



## RESEARCH BULLETIN

### Essential Workers' Bubbles: Crowding, Housing Affordability and Tenure

K. Saville-Smith (CRESA) and I. Mitchell  
(Livingston Associates)

This bulletin highlights:

- Housing issues that essential workers currently face at Level 3 and Level 4.
- This set of essential workers can be dealing with affordability stress and some are experiencing overcrowding.
- Those essential workers in rental housing are most vulnerable to both affordability problems and problems with crowding.
- It is vital to look at housing for essential workers in order to protect our communities in the future because pandemics are likely to be more prevalent.

### Covid-19 and home

COVID-19 and New Zealand's lockdown into home-based bubbles has highlighted the importance of housing not only for individuals, their households and families but for the public good. Home-based bubbles are not simply to protect the members of each household from infection, they are also designed to reduce the likelihood that members of one household will infect others. The home, then, is the first line of pandemic defence. In that context, those without shelter or in other forms of homelessness have attracted public and government attention. Housing advocates and providers and the current Government have been anxious to reduce reliance on motels and hotels for homeless individuals and families. However, the demands of Level 4 and the vulnerability of homeless people, have meant that motels and hotels have been prominent in the COVID-19 response.

There has been less attention in the public arena to essential workers, their housing, and the extent to which their homes provide a safe and secure place. It is the housing conditions of essential workers that is the focus of this and a series of subsequent bulletins arising out of an analysis of the 2019 Household Economic Survey (HES). This bulletin focuses on the data around crowding for households with essential workers in the following occupational sets: 'nurses', 'other health care workers', 'police', 'supermarket and grocery workers', and 'checkout operators'.

The HES data is analysed for households in which an essential worker lives. The income data relates to market incomes and national superannuation only. All means-tested income is excluded. A separate report will detail the household, housing and household incomes of those households as well as the analytic method. For this bulletin it should be noted that:

- The essential worker households are analysed as an aggregated set but also according to the industrial/occupational category of the essential workers where household numbers are adequate. There are, for instance, very small numbers of police households so these are not able to be analysed separately.

- There are significant differences in the household incomes found among essential workers. Those differences can be attributed to:
  - Differences in wages and salaries earned by each of these sets of essential workers – police and nurses have higher salary or market income profiles than health care workers and supermarket workers.
  - Household composition. Some households have more than one member with a wage and salary. This can off-set low wages and salaries for some essential worker occupations. An indication of the impact of household composition on household incomes is evident in market median household incomes (MMHI) across our set of essential workers: couple MMHI \$104,700; couple with children MMHI \$128,000; other multi-adult households MMHI; \$136,600; one parent with children MMHI \$59,700; one-person MMHI \$49,200. We use market incomes to show the exposure of households to housing costs. Means-tested sources of income are excluded. National superannuation is included because it is not means tested.
- We treat the category of ‘not owned’ as rental households. The HES data category ‘not owned’ is more encompassing than rented but only slightly. This may tend to understate the difference between what we have termed ‘rented’ and the other households in owner occupation.

## Why think about essential workers and crowding?

Not all, but many workers in occupations falling into the category of essential workers in the context of New Zealand’s response to COVID-19, must spend work time outside their bubbles.

The essential workers whose households are the focus of this series of bulletins are required to move in and out of their bubbles. For some, it also means dealing with large numbers of people. Supermarket workers both at checkout and in shelving or managing goods are in largely controlled and distanced situations. Others, by the very nature of their occupations, tend to be in close proximity with other individuals, although the number of those individuals might be relatively limited. Nurses and the residential care and in-home care health workers that make up the ‘other health care workers’ are examples. Police have both those experiences. They potentially can be dealing at a distance with a range of people but also may be in close contact with some, often in uncertain and unpredictable situations.

Without these essential workers moving in and out of the protection of their bubbles, the bubbles of other households would not, as we have seen with supermarkets, be able to access necessary goods and services. There are risks here.

If community (rather than known contact) transmissions were high, then these workers would be at risk of COVID-19 contact and could bring that risk back to the members of their households who share their bubbles. In addition, these essential workers, like many others, may also be dealing with the challenges of lockdown at home in Level 3 and Level 4: adults may be working at home, children may be being schooled, some bubble members may require care, and bubbles need to get food and access necessary services. All the demands of home-based COVID-19 responses must be managed while at least one member of the bubble is required to leave and return on a routine basis.

In short, essential workers effectively ensure that bubbles can deal with the siege of COVID-19 and keep local economic activity and services going. For them, and for those that share their bubbles, the home may still be the first line of defence, but the defence is more precarious. This is particularly so if the household must also deal with excess housing costs or limited space and crowding.

## Crowding and essential workers

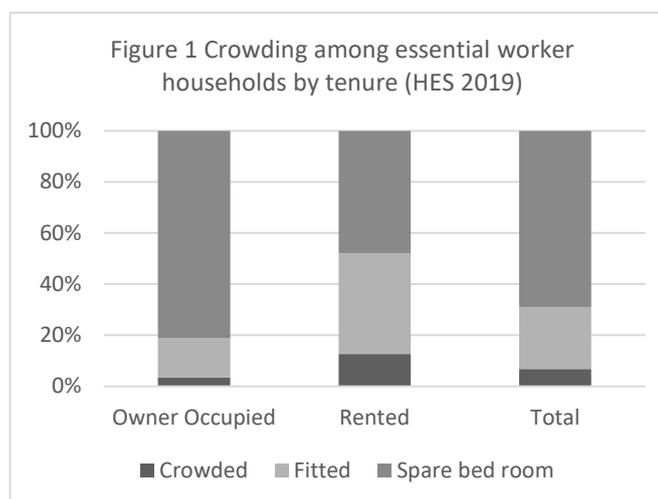
Crowding is a well-established determinant of poor health and is associated with infectious disease transmission.<sup>1</sup> As such, crowded households with essential workers may confront issues with heightened possibilities of COVID-19 transmission. There are also other risks associated with crowding including fear of family violence and abuse exacerbated by the enforced proximity associated with COVID-19 Level 3 and Level 4 statuses. Limited space in a dwelling, even when not crowded, may place significant constraints on education and home-based work.

## Owner occupation and renting, crowding and dwelling capacity

Figure 1 shows that across this set of essential worker households, crowding is evident in a small proportion, around 7 percent of households.

However, among essential workers living in rental accommodation, the crowded proportion is considerably higher.

Among essential worker households in rentals, 13 percent are crowded while a further 39 percent are not crowded but have no spare bedroom. That compares to owner occupier, essential worker households. Only 3 percent of owner occupier households are crowded and only a further 15 percent have no spare bedroom.



In short, while 81 percent of the essential workers in owner occupier households are in dwellings that have additional capacity in the form of a spare bedroom, less than half (48 percent) of the essential worker households in rentals do so.

<sup>1</sup> See for instance Baker, M., Milosevic, J., Blakely, T., & Howden-Chapman, P. (2004). Housing, crowding and health. In P. Howden-Chapman & P. Carroll (Eds.), *Housing & health: Research, policy and innovation*. (pp. 57-69). Wellington, New Zealand: Steele Roberts; Baker, M. G., Goodyear, R., & Howden-Chapman, P. L. (2003). Household crowding and health. In *What is the extent of crowding in New Zealand?: An analysis of crowding in New Zealand households 1986-2001*. (pp. 58-87). Wellington: Statistics New Zealand; and Baker, M., A. McNicholas, N. Garrett, N. Jones, J. Stewart, V. Koberstein, and D. Lennon (2000) Household crowding a major risk factor for epidemic meningococcal disease in Auckland children, *The Pediatric Infectious Disease Journal*, 19(10):983-990.

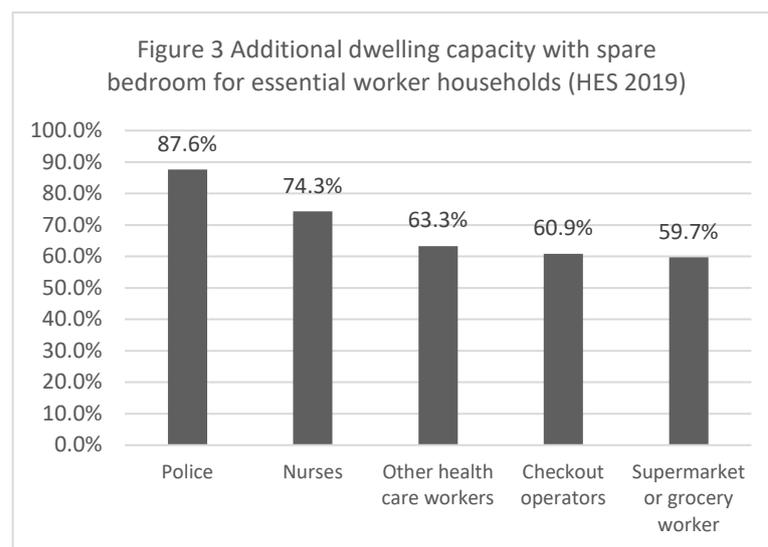
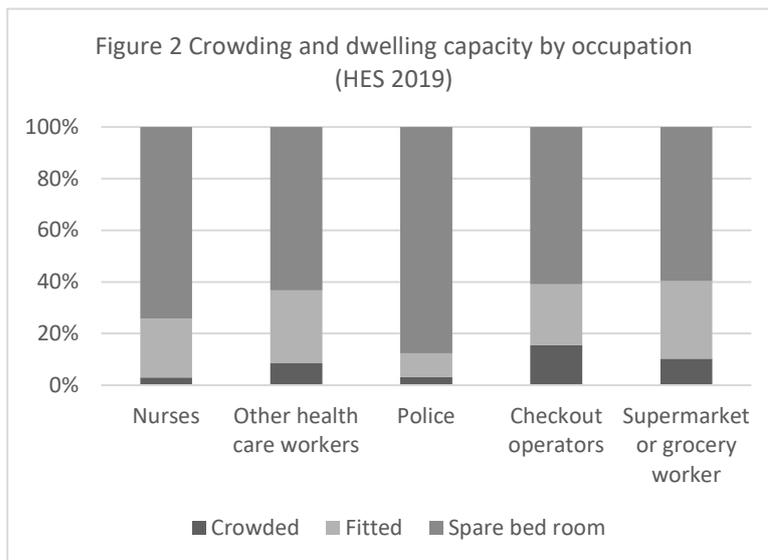
## Occupation, crowding and dwelling capacity

Figure 2 shows that households with the 'other health care workers' and supermarket workers have higher levels of crowding than nurses and police.

Almost 9 percent of 'other health care workers' are in crowded dwellings compared to 3 percent of nurses. Almost 16 percent of checkout operators are in crowded dwellings and about 10 percent of supermarket or grocery workers are in crowded dwellings.

There are similar variations associated with occupation in relation to dwelling capacity.

Almost 88 percent of police and around 74 percent of nurses live in dwellings with at least one spare bedroom. By contrast, less than two thirds in each of the other essential worker categories respectively live in a dwelling with a spare bedroom (Figure 3).

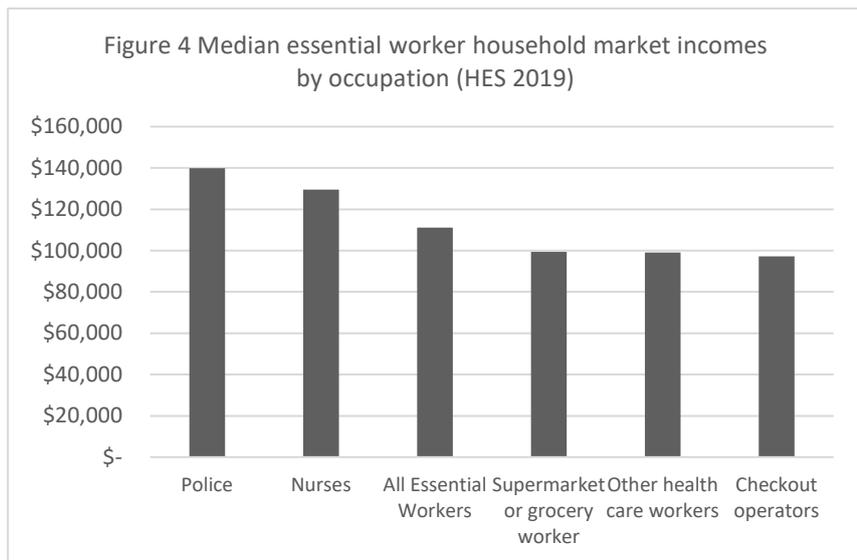


## Housing affordability

Households expending more than 30 percent of gross household income on housing are generally accepted as burdened with excessive housing costs and likely to be under housing stress. Using that measure, around 18 percent of households within this set of essential workers are in affordability related stress. This is a manifestation of differences in the median market incomes of households in affordability stress compared to others.

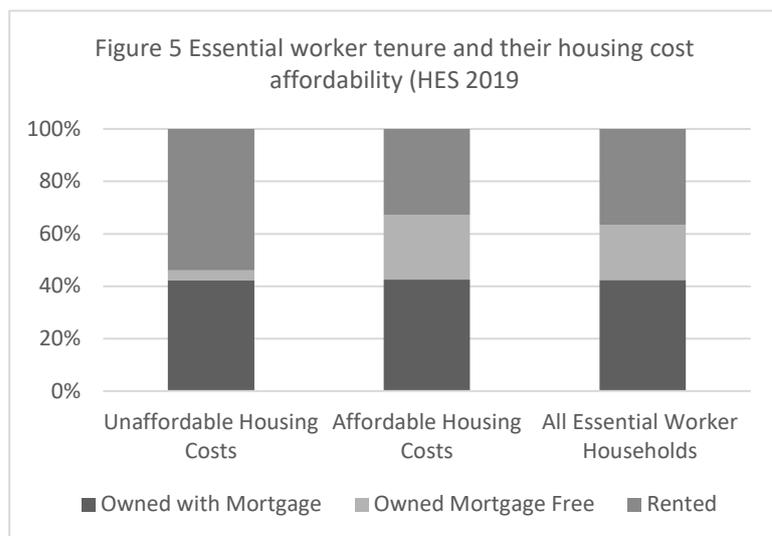
Median market household incomes vary, as Figure 4 shows, between the different occupational groups among essential workers. Overall, the median market household income of essential workers was \$111,100 in 2019. However, the median income of essential worker households with housing outgoings in excess of 30 percent of household income was only \$62,100 in 2019.

Affordability stress is particularly apparent among essential worker households in rental dwellings. Over 52,000 essential worker households are burdened by affordability stress. Over half of them (54 percent) are in rented dwellings and 42 percent are in mortgaged owner-occupied dwellings.



There are relatively large numbers of owner-occupied dwellings among essential workers. A comparison of the tenure of households exposed to excess housing costs and those households whose housing costs are affordable shows the profound impact on a household when dependent on the rental market. It also shows the resilience afforded to those households who have been able to pay off their mortgages.

While mortgage-free households make up only 4 percent of those essential worker households burdened by excess housing costs, they constitute 25 percent of households with affordable housing costs.



By contrast, while rental households make up 54 percent of households with unaffordable housing costs, they constitute only 33 percent of households with affordable housing costs.

In short, essential worker households in rentals are over-represented among households with unaffordable housing costs (Figure 5).

### Trading-off housing costs and crowding

There is a tendency for some households to trade off affordability stress in exchange for crowding. The median household market incomes for essential worker households in rental accommodation is higher among those in crowded dwellings and lowest in among households with a spare bedroom.

Among mortgaged owner occupier households, crowded households have median market household incomes of \$141,500 compared to \$130,800 for those with a spare bedroom. A similar pattern is evident for owner occupied but mortgage free households. Only 2,000 owner occupier essential worker households that are mortgage free are also in affordability stress. The vast majority of those have an additional spare bedroom. Similarly, among mortgaged owner-occupied households, the vast majority are not crowded.

The story is different for households in rented housing. The households in affordability stress and also subject to crowding are found among households in rent. The median market income for crowded households is \$107,000 compared to \$87,000 for renting households that have a spare bedroom. These households have tended to squeeze more people into the dwelling. In doing so, some at least, have increased the number of earners in the household and, consequently, increased their household incomes. Some 54 percent of households stressed by housing costs are in rent. That is around 28,000 essential worker households. Of those renting households with excessive housing costs, 9 percent are also crowded.

## A quick summary

The HES data for this set of essential workers shows that:

- Substantial proportions of essential workers are dealing with crowding and limited space in which to undertake the intense home-based activities that Level 4 and Level 3 imposes:
  - Among essential worker households in rentals, 13 percent are crowded while a further 39 percent are not crowded but have no spare bedroom.
  - Among essential worker household in owner occupation, 3 percent are crowded and a further 15 percent have no spare bedroom.
- Some essential worker households seek to increase their household income and housing affordability by having multiple earners and trading off housing costs for crowding.
- Whether an essential worker is in an owner occupier household or in rental has a significant impact of exposure both to excessive housing costs and to crowding:
  - 54 percent of households stressed by housing costs are in rent - around 28,000 essential worker households.
  - Of renting households with excessive housing costs, 9 percent are also crowded.
  - 81 percent of essential workers in owner occupier households but only 48 percent in rented housing have additional dwelling capacity that could be used for the additional burdens of home-based work and education.

This Bulletin has focused on national level data. There are always difficulties in surveys such as HES when attempting to granulate the analysis. Multiple layering of variables in attempts to explore the conditions of sub-sets of essential workers living in specific places or different sorts of households or of different ages or of different ethnicity are limited. Nevertheless, the situations of essential worker households who have had to move in and out of their bubbles to serve others do vary. Future Bulletins will explore those experiences to better understand the housing needs and price points which are needed to provide affordable housing for these and other key workers.

## Acknowledgements

We would like to acknowledge Statistics New Zealand's support for this project with a special thanks to Andrew McLaren, Data Analyst at Statistics New Zealand for his assistance in providing the data from the Housing Economic Survey.

## Contacts

Dr Kay Saville-Smith, Director Centre for Research, Evaluation and Social Assessment (CRESA), Co-leader, Affordable Housing for Generations, Building Better Homes Towns and Cities National Science Challenge.

Ian Mitchell, Principal Livingston Associates, Principal Investigator, Affordable Housing for Generations, Building Better Homes Towns and Cities National Science Challenge.