congratulate the authors on their consideration of confounding variables associated with this knowledge, although other potentially important factors such as ethnicity were not investigated. In the context of a multicultural society, this issue of ethnicity and the fact that 33% of women did not respond suggest there may be sectors of the community where particular needs are overlooked.

We question whether education level attained is an independent variable or whether it is linked to awareness about relevant sources of information and the ability to seek them out. It is not clear from the study whether women were required to choose from a list of pre-determined options on knowledge of screening or provide an open, written response. This distinction is important when interpreting the fact that 94% believe breast screening is to allow the earlier detection of cancer and 45% believe screening is to prevent cancer developing. Women participating in the NHS screening programme receive a leaflet<sup>2</sup> along with their invitation for mammography, and it clearly states screening does not prevent breast cancer; a fact which the above would suggest is not retained or other sources of information are being used. Therefore, this study highlights deficits in understanding of the purposes of screening which could guide further research.

### References

- 1 Webster P, Austoker J. Women's knowledge about breast cancer risk and their views of the purpose and implications of breast screening—a questionnaire survey. *J Public Health (Oxf)* 2006;**28**(3):197–202.
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### Response to: Understanding women's knowledge of breast cancer screening

Sirs,

In response to the comment on investigating the issue of ethnicity, the number of respondents from ethnic minority groups was too small to undertake any meaningful analysis. An analysis of the non-responders did not show a higher proportion of women from ethnic minorities. As pointed out in the article, the preponderance of white, home-owning women in the sample reflects the population profile of Oxfordshire in this age group. Ethnicity is an important factor, and it is essential that research be done to identify the particular needs of ethnic minority women.

Education, as the correspondents have pointed out, is linked to awareness about relevant sources of information and the ability to seek them out. The women were required to choose from a list of pre-determined options on knowledge of screening. This questionnaire was sent out before the NHS breast-screening leaflets were introduced. However, a follow-up study was done on a sub-group of the respondents to this study who were sent the NHS leaflet to identify whether knowledge about breast cancer risk and screening had changed following the leaflet. It was interesting to note in this study that although the leaflet states that breast screening does not prevent cancer, while 32% who previously thought screening prevented breast cancer responded correctly after reading the leaflet, 20% who previously thought that screening does not prevent cancer responded that screening does prevent cancer. This follow-up study further highlighted issues of how information provided on breast screening is perceived and