DIETARY TRANSITIONS IN GHANAIAN CITIES:
LEVERAGING EVIDENCE FOR POLICY AND INTERVENTION TO PREVENT DIET-RELATED NON-COMMUNICABLE DISEASES

JANUARY 2019
BACKGROUND

Ghana is experiencing a nutrition transition with some evidence of transitioning dietary habits related to urban demographic change. As a consequence, obesity and diet-related non-communicable diseases (DR-NCDs) are rapidly increasing and becoming an important public health problem, especially in cities.

OBJECTIVES

- We recruited adolescents and adults living in socio-economically deprived urban neighbourhoods in Accra (n=64) and Ho (n=32) from May-December 2017.
- Participants were asked to take photographs of: places where they eat, things that influence what they eat in their neighbourhood, someone who influences what they eat, things that make eating healthy easy or difficult.
- Participants told the ‘stories’ of their photographs during follow up interviews.

WHAT WE DID

We undertook several pieces of research involving individuals, communities, local and national stakeholders; addressing the following questions:

1. People in their communities
   - What are dietary behaviours in urban Ghana and Kenya? A systematic review and meta-analysis.
   - What influences people’s dietary behaviours in urban Africa? A systematic mapping review.
   - How are unhealthy food and beverages embedded in everyday life in urban Ghana? Dietary intake and time use study.
   - What are the factors shaping dietary behaviours of people living in urban Ghana? A Photovoice study.

2. Communities and neighbourhoods
   - How is food sold and advertised in urban Ghana? Geographical mapping study.
   - How ready are urban Ghanaian communities to reduce unhealthy food and beverage consumption? Community Readiness mapping study.

3. Priorities for national action
   - What are the priorities for policy and interventions to improve diets at a national level? Benchmarking food environments to prioritise recommendations.
   - Developing a conceptual framework of drivers of dietary behaviours in African cities.
WHAT ARE DIETARY BEHAVIOURS IN URBAN GHANA AND KENYA?

We aimed to characterise dietary behaviours of adolescents and adults and their healthiness in urban populations of Ghana and Kenya.

METHODS

We searched six online databases and grey literature for publications meeting inclusion criteria dating from 1971 to 2017. Data were extracted on energy and macronutrient intakes; food items consumed; dietary patterns; dietary diversity and dietary practices. Meta-analyses were conducted on energy, macronutrients and food items consumed.

KEY FINDINGS

Ghana

- 26 studies
- 12,065 individuals and a further 1,452 households
- Mean energy intake: 1849 kcal/day (9 studies)
- Total energy intake from:
  - Carbohydrates 62.9%
  - Fat 24.7%
  - Protein 13.6%

Kenya

- 21 studies
- 8,661 individuals and a further 5074 households
- Mean energy intake: 1889 kcal/day (6 studies)
- Total energy intake from:
  - Carbohydrates 59.6%
  - Fat 25.8%
  - Protein 13.8%

Ghana and Kenya combined

<table>
<thead>
<tr>
<th>Foods consumed by percentage of sample</th>
<th>Ghana</th>
<th>Kenya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhealthy food and beverages</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>Fruits, vegetables and legumes</td>
<td></td>
<td>51.6%</td>
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<tr>
<td>Animal products</td>
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<td>68.8%</td>
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</table>

• Dietary diversity scores were relatively high.
• Most individuals and households had a typical pattern of three meals per day.
• Meals more likely to be eaten outside the home were breakfast and lunch.

IMPLICATIONS FOR INTERVENTIONS

- Some evidence of nutrition transition was apparent in the relatively high consumption of unhealthy foods and drinks, and in the relatively low consumption of fruits and vegetables.
- Energy and macronutrient intakes were within the WHO recommended nutrient goals for preventing diet-related non-communicable diseases, but fat intakes were quite high (close to the upper limit of the recommended range).
- The studies reviewed were not designed to examine nutrition transition, which limits the conclusions that can be drawn.

KEY RECOMMENDATIONS FOR FURTHER RESEARCH

- Studies of dietary behaviours using validated dietary assessment methods are needed in rapidly urbanising African countries such as Ghana and Kenya.
- There is a need for studies that are specifically designed to assess the nutrition transition, and measure intakes of food items such as added sugars and saturated fats.
- Evidence is needed on dietary patterns and practices, particularly around fast food and street food consumption, and eating outside the home.
WHAT INFLUENCES PEOPLE’S DIETARY BEHAVIOURS IN URBAN AFRICA?

We reviewed factors influencing dietary behaviours among adolescents and adults living in urban Africa to identify priority areas for future research.

METHODS
A systematic mapping review was conducted to update and extend an existing review investigating drivers of dietary behaviours in women living in urban Africa, which was undertaken in 2015. The current review extended beyond women only to include men and adolescents. Electronic searches across six databases (MEDLINE, EMBASE, PsycInfo, CINAHL, African Index Medicus and ASSIA) were conducted. Findings were synthesised narratively. Factors were compiled into a map adapted from an existing socio-ecological model, based on research in high-income countries using four broad levels: individual and household factors; social environment; physical environment and macro level factors.

KEY FINDINGS
• 38 studies included in mixed-methods data synthesis.
• Number of influential factors identified:
  - Adult women- 65
  - Adult men- 47
  - Adolescents- 42

Factors linked to unhealthy diets
- Time limitations
- Skipping meals
- Advertising
- High cost of food
- Higher stress levels
- Low self-esteem
- Lower education
- Unhealthy dietary behaviours

• Individual and household level factors were the most frequent (e.g. Taste, emotions, income).
• Macro level factors were poorly investigated (e.g. Media, policy, food prices).
• Adult men and women studies showed similar patterns of distribution of factors associated with dietary behaviours.
• More studies involving adolescents investigated factors in the social environments (e.g. friends, peer pressure).

IMPLICATIONS FOR INTERVENTIONS
• Interventions could be targeted at both adult men and women, as our findings showed they have similar influences on dietary behaviours.

KEY RECOMMENDATIONS FOR FURTHER RESEARCH
• Studies should be directed at investigating dietary behaviours in urban populations specifically as these are often the communities most affected by obesity and other DR-NCDs.
• More research is needed on how the macro, social and physical environments influence diets in adults and adolescents.
HOW ARE UNHEALTHY FOOD AND BEVERAGES EMBEDDED IN EVERYDAY LIFE IN URBAN GHANA?

We explored how habits related to food consumption are structured and organised in social practices in Ghanaian cities, such as when unhealthy food and beverages are eaten, how quickly, where and with whom.

METHODS
- Deprived neighbourhoods in two Ghanaian cities: Accra (James Town) and Ho (Ho-Dome).
- A quota sampling method (based on age, BMI, occupation and economic status) was used to recruit 301 female and male adolescents/adults aged ≥ 13 yrs in both cities.
- Qualitative 24hr recall via face-to-face interviews were conducted in June to December 2017, which noted:
  - all food and drink consumed inside/outside the home in the previous 24hr period
  - time of day of the food event
  - how long a food event lasts
  - who participants eat with and where

**KEY FINDINGS**

- Most food episodes were quick.
  - 40.1% at <10 mins
  - 47.0% at 10-29 mins
- Shorter meals were more likely to have a greater intake of unhealthy foods, nutrient poor foods, sweet foods or sweetened beverages.
- Only 12.9% of food episodes were 30 mins or more.
- Longer meals were more likely to include fried food, energy dense, energy dense-nutrient rich foods and occur at home.

- A structured meal pattern around 3 main meals a day persists in Ghana with limited snacking in-between.
- Unhealthy foods were more commonly consumed during the morning.

- Energy dense foods: 94.0%
- Energy dense nutrient rich: 89.4%
- Fried foods: 66.8%
- Energy dense nutrient poor: 55.8%
- Nutrient poor foods: 41.0%
- Sweet foods: 38.5%
- Sweetened beverages: 36.2%
• Families and the home environment were very important, 46.5% of meals were consumed at home—especially the evening meal.

• The role of families in the social environment is therefore key to maintaining healthy diets.

• Only 7% of meals were eaten with friends. Consumption of fried foods and SSBs (more than twice) was higher with friends, with whom breakfast was often eaten.

• Eating with friends was often a vehicle for unhealthy eating practices, so awareness about eating well with others could be developed as part of interventions.

• Eating alone was also quite common (45.4%), especially at lunchtime, when it was more associated with eating away from home.

• Encourage people to choose healthier options when eating out.

• Unhealthier foods were consumed in schools/workplaces.

• Interventions in schools and workplaces to promote healthier diets should be encouraged.

• Consumption of unhealthy food was widespread.

• Food based dietary guidelines are needed as a tool to educate the public about eating healthier diets.

RECOMMENDATIONS FOR FURTHER RESEARCH

• Explore how work patterns and convenience are associated with dietary practices.
• Extend the approach to more urban areas in Ghana to understand how representative the findings are across cities.
WHAT ARE THE FACTORS SHAPING DIETARY BEHAVIOURS OF PEOPLE IN GHANAIAN CITIES?

We aimed to identify social and physical environmental drivers shaping dietary behaviours of individuals living in urban Ghana.

METHODS

Photovoice, a participatory photography method, was used

• We recruited adolescents and adults living in socio-economically deprived urban neighbourhoods in Accra (n=64) and Ho (n=32) from May-December 2017.

• Participants were asked to take photographs of:
  - places where they eat,
  - things that influence what they eat in their neighbourhood,
  - someone who influences what they eat,
  - things that make eating healthy easy or difficult.

• Participants told the 'stories' of their photographs during follow up interviews.

KEY FINDINGS

Physical environment factors influencing dietary behaviours...

Food hygiene was important when choosing where to eat

“They keep that place very well. They sell by a gutter but, when they come, they clean the gutter very well before they sell. They have glass covering all their food. And the place they give you to sit if you are eating the food there, is very neat, there is soap, to use in washing your hands. When you eat, you enjoy it, even if the food is not so nice at times, you will enjoy it because of how the place is kept. How the place is neat, makes me want to eat over there.”

(Female, 15-18 years, lowest SES, Ho)

Environmental sanitation was a key consideration

“As you can see the place is not neat... if you cook in a place like this and sell, I will not buy food from you to eat. That is why I took this picture. As you can see in this picture there are dirty rags on the ground and the place is littered with plastic rubbers. You can also see a bag full of empty sachet water rubbers.”

(Female, 19-49 years, lowest SES, lactating, Accra)

Food adulteration by street vendors was a common concern

“Some food sellers also go and buy rotten and spoilit items to cook. I have also seen at the milling shop were rotten tomatoes, pepper and onion with maggots all over the container being milled together to be used to prepare food for people to buy and eat. These are happening in the larger markets like Makola so I prefer to cook at home to avoid all these things.”

(Male, over 50 years, lowest SES, Accra)

Financial access was a barrier to a healthy diet

“when you have [money] then you can buy something to cook at home, and when you cook it, you can get some health from it. But if you don’t have money, and you go to the roadside to buy something...people do not take care of how they cook their food, when you eat, you can fall sick. So when you have money and you buy the foodstuff and cook at home, you will have nothing to worry about with regards to your health. So money is needed, everywhere.”

(Female, 19-49 years, lowest SES, lactating, Ho)

Social environment factors influencing dietary behaviour

Family members influence dietary behaviours of participants in a number of ways:

Being in charge of the cooking of meals

“This picture shows my mum... what she cooks at home is what I eat home. She is very selective of what we should eat because of my little brother and so she is mindful to cook what will be good for us for us to grow strong because at the end of the day when we get sick she will end up spending more money at the hospital so in order for her to prevent that she makes us eat good food, selecting the right nutrients.”

(Female, 19-49 years, low-to-middle SES, Accra)
Providing advice on the type of foods consumed and on the source of provisioning of these foods

“This is my auntie and she advises me on the food to eat and not to eat. I listen to her because she is older than me and I have to take advice from her. I will say that everyone should get an elderly one who will advise you on the food to eat and things to do in order to become healthy and this will help us a lot.”
(Male, 19-49 years, lowest SES, Accra)

Providing support in times of hardship

“The food seller is my auntie... Even when I don’t have money, she could sell to me on credit then I pay later when I have money. She also provides the food to my children even when we don’t have money.” (Female, lowest SES, lactating, Accra)

Following family’s food preferences and needs

“It is because of them that I eat a lot or eat a healthy food to get more breast milk for them to feed on. Because if I don’t eat a lot or eat a healthy food, they will not get the breast milk to feed on and they need to grow well...”
(Female, low-to-middle SES, lactating, Ho)

Friends influenced dietary behaviours of men more than women:

Friends regularly gather for eating/cooking.

“In the picture you can see some Banku there with my paddies (friends), showing we are about to eat. We normally eat this food with my boys sometimes every Tuesday or every Friday.” (Male 19-49, low-to-middle SES, Accra.)

Eating together (in a group of friends) is mentioned to be more enjoyable, as well as motivate participants to eat.

“I think the food my mum prepares at home is really better than the ones I go and buy outside. But sometimes we the boys feel like going to eat Las Palmas or we friends feel like sitting to eat something and enjoy ourselves and that is the reason why I go outside and buy food.”
(Male, 15-18 years, lowest SES, Accra)

IMPLICATIONS FOR INTERVENTIONS

• Food safety and neighbourhood environmental sanitation need to be addressed within the physical food environment. Enforced legislation and regulation around food hygiene and standards is warranted.

• Friends influence dietary behaviours of males, thus interventions targeting friendship groups may be effective to instill healthy dietary practices.

• Policies to ensure food is financially accessible are needed to enable healthful dietary choices.

KEY RECOMMENDATIONS FOR FURTHER RESEARCH

• Explore whether food safety and financial access are factors in the physical environment influencing dietary behaviours of individuals in other parts of Ghana.

• Explore whether family and friends are important social drivers of dietary behaviours in other Ghanaian communities.
HOW IS FOOD SOLD AND ADVERTISED IN URBAN GHANA

We aimed to characterise the food sold and advertised within deprived urban neighbourhoods.

METHODS
A full audit of all food shops and vendors selling foods and drinks, as well as standalone advertisements, were surveyed in James Town (Accra) and Ho Dome (Ho) between September and December 2017. We recorded what type of outlet it was, all items sold, whether there were any adverts and what they were (type and item being advertised). The latter was also recorded for standalone adverts. GPS location was also recorded.

KEY FINDINGS

- Informal vendors (e.g. kiosk, local sellers, table tops) were common in James Town (81%), with shops most common in Ho Dome (44%).

- Energy dense nutrient poor foods were more commonly sold in informal outlets.

- Energy dense foods, particularly fried and processed foods were commonly available (James Town 37%, Ho Dome 68%), as were sugar sweetened beverages (James Town 36%, Ho Dome 50%)

- Healthier foods were also available albeit less common, e.g. grains/staples (James Town 26%, Ho Dome 56%), vegetables (James Town 20%, Ho Dome 22%), and eggs (James Town 28%, Ho Dome 54%).

- 25% of all outlets in James Town and 39% in Ho Dome contained at least one advert.

- Items most commonly advertised were sugar-sweetened beverages (James Town 58%, Ho Dome 34%) and alcohol (James Town 34% and Ho Dome 32%).

IMPLICATIONS FOR INTERVENTIONS

- Regulating the location of advertisements due to the dominance of unhealthy options (or countering these messages) appears important.

- Informal (small-scale) vendors are generally healthy and focus should be on more formal outlets.

- Healthy foods were fairly common, suggesting that addressing availability alone might not be effective.

KEY RECOMMENDATIONS FOR FURTHER RESEARCH

- Explore how accessibility to foods sold and advertised is associated dietary behaviours.

- Examine broader aspects of accessibility including acceptability of foods and affordability.

- Extend the approach to more neighbourhoods to understand how representative the findings are and how environments change across cities.
HOW READY ARE GHANAIAN COMMUNITIES TO REDUCE UNHEALTHY FOOD AND BEVERAGE CONSUMPTION?

The capacity and readiness of communities to accept a range of interventions needs to be understood before appropriate interventions can be implemented. We investigated how ready urban poor communities are to improve the diets of women of reproductive age in Ghana.

METHODS

- Community readiness model (CRM), adapted to the Ghanaian context, was used to explore the attitudes, knowledge, efforts and activities and resources of community members and leaders in Ho Dome, Ho and James Town, Accra.
- Semi-structured interviews (n=24) were transcribed, reviewed and scored using rating statements for 5 dimensions. An overall readiness score was calculated and compared to the 9 stages of community readiness.

KEY FINDINGS

Both communities in ‘Vague awareness’ stage of readiness (Ho- 3.95, Accra- 3.35)

- Community members had limited knowledge of issues (some misconceptions).
- Limited awareness of local efforts.
- Concerns insufficient to motivate action.
- Limited resources identified that could be used for further efforts.

IMPLICATIONS FOR INTERVENTIONS

- Improve community and leader knowledge of the health implications of excessive unhealthy food and beverage consumption to prioritise issue and mobilise resources.
- An initial focus should be on increasing the community knowledge of efforts (Ga Mashie) and the resources available for intervention (Ho Central).
- Need to consider food safety/hygiene in interventions designed to reduce consumption of unhealthy foods.
- Upscale and improve publicity of existing efforts, e.g. present information at local community events, post flyers, posters and billboards strategically in health facilities and schools. Radio considered particularly effective channel of information delivery.
- Improve awareness and utilise existing resources, e.g. use community spaces, coordinate existing experts and NGO activities to raise awareness and profile of diet-related health.
- Work with key members of the municipal assembly, health workers, youth leaders, teachers, local food vendors (businesses) and traditional leaders to develop and implement changes.
WHAT ARE THE PRIORITIES FOR POLICY AND INTERVENTIONS TO IMPROVE DIETS AT NATIONAL LEVEL?

We assess the extent to which the Government of Ghana is implementing policies on the promotion of healthy food environments (FE).

METHODS

- The Healthy Food Environment Policy Index (Food-EPI) produced by INFORMAS (International Network for Food and Obesity/NCDs Research, Monitoring and Action Support) was used for the assessment.
- Between October 2017 and August 2018, a cross-country team of researchers trained by a Food-EPI expert implemented the Ghana Food-EPI exercise.
- Using a comprehensive evidence pack developed by researchers and validated by government officials, a panel of 19 local experts rated the extent of government action against the local policy development cycle (‘initiation’, ‘in development’, ‘implementation’ or ‘evaluation’) and against international best practice.
- Actions for the government to improve the FE were proposed and prioritised taking into account perceptions of the relative importance (i.e. perceived need, likely impact and equity) and achievability of each action (i.e. feasibility, level of acceptability to a wide range of key stakeholders, affordability and cost-effectiveness).

KEY FINDINGS

In relation to the local policy development cycle

- Government efforts to restrict marketing of breastmilk substitutes were judged the most advanced i.e. in an ‘evaluation’ phase.
- 21 areas of good practice were judged as in an ‘implementation’ phase.
- 14 areas were judged to be only ‘in development’ including limited action to: establish food composition standards for processed foods, use price controls (taxes, subsidies) to promote healthy food choices, or use zoning laws to limit density of unhealthy food retail outlets, although some local bye-laws address zoning.
- No evidence of any government action was documented for 5 policy and 2 infrastructure support areas of good practice.

At the level of international best practice, the Government of Ghana was assessed to be performing:
- **Very well (‘high’)** restricting the marketing of breastmilk substitutes.
- **Relatively well (‘medium’)** in two policy areas; policy action to establish ingredients lists/nutrients declaration and setting standards for maximum fat content in beef, pork, mutton and poultry.
- **Relatively well (‘medium’)** in six infrastructure support areas, including: access to government information, monitoring progress on reducing health inequalities, platforms for interaction, sensitivity of all government policies to nutrition.

There were major gaps identified:
- Three quarters of all areas of good practice were assessed as ‘low’ or with ‘very little’ implementation.
- A particular gap was in relation to the provision of government–funded research funding targeted at improving food environments and reducing NCDs.
### IMPLICATIONS FOR INTERVENTIONS

A total of 13 policy actions were identified and prioritised.

<table>
<thead>
<tr>
<th>Policy domain</th>
<th>Recommended policy action</th>
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</thead>
<tbody>
<tr>
<td><strong>Highest importance and achievability</strong></td>
<td></td>
</tr>
<tr>
<td>Food promotion</td>
<td>The Government should pass legislation to regulate the promotion, sponsorship, advertisement and sale of food and drink with added sugars, and other nutrients of concern (saturated fatty acids/trans fats, salt) in the school environment and other child-laden settings, enforceable with fines.</td>
</tr>
<tr>
<td>Food promotion</td>
<td>The Government should enforce legislation to regulate the promotion, sponsorship, advertisement and sale of food and drink with added sugar, and other nutrients of concern (saturated fatty acids/trans fats, salt) in print and electronic media, enforceable with fines.</td>
</tr>
<tr>
<td>Food labelling</td>
<td>The Government should support nutrition advocates (e.g. with financial support, knowledge and research development, capacity planning).</td>
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<tr>
<td>Food provision</td>
<td>The Government should implement a requirement for caterers involved in the School Feeding Programme to pass a training course on healthy meal planning.</td>
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<tr>
<td><strong>High importance but less achievable</strong></td>
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<tr>
<td>Food labelling</td>
<td>The Government should adopt a mandatory labelling scheme that ensures that foods manufactured for both local and international markets are appropriately labelled. (e.g. develop mandatory front-of-pack labelling such as the traffic light labelling scheme).</td>
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<tr>
<td>Food prices</td>
<td>The Government should implement subsidies to increase the affordability of healthy foods.</td>
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<tr>
<td><strong>Lower importance and achievability</strong></td>
<td></td>
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<tr>
<td>Food prices</td>
<td>The Government should implement taxes on unhealthy foods that will raise their price.</td>
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<tr>
<td>Food trade and investment</td>
<td>The Government should develop and implement a strategy to control illegal imports of unhealthy foods.</td>
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<td>Food composition</td>
<td>The Government through the relevant agency (e.g. Food and Drugs Authority; Ghana Standards Authority) should set food composition standards for out-of-home meals.</td>
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<tr>
<td>Food in retail</td>
<td>The Government should institute a requirement for all restaurants to have appropriately qualified nutritionists and dietitians on staff.</td>
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<tr>
<td>Food trade and investment</td>
<td>The Government should ensure that the impact of trade and investment agreements on food environments, population nutrition and health are assessed and monitored.</td>
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<tr>
<td>Food provision</td>
<td>The Government should prioritize food transfer over cash transfer when providing support to vulnerable individuals/households.</td>
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<tr>
<td>Food in retail</td>
<td>The Government should ensure that local authorities are equipped with the requisite resources to monitor unhealthy foods sold in local markets.</td>
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</tbody>
</table>

A total of 14 infrastructure support actions were identified and prioritised.

<table>
<thead>
<tr>
<th>Infrastructure support domain</th>
<th>Recommended action</th>
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<tbody>
<tr>
<td><strong>Highest importance and achievability</strong></td>
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<tr>
<td>Funding and resources</td>
<td>The Government should ensure that sufficient and transparent funding is allocated to nutrition, particularly promotion of healthy eating.</td>
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<tr>
<td>Funding and resources</td>
<td>The Government should allocate adequate funding for nationally-relevant research on nutrition and NCDs, including obesity and related health and social inequalities.</td>
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<tr>
<td>Leadership</td>
<td>The Government should develop and publish food-based dietary guidelines.</td>
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<tr>
<td>Monitoring and evaluation</td>
<td>The Government should develop a food composition database.</td>
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<tr>
<td>Monitoring and evaluation</td>
<td>The Government should establish regular surveillance and monitoring of the food environment, including obesity and overweight in the population across all age groups.</td>
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<tr>
<td><strong>Lower importance and achievability</strong></td>
<td></td>
</tr>
<tr>
<td>Funding and resources</td>
<td>The Government should create a Health Promotion Agency with dedicated funding.</td>
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<tr>
<td>Platforms for interaction</td>
<td>The Government should strengthen cross-sectoral platforms for coordination of nutrition and nutrition-related policies and plans.</td>
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<tr>
<td>Monitoring and evaluation</td>
<td>The Government should regularly monitor and evaluate indicators of health inequalities with the aim of reducing these and improving the health of vulnerable populations.</td>
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<tr>
<td>Funding and resources</td>
<td>The Government should earmark all revenues collected from tobacco sales to fund health related research, including nutrition.</td>
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<tr>
<td>Governance</td>
<td>The Government should develop and implement policies to regulate relationships and influence of commercial industry on government.</td>
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<td>Governance</td>
<td>The Government should ensure that comprehensive nutrition-related information is available and accessible within districts.</td>
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<td>Governance</td>
<td>The Government should ensure that the Access to Information Bill is passed by Parliament.</td>
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<tr>
<td>Platforms for interaction</td>
<td>The Government should form a strategic partnership with West African nations to exchange ideas and practices on reporting, surveillance and monitoring and evaluation on population nutrition and NCDs.</td>
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CONCEPTUAL FRAMEWORK OF THE FACTORS DRIVING DIETARY BEHAVIOUR IN URBAN AFRICA

We aimed to develop a conceptual framework of the factors influencing dietary behaviours in urban Africa to identify key factors for research prioritisation and intervention development.

METHODS

Framework creation:
- Systematic mapping review of factors influencing dietary behaviours.
- Findings from our two projects.
- Expert knowledge on factors influencing dietary behaviours in African cities.

Framework evaluation:
- Gathered their views on the priority factors for research and interventions.
- Appraised the usefulness of the framework for research and intervention planning.

KEY FINDINGS

The top 10 factors that influence dietary behaviours in urban Africa

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
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<tbody>
<tr>
<td>Food prices</td>
<td>4.8</td>
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<td>Food habits</td>
<td>4.6</td>
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<td>Food preferences</td>
<td>4.2</td>
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<tr>
<td>Household composition</td>
<td>4.4</td>
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<tr>
<td>Convenience (time/afford)</td>
<td>4.6</td>
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<tr>
<td>Cultural belief</td>
<td>4.2</td>
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<tr>
<td>Seasonality</td>
<td>4.4</td>
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<tr>
<td>Socioeconomic status</td>
<td>4.6</td>
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<tr>
<td>Macro (n=27)</td>
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<tr>
<td>Religion</td>
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<td>Quality and freshness of foods</td>
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<td>Zoning policies</td>
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<td>Social (n=13)</td>
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<tr>
<td>Household food insecurity</td>
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<td>Female headed households</td>
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<td>Women’s empowerment</td>
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<td>Physical (n=17)</td>
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<td>Household sanitation and hygiene</td>
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<td>Food adulteration/contamination</td>
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<td>Area deprivation</td>
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<td>Individual (n=50)</td>
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<td>Body satisfaction</td>
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<td>Land use</td>
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<td>Food allocation</td>
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<td>Communal eating</td>
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<td>Vendor reputation</td>
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</table>

Africa specific factors that emerged
- Religion
- Quality and freshness of foods
- Zoning policies
- Household food insecurity
- Female headed households
- Women’s empowerment
- Weather
- War
- Household composition
- House-help
- Household sanitation and hygiene
- Food adulteration/contamination
- Area deprivation
- Food allocation
- Communal eating
- Vendor reputation

Framework evaluation
- The quality of the framework was judged to be “comprehensive” by three-quarters (n=62) of participants.
- Over two-thirds (n=57) of participants indicated that they would consider using the framework for developing interventions.
- Almost two-thirds (n=46) indicated they would consider using it for research development.

IMPLICATIONS FOR INTERVENTIONS

- Conventional approaches focusing on individual level behaviour change are insufficient to improve dietary behaviours in urban Africa.
- To promote healthy diets, policies to reduce the price of healthy foods especially should be considered.

KEY RECOMMENDATIONS FOR FURTHER RESEARCH

- Research the broader food environment (the physical and macro levels) as well as causal models and pathways of the factors that influence dietary behaviours.
- Explore and evaluate existing interventions to promote healthy diets in a way that goes beyond ‘what works’, but also identifies ‘for whom it works and in what context’.
### POLICY RECOMMENDATIONS SUMMARY

#### National Level
- Regulate and legislate unhealthy food and beverage promotion, sponsorship and advertisement in schools and by media.
- Implement mandatory healthy meal preparation training for school catering staff.
- Implement mandatory food labelling scheme.
- Implement subsidies to increase the affordability of healthy foods.
- Provide food transfer support to vulnerable individuals and households.
- Updated food composition tables for Ghana are required to implement several of these policies.

#### Neighbourhoods and communities
- Food safety and environmental sanitation needs to be addressed.
- Food based dietary guidelines are needed as a tool to educate the public about eating healthier diets.
- Improve community and leader knowledge about health implications of unhealthy dietary behaviours.
- Improve awareness and utilise existing resources to support healthy dietary behaviours.

#### People in their communities
- Families and the home environment have a strong influence over dietary behaviours and are therefore important intervention targets and key to maintaining healthy dietary behaviours.
- Friends have a strong influence over dietary behaviours, particularly males, thus friendship groups and social settings may be important intervention targets.
The studies summarised in this booklet involved collaborative work involving six universities and research institutes in Ghana, Kenya, France and the UK, involving the following individuals:

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