An example of inadequate food provision during the mandatory quarantine: An ultra-processed fritter with fried potatoes. Australia.

Field Article

Feeding young children during mandatory COVID-19 quarantine in Australia

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What we know:

The COVID-19 pandemic threw many countries into mandatory quarantines. In such settings, the inadequate provision of suitable foods may compromise young children's nutrient intakes.

What this adds:

Even in a high-income country such as Australia, the provision of optimal young child feeding was woefully inadequate, indicating that this is not necessarily a resource issue but rather is symptomatic of a failure to consider and plan for appropriate child feeding in such situations. The lessons presented here are applicable to any environment where parents and caregivers are unable to access food independently, such as seen in protracted or acute crises.

Background

The arrival of the COVID-19 pandemic resulted in a range of measures being implemented to restrict the spread of the virus. Health measures varied between countries and included school closures, public gathering limitations, movement restrictions (including stay-at-home orders), emergency healthcare investments, new social welfare provisions, contact tracing, travel restrictions, and quarantines. Low-, middle- and high-income countries all deployed at least some of these measures.

In March 2020, the Australian government implemented border closures and movement restrictions to control virus transmission. Australian citizens and non-citizens arriving from overseas were held in 'quarantine hotels' or other quarantine facilities for 14 days. This included families with infants or young children aged under three years. Other countries, including China and Vietnam, also had facility-based quarantine for those entering the country or required strict home-based quarantine that did not allow anyone to enter or leave the home for any reason (Hale, 2020; Thảo, 2020). The public health measures, often overseen by law enforcement or the military, were crucial in reducing the spread of COVID-19, but greatly impacted the lives of families with young children.

Due to particular dietary and food security needs related to their stage of development, infants and young children are vulnerable in emergencies. However, infant and young child feeding (IYCF) in emergencies is the most neglected aspect of breastfeeding policy by governments globally (Gupta et al., 2013).

The foundations for children's eating behaviours and dietary patterns are laid down during the complementary feeding period (Johnson and Hayes, 2017). With greater taste exposure, children learn to accept greater diet variety – with the introduction of bitter vegetables and sweet fruits remaining key dietary behaviours to protect against chronic illness (Johnson and Hayes, 2017). To ensure that a young child's needs are met during this critical stage of feeding development, parents require access to age-appropriate foods and feeding methods. Complementary foods must also be deemed suitable by parents for them to be willing to give these foods to their children.

This article shares lessons learned from the Australian quarantine context, to assist in planning for other settings and/or for future pandemics. As a high-income country, Australia should have had the resources available to easily meet children's complementary feeding needs during quarantine. Yet it failed to do so.

Study methods

The study recruited parents who experienced COVID-19 quarantine in Australia between June and December 2021 with a child or children aged 0–3 years. Parents were recruited via social media pages such as the Facebook group 'Parents in hotel quarantine Australia' and asked to complete an online survey. Participants had to either be residing in a COVID-19 quarantine facility at the time of survey completion or to have been in mandatory hotel/institutional quarantine in Australia in the last six months.

The online survey featured quantitative and short answer survey questions that collected data on parent and child demographics, facilities available in quarantine, child feeding and sleeping experiences, and parent experiences of caring for their child.

The study included 204 participants (96% mothers, 4% fathers), with the average age of their youngest child being 15.8 months (range 1–36 months).

> "The lessons presented here are applicable to any environment where parents and caregivers are unable to access food independently. This research illustrates that supporting the feeding needs of infants and young children in emergencies is not simply a matter of having sufficient resources."

Results

Unsuitable food provision

Overall, parents reported that they were not provided with nutritious meals and foods suitable for feeding children aged 6–36 months. In total, 80% (n=166) of parents stated that the foods provided for their children were unsuitable in some way. Reported unsuitability included foods not being nutritious (36%), food being of inappropriate consistency for the age of the child (20%), or foods that were potential choking hazards (e.g., nuts) (31%).

"We had to choose between baby food (i.e., terrible tasting puree) or food that was too advanced for our toddler (e.g., mini adult meals). There was no toddler option. We ended up buying in packet food… and our toddler was then difficult to feed non-processed food afterwards."

– Caregiver for a child aged 14 months

"The food provided was ridiculous (hot dogs, party pies, chicken nuggets). We complained in the first few days but then just gave up as we realised they had no clue how to feed babies."

– Caregiver for a child aged eight months

Due to the unsuitability of foods for their young child, 89% of all participating parents sought food deliveries from external providers (such as supermarkets). However, due to a lack of food preparation or refrigeration, the purchased food was often highly processed packaged food that was nutritionally inadequate.

Feeding routines were changed

In total, 66% of parents identified that their child's feeding routine was disrupted in quarantine. The most common problem encountered was that food being provided at set times was not amenable to the child's feeding pattern (reported by 43%). It was often noted that there was no heating or refrigeration to keep meals for when the child may want to eat.

"Food arrived once a day and with no predictability over time – between 4.30pm and 7pm. Dinner was hot and there were no facilities to reheat so had to be eaten immediately, which made it difficult to manage hunger – i.e., to know whether to give afternoon snack, prepare alternative dinners, etc."

– Caregiver for a child aged 11 months

Child feeding behaviours changed

Over the two-week quarantine period, 42% of parents reported that their children's eating behaviour changed, 30% of parents noted that their child became more picky/fussy with their eating, and 21% reported that their child ate less frequently.

"They became more picky/fussy with their eating. They became less adventurous with different tastes/types of foods. They ate less frequently"

– Caregiver for children aged six and 16 months

Mealtimes and poor food preparation facilities

Children's mealtime routines were often negatively impacted by limited or no access to appropriate facilities for food preparation and washing. Less than half of parents had access to a working stovetop. For almost half, the only location for washing feeding utensils was in the bathroom sink.

"We had to eat on the floor because there was no table. We had to wash food utensils in the same sink we wash our hands in after using the bathroom"

– Caregiver for a child aged 11 months

Strengths and limitations

A strength of this study is that parents who had cared for their children in quarantine completed the survey – often while still in quarantine – providing a window into their experiences during this time. The self-selected nature of participants may also be a limitation, however, as those with negative experiences may have been more willing participants. Additionally, parental reporting of the nutritional quality of provided foods may not have been accurate.

A way forward for infant and young child feeding in future quarantines

We found that children had poor access to quality age-appropriate foods when contained in a 14-day emergency quarantine isolation period during the COVID-19 public health response in Australia. Parents reported that a lack of access to age-appropriate foods and imposed feeding routines impacted their child's feeding behaviour and intake during this 14-day period. Notably, changes during this period were also reported to impact on child's mood. Data collected from parents demonstrated how quarantine facilities were underprepared for IYCF needs and had limited knowledge on what is required to support optimal IYCF in a quarantine setting.

Although the current study was conducted during the COVID-19 period in a higher-income country, the type of emergency context itself – whether sudden onset, protracted crisis, or conflict – raises similar concerns around the age-appropriate integration of nutritional support for IYCF to occur. An evaluation of funded food assistance programmes, by the European Commission, found that blanket assistance programmes often do not take sufficient account of the nutritional requirements of the target population – such as the age of a child (Haver et al., 2013).

Emergencies are critical times for infants and young children as they are more vulnerable to health risks and nutrition deficiencies due to the increased nutrition and food security requirements to meet developmental stages (Carothers and Gribble, 2014). It is also well established that parent feeding practices and interactions with their child during mealtimes can directly shape a child's lifelong dietary intake (Birch and Fisher, 1998). If children that experience sensitivity and fussy behaviour are unable to access familiar foods, they may significantly reduce their dietary intake. This causes both great parental stress and risks to their nutritional status (Lafraire et al., 2016). Parental stress during quarantine might also lead to maladaptive parental feeding practices. A recent study by Luo et al. (2022) found that, although not in close quarantine specifically, parental feeding practices throughout the pandemic changed with a higher use of coercive control. The authors highlighted how more research is needed to further explore how to provide supportive feeding guidance to parents during emergencies.

Without question, the findings from this study established that young children's nutritional intake, feeding, and mental health were all impacted during their quarantine isolation period, with a lack of consideration given to their specific needs within the emergency quarantine setting.

Although these data were collected in a high-income country, with the restriction of movements utilised as a public health measure across all low- and high-income countries at the height of the pandemic (2020–2021) (Hale et al., 2020) and the likelihood that such movement restrictions will be used again there is an urgent need for better planning and implementation for quarantine settings. That Australia, a high-income country with capacity to properly resource quarantine environments, did so poorly in supporting IYCF exposes a lack of awareness planning and preparedness.

While no other research has been undertaken on IYCF in COVID-19 quarantine, it is likely that similar issues regarding complementary feeding were experienced in other countries, across country income categories. To support change across all countries and agencies involved in closed emergency care, the development of clear minimum standards for any closed emergency accommodation, such as a quarantine facility where families and children are confined and have food provided externally, is needed. Along with this, the development of resources on IYCF requirements is required to support the knowledge of staff in food assistance programmes and facility providers.

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