Impact of the COVID-19 pandemic on diets, nutrition services and nutrition practices in Malawi

September 2022
Acknowledgements

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Key findings

Results of a remote survey in 2021 revealed that the COVID-19 pandemic led to changes in the diets of infants, children, adolescents, and pregnant and lactating women in Malawi.

73% of caregivers reported that their child consumed less variety of foods due to the COVID-19 pandemic.

Reduced consumption of animal source foods was frequently reported by all age groups due to the COVID-19 pandemic.

Some positive changes in diets were reported due to the COVID-19 pandemic, including reduced consumption of unhealthy foods and drinks and increased consumption of vegetables.

Many respondents reported that reduced household income, and increased food prices, led to changes in the types of foods purchased during the COVID-19 pandemic.

Fear of COVID-19 infection was the most common reason for caregivers not to seek treatment for a sick child during the pandemic.

A very high level of moderate or severe food insecurity was reported in this sample during the COVID-19 pandemic according to the Food Insecurity Experience Scale (74% of caregivers of children < 2 years, 65% of caregivers of children aged 2-18 years, and 67% of PLW).

Health workers frequently reported that delivery of maternal micronutrient supplementation, IFA supplementation for adolescent girls and nutrition counselling were disrupted during the COVID-19 pandemic.

Health workers reported that vitamin A supplementation and wasting screening and treatment services largely continued without interruption.
Background

The first case of COVID-19 was detected in Malawi on 2nd April 2020, after which it spread to all regions of the country. By July 2022, 2,651 confirmed COVID-19 deaths had been reported.\(^1\) According to the COVID-19 INFORM risk scale, Malawi is classified as a high COVID-19 risk country (score 5.8\(^*\)). While there are no known direct impacts of COVID-19 on child nutrition status globally, secondary impacts of the virus have led to reduced household incomes, disruption to food systems and reduced uptake of nutrition and health services.

Malawi was one of six countries included in research undertaken by UNICEF’s Eastern and Southern Africa Regional Office (ESARO) in 2021 to understand the impacts of the COVID-19 pandemic on diets, nutrition services and nutrition practices in the region. The research was undertaken in two parts: the first phase involved a desk review of all available literature across the ESAR, with a detailed report produced. The second phase involved primary data collection in six countries in the region using remote methods including telephone and internet-based surveys, the overall objective of which was to identify changes since the COVID-19 pandemic began in child, adolescent and women’s nutrition practices, food security and nutrition services. Results of the second phase for Malawi are presented here.

Methodology

Primary data were collected in Malawi in July and August 2021. Target groups included caregivers of children aged 0-23 months and 2 to 18 years; adolescents aged 10 to 18 years; pregnant and lactating women (PLW) and women who recently gave birth\(^3\); and health workers. Surveys were designed and administered using Computer Assisted Telephone Interviewing (CATI), U-Report (using the RapidPro platform) and Internet of Good Things (IOGT). Surveys and polls were tailored to each respondent group, with standardized indicator modules integrated where possible. Respondents were reached through lists provided by UNICEF that matched the target group criteria.

Findings

Sample characteristics

Sample characteristics from the CATI surveys and U-Report surveys are described in Table 1. Results from the IOGT were excluded as respondent numbers were very low. Most CATI respondents were female (94%) while most U-report respondents were male (66%). There was balanced representation across all age groups for both survey methods. CATI respondents were more likely to reside in Southern regions than any other. Analysis of sample characteristics against household survey data show that the CATI sample is biased towards more educated mothers.\(^4\) This should be considered in the interpretation of results.

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2. The total score is 10, of which a score of 6.5 or more is considered very high, 5 or more high, 3.5 or higher medium, 2 or higher low, and below that very low.
3. Women who gave birth within 20 months prior to the survey.
4. Data on socioeconomic status and urban versus rural location were not collected so level of bias is unknown.
### Table 1: Characteristics of CATI and U-Report respondents from Eswatini

<table>
<thead>
<tr>
<th>Survey type</th>
<th>Sample</th>
<th>Gender % (n)</th>
<th>Groups % (n)</th>
<th>Region % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total planned sample size</td>
<td>Total actual sample size</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>CATI</td>
<td>2,665</td>
<td>2,897</td>
<td>6%</td>
<td>94%</td>
</tr>
<tr>
<td>U-REPORT</td>
<td>2,665</td>
<td>24,443</td>
<td>66%</td>
<td>34%</td>
</tr>
</tbody>
</table>

*Adolescents aged 15-18 years **Adolescents aged 10-18 years predominantly (17% up to age 29 years).

### Nutrition practices and behaviour

#### Children under two years:
Seven percent of caregivers of children under two years of age reported via the CATI survey that their child was breastfed less frequently due to COVID-19. Sixty seven percent of caregivers reported that their child aged 6-23 months reduced consumption of one or more food groups due to COVID-19. The mean number of food groups with reduced consumption was 3.1 (out of 11). Healthy food groups most frequently reported to be consumed less by children aged 6-23 months due to COVID-19 were dairy products (42%), meat and poultry (42%), organ meat (39%), commercially fortified baby foods (34%), fish and seafood (34%), and oils and fats (34%). Many caregivers reported that unhealthy foods were also consumed less (savoury and friend snacks 42% and sugary foods 38%). The foods most frequently reported to be consumed more by children aged 6-23 months due to COVID-19 were other fruits and vegetables (14%) and vitamin A rich fruits and vegetables (12%).

#### Figure 1: Proportion of caregivers in Malawi reporting changes in consumption of children under two years by food group (CATI U2 survey)
73% of caregivers reported that their child consumed less variety of foods due to the **COVID-19** pandemic.
Reduced consumption of animal source foods was frequently reported by all age groups due to the COVID-19 pandemic.
Children and adolescents aged 2-18 years: Seventy two percent of caregivers of children aged 2-18 years and adolescents aged 15-18 years reported via the CATI survey reduced consumption of one or more food groups due to COVID-19. The mean number of food groups with reduced consumption for this age group was 4.3 out of 13 food groups. Healthy food groups most frequently reported to be consumed less by children aged 2-18 years due to COVID-19 were dairy products (45%), meat and poultry (44%), oils and fats (42%), rice, bread, cereals and potatoes (41%), fish and seafood (39%) and organ meat (38%). Many respondents also reported reduced consumption of unhealthy food groups (savoury and friend snacks 44% and sugary foods 32%) as well as sugary drinks (41%). The foods most frequently reported to be consumed more by children aged 2-18 years due to COVID-19 were dark green leafy vegetables (11%) and vitamin A rich fruits and vegetables (10%).

Figure 2: Proportion of caregivers and adolescents reporting changes in consumption of children aged 2-18 years by food groups (CATI U19 survey)

Of the caregivers of children who responded via U-Report, 73% reported that their child consumed less variety of food, 69% of respondents reported that their child consumed less meals, 47% reported that their child consumed smaller portions, 15% reported that their child skipped meals, and 21% reported that their child snacked less because of COVID-19. Food groups most frequently reported to be consumed less due to COVID-19 by adolescents self-reporting via U-Report were meat (51%), eggs (49%) and dairy products (48%) and the food group most likely to be consumed more was vegetables (45%).

Pregnant and lactating women and women who recently gave birth: Seventy eight percent of PLW and women who recently gave birth reported via CATI reduced consumption of one or more food groups due to COVID-19. The mean number of food groups with reduced consumption for this group was 4.4 (out of 13). Healthy food groups most frequently reported to be consumed less by PLW and recent mothers were organ meat (55%), dairy products (51%), meat and poultry (48%), oils and fats (41%) and fish and seafood (39%). Many respondents also reported reduced consumption of unhealthy food groups (savoury and fried snacks 52%, sugary foods 48%) as well...
as sugary drinks (40%). Foods most frequently reported to be consumed more were dark green leafy vegetables (19%), other vegetables (15%) and vitamin A rich fruits and vegetables (13%).

**Figure 3:** Proportion of pregnant and lactating women in Malawi reporting changes in consumption by food group (CATI MQ survey)

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Increased COVID-19</th>
<th>Decreased COVID-19</th>
<th>No change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ meat</td>
<td>3%</td>
<td>55%</td>
<td>42%</td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td>5%</td>
<td>31%</td>
<td>64%</td>
</tr>
<tr>
<td>Dairy products</td>
<td>7%</td>
<td>51%</td>
<td>42%</td>
</tr>
<tr>
<td>Meat and poultry</td>
<td>7%</td>
<td>48%</td>
<td>45%</td>
</tr>
<tr>
<td>Other fruits</td>
<td>8%</td>
<td>37%</td>
<td>56%</td>
</tr>
<tr>
<td>Oils and fats</td>
<td>8%</td>
<td>41%</td>
<td>51%</td>
</tr>
<tr>
<td>Eggs</td>
<td>9%</td>
<td>29%</td>
<td>63%</td>
</tr>
<tr>
<td>Fish and seafood</td>
<td>11%</td>
<td>39%</td>
<td>50%</td>
</tr>
<tr>
<td>Beans and pulses</td>
<td>12%</td>
<td>25%</td>
<td>54%</td>
</tr>
<tr>
<td>Rice, bread, cereals, tubers</td>
<td>12%</td>
<td>29%</td>
<td>59%</td>
</tr>
<tr>
<td>Vitamin A rich fruits and vegetables</td>
<td>13%</td>
<td>26%</td>
<td>61%</td>
</tr>
<tr>
<td>Other vegetables</td>
<td>15%</td>
<td>20%</td>
<td>64%</td>
</tr>
<tr>
<td>Dark green leafy vegetables</td>
<td>13%</td>
<td>16%</td>
<td>65%</td>
</tr>
</tbody>
</table>

**Food insecurity**

**Food access:** The most frequently reported reason for reduced consumption of foods by PLW and mothers who recently gave birth was diminished purchasing power. Substituting expensive items (such as meat) for cheaper items was commonly reported. Fifty six percent of PLWs reported that their household income had decreased since before the pandemic. Caregivers reported via U-Report that the most common reason for changes in food consumption patterns during COVID-19 were financial, either due to the family having no money (58%) or the high cost of food (36%). Fifty four percent of caregivers reported that they ate less during the pandemic to enable their children to eat.

**Food Insecurity Experience Scale (FIES):** According to the Food Insecurity Experience Scale (FIES), severe household food insecurity was experienced by 42% of caregivers of children under two years, 37% of caregivers of children aged 2-18 years, and 36% of PLW and mothers who recently gave birth. Severe or moderate household food insecurity was experienced by 74% of caregivers of children under two years, 65% of caregivers of children aged 2-18 years, and 67% of PLW and mothers who recently gave birth. According to the child FIES, 25% of adolescents aged 15-18 years reported many food insecurity experiences and 34% very many food insecurity experiences.

**Social protection:** School meals are an important form of social protection that serve to protect child diets. In Malawi, 16% of adolescents aged 15-18 years reported receiving free school meals during the COVID-19 pandemic, while 59% attended school but did not receive free school meals and 25% did not attend school because schools were closed.

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5 Using the four point scale of: no food insecurity experiences, some food insecurity experiences, many food insecurity experiences and very many food insecurity experiences.
Nutrition services

User experiences: Four percent of caregivers of children under two years of age reported having a sick child during the past year and not seeking treatment. Of these, 33% did not seek treatment due to risk of COVID-19. Eleven percent of caregivers of children aged 2-18 years (and adolescents aged 15-18 years) did not seek treatment when sick during the past year. Of these respondents, 33% reported that they did not seek treatment due to risk of COVID-19. Ten percent of pregnant women did not attend an ANC visit due to risk of COVID-19 and 11% of women who recently gave birth changed their birth plans due to COVID-19.

Some positive changes in diets were reported due to the COVID-19 pandemic, including reduced consumption of unhealthy foods and drinks and increased consumption of vegetables.
Health worker perceptions: Health workers reported some disruption to nutrition services during COVID-19. The services with the highest level of reported disruption were maternal iron and folic acid (IFA) supplementation (30%), IFA supplementation for adolescent girls (11% - 41% of those reporting disruption said this was because schools closed), and nutrition counselling (11%). Almost no health workers reported disruption of vitamin A supplementation (VAS), micronutrient powder (MNP) distribution, wasting screening and severe wasting treatment services.

Health workers reported adaptations to nutrition services during COVID-19. Adaptations were reported in the delivery of nutrition counselling (physical distancing 79%, use of community platforms 66%, use of radio, TV and other media 55%); vitamin A supplementation (physical distancing 100% and use of community platforms 100%); wasting screening (physical distancing 85%, use of community platforms 31%, and use of Family MUAC 23%); and wasting treatment services (physical distancing 63% and use of community platforms 25%). Health workers reported that some services had not yet restarted including IFA supplementation (55%) and maternal IFA (46%).

Discussion and conclusions

Results indicate that the COVID-19 pandemic had a negative impact on child, adolescent, and women's diets in terms of reduced variety of foods consumed, and reduced consumption of healthy foods, especially animal source foods. Results also suggest some positive impacts on diets in terms of reduced consumption of unhealthy drinks and snacks high in sugar, salt and fat, and increased consumption for some of micronutrient-rich vegetables. Dietary changes in Malawi were largely driven by changes in foods purchased. This appears to have been driven primarily by reduced household incomes and to some extent increased food prices. A very high level of food insecurity was reported in this sample across all age groups during the COVID-19 pandemic, which is concerning.

Results indicate that some nutrition services were disrupted by the COVID-19 pandemic in Malawi. Service users reported reduced uptake of maternal health and nutrition services due to perceived risk of COVID-19 and reduced IFA for adolescent girls due to school closures. Other services, such as vitamin A supplementation and wasting screening and treatment, appear to have been more resilient. Adaptations such as physical distancing at contact points, and use of community platforms to delivery services were used to enable some services to continue.

The negative impact of COVID-19 on diets, nutrition services and nutrition practices is likely to affect progress against child nutrition targets in Malawi for years to come. Resources are urgently needed to re-expand and prioritise efforts to prevent stunting and micronutrient deficiencies by protecting breastfeeding, delivering micronutrient supplementation at scale, and increasing access to diverse, healthy diets for children, adolescents and pregnant and lactating women. To protect against future emergencies, routine health systems must be strengthened, and population nutrition resilience built by expanding national social safety nets and developing strategies to build sustainable rural livelihoods.

Remote survey methods proved useful for collecting information on caregiver, adolescent and health worker perceptions and experiences in Malawi at a time when movement restrictions prevented household surveys. The utility of their wider use to complement household survey data should be explored.