

Adolescent Nutrition: The Missing Link in the Life Cycle Approach

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Romana Cipriano with her daughters Inês and Beatriz at the Chimbadzuo primary school. Romana is the gender advisor for the school council and she makes sure girls stay in school and provides support for other health and sanitation needs. Manica, Mozambique. Foto by Kieron Crawley

Abstract

Objective: To understand the extent to which adolescent health is being addressed in order to improve nutritional outcomes in Manica province, Mozambique and to highlight the global evidence-base and best practices in addressing adolescent nutrition to reduce stunting and improve the nutritional status of the overall population. This steering document uses the life cycle approach as its conceptual framework and looks at the interrelationship between biological and social factors that shape adolescent nutrition.

Design: We analyzed the extent to which adolescent nutrition is being addressed in Manica province using the indicators of Mozambique's Multi-Sectorial Action Plan for the Reduction of Chronic Malnutrition (PAMRDC) (Republic of Mozambique, 2010), as a guiding framework. Our findings from the field indicate great opportunity to address adolescence nutrition and health.

Conclusions: We suggest ways in which the development community may address this gap in adolescent health through programmatic design and implementation, in order to improve nutrition outcomes through evidence-based interventions.

Recommendations: In order for Mozambique to reduce chronic undernutrition there needs to be a paradigm shift in the way populations are targeted, taking the life cycle approach into account bringing adolescents to the forefront. (1) Nutrition interventions should define female adolescents as a separate target group apart from their older adult counterparts. (2) The reduction of pregnancies in female adolescents should be a central component of nutrition programmes that seek to reduce chronic undernutrition, taking gender into account and engaging men. (3) All outreach mechanisms should address early child marriage considering this is one of the strongest drivers of teen pregnancy (Save the Children, 2015). To this end we should also be engaging men, recognizing that there are many determinants of early marriage. (4) The current delivery platform, Geração Biz, should be utilized to full capacity in order to increase care-seeking behavior and ensure that SAAJ services are being accessed by the intended consumers. (5) The interventions should be equitable, targeting adolescents in, and out of, school.

Background

This document presents a picture of how Manica Province is responding to the first objective of the PAMRDC, which specifically aims to improve the nutritional status of adolescent girls aged 10-19 (Republic of Mozambique, 2010). The evidence gathered for this paper is intended to improve public sector interventions that address adolescent nutrition and to assist SETSAN Manica in advocating for expanding current delivery channels that serve adolescents. The paper also aims to highlight this target group among the development community as an important cohort on which to focus and invest.

The author, is currently serving as Technical Advisor (TA) to the Technical Secretariat for Food Security and Nutrition (SETSAN) focal point in Manica¹. Her position is funded by DFID, the UK's Department for International Development². The research for this steering document was carried out by the SETSAN-P, Manica Focal Point and the SETSAN TA. During this evidence-gathering exercise in early 2015, SETSAN Manica identified a gap in the implementation of the first objective of the PAMRDC at the provincial level. Adolescent nutrition is highlighted in the first objective, yet few PAMRDC interventions in the province define adolescents as their target group except Serviços Amigos dos Adolescentes e Jovens (SAAJ) and the Department for Youth and Sports. We define adolescence as the age period 10-19 year (WHO, 1986). SAAJ is the unit within the Ministry of Health that provides public health services to adolescent males and females. SAAJ in Manica was given technical support through UNFPA from 2005 until 2012³ (Hainsworth et al., 2009). Currently, they have one partner, Save the Children, who is providing technical assistance in two of the eleven districts in Manica⁴. There is a gap in implementation of SAAJ services which will impede the attainment of the three impact results outlined in objective one of the PAMRDC, which aims to control anemia, reduce early pregnancy and strengthen nutritional education.

We utilized qualitative research compiled by key informant interviews and secondary sources including a literature review, in addition to participatory observations of service provision of adolescent (SAAJ) health services in two district-level facilities in Manica Province, namely Guro and Tambara districts, in addition to a training of peer-to-peer, Geração Biz, activists in Gondola district. Key informant interviews were conducted with the provincial SAAJ Focal Point in Manica, SAAJ health providers in Guro, Tambara, and Manica districts, the provincial Focal Point for the Ministry of Education and several NGOs including Pathfinder International, Save the Children, FHI360, CARE and the UN agencies, UNICEF and FAO.

The document aims to initiate a dialogue and inform practice to effect a greater impact on adolescent health and subsequently chronic undernutrition in children under five as well as to bring this topic to the forefront of the nutrition agenda in Mozambique both at the provincial and national levels. With a global focus and strong push on improving maternal and child health outcomes with little data that reflects the needs of adolescent females, this population group is often made 'invisible' (Patton et al., 2014). This paper aims to highlight adolescent nutrition and serves as a "call-to-action" to improve the current service delivery platforms ensuring that consumer needs are reflected in order to reach a greater number of adolescents and thus improve nutrition outcomes for them and their future children.

Adolescent Nutrition: Global Overview

Adolescent health has been a relevant topic in the public health arena for some time now; despite this, the needs of adolescents, both female and male, are not being adequately addressed (Patton et al., 2014). Adolescents are an underserved population and often their needs are not reflected in the services they are provided (Hainsworth et al., 2009; Save the Children, 2015). Existing interventions do not define, or target,

¹ The role of the TA is to gather evidence jointly with SETSAN in order to improve the knowledge systems of SETSAN Manica such that, this entity can advocate for the scale-up of evidence-based interventions that have an impact on the nutritional status of the defined target groups in the PAMRDC. The knowledge will also be shared with SETSAN Central in Maputo and will thus be used to highlight Manica as an efficacious case study that is successfully coordinating, monitoring and advocating for the PAMRDC.

² This report has been produced with the assistance of UK Aid and Irish Aid. The contents of the report are the sole responsibility of the authors and of Concern Worldwide and can in no way be taken to reflect the views of UK Aid or Irish Aid.

³ Dionisio Oliveira (SAAJ), conversation with author, 8 April 2015.

⁴ Dionisio Oliveira (SAAJ), conversation with author, 4 June 2015.

adolescents as a stand-alone group. Most global nutrition interventions are targeted to their older, or younger, counterparts with little regard for this formative stage of life (Delisle et al., 2000; Save the Children, 2015).

At the global level, the lack of research and evidence-based data around adolescent nutrition (Save the Children, 2015) makes policy decisions difficult. Despite this lack of knowledge, the evidence gathered indicates that if adolescents are not aggressively targeted there will be major implications for improved health outcomes. Adolescent females are more likely to give birth to babies with low birth weight and babies who are small for gestational age. These infants are more likely to suffer from stunting during childhood and adulthood and are more likely to give birth to small infants themselves – this is known as the intergenerational cycle of undernutrition (Save the Children, 2015). By neglecting adolescent health, the intergenerational cycle of undernutrition will persist (Save the Children, 2015) and child mortality rates and maternal health will remain relatively unchanged (Sawyer et al., 2012). Given that “we know that malnourished women give birth to malnourished children, it is possible to take action to improve nutrition across generations” (Branca et al., 2015).

Situation Analysis: Manica, Mozambique

The on-the-ground reality in Manica highlights a large gap in the implementation of the first objective and its three impact results of the PAMRDC. The PAMRDC is a guiding framework designed by the Nutrition Department within the Ministry of Health that is monitored by SETSAN. The framework includes seven objectives⁵, all with defined impact results, for the reduction of chronic malnutrition. The first objective is highly relevant to adolescent females and males (Republic of Mozambique, 2010). This gives an overview of how each of the three results for Objective 1 is being addressed.

STRATEGIC OBJECTIVE 1: To strengthen activities with impact on the nutritional status of adolescents.

Result 1.1. Controlled anaemia in adolescents (10-19 years) within and out of schools; Result 1.2.

Reduced early pregnancy in adolescents (10-19 years);

Result 1.3. Strengthened nutrition education in different education levels as part of school curriculum, including literacy curricula.

Result 1.1: In Manica “45% of adolescent girls 10 to 18 years old attending school are anaemic” (Horjus et al., 2005). In Manica province, the service provision of iron supplementations is implemented through health clinics and mobile brigades. When mobile brigades go out into the community to deliver services to remote communities, adolescents are not specifically targeted at the community levels to receive iron supplementations or family planning⁶. Moreover, the target group in practice, up until 2015, was only 15-19 year old females as opposed to defined target group of 10-19 year olds⁷.

Result 1.2: “In Manica province 47% of adolescent girls 15 to 19 years old are or have been pregnant...” (Horjus et al., 2005). The platform delivery for family planning for adolescents is implemented through the health post – mobile brigades, however, do not specifically target adolescents. This delivery mechanism makes it difficult to reach the target population. Manica’s reality speaks to the fact that adolescents are often globally perceived as a healthy or ‘low-risk’ group, adolescents are left out and neglected (Save the Children, 2015). Moreover, care-seeking behavior is poor among this group due to individual and structural barriers (Temin & Levine, 2009). Stigma around the use of family planning and the usage of the health system is also a barrier to service delivery through these platforms (Temin & Levine, 2009).

There is an established, country-wide, mechanism of peer-to-peer activists created to increase the number of adolescents who access SAAJ services with the ultimate goal of addressing the sexual and reproductive health needs of male and female adolescents. The activists are trained and supervised by SAAJ, the Department of Education and the Department of Youth and Sports. Currently in Manica Province there are activists in the district schools but only two districts have received refresher trainings (with the support of

⁵ See Annex 1

⁶ Dionisio Oliveira (SAAJ), conversation with author, 8 April 2015.

⁷ Ibid.

Save the Children). The lack of resources limits further rollout. It is important to note that ‘SAAJ’ consists of one focal point located in the provincial capital who is responsible for the oversight of all the district level service provision. SAAJ receives support from Save the Children in two of eleven districts in Manica Province, Gondola and Guro. Save the Children is providing assistance through training of activists, service providers and teachers in these districts as well as the provision of materials; the project is a two year pilot program. This support was initiated in mid-2015 with funding from the Norwegian government⁸. While Save the Children, with the financial support of the Norwegian government, is supporting SAAJ in making strides to address adolescent sexual and reproductive health and nutrition, there is still a very large gap in implementation of this impact result under the first objective of the PAMRDC.

Result 1.3: There is a national curriculum that includes a nutrition component, which is implemented in the primary school level. Within three districts of Manica province, the Food and Agriculture Organization (FAO) is supporting the training of teachers in nutrition. Although adolescent nutrition and health is being addressed to some extent, there are many opportunities to continue and increase the inclusion of adolescents in public health interventions.

At the national level, several organizations, including Pathfinder International, UNFPA and UNICEF, work in adolescent health, focusing on sexual and reproductive health (SRH). Unfortunately, the area of SRH does not take nutrition into account. If it did, these types of adolescent interventions might be more inclusive, cross-cutting and multi-sectorial. Given that a peer-to-peer platform already exists to reach adolescents, nutrition programming should use the same service delivery channels to target adolescents in order to reduce teen pregnancy and early marriage and thus contribute to reducing the prevalence of chronic undernutrition.

This work represents a snapshot of the ways in which Mozambique is addressing sexual and reproduction health and nutrition of adolescents with a focus on Manica province. Being located at the provincial level is a major advantage in terms of understanding what is actually happening at the district and community levels and to understand the extent to which government policies are reaching the intended beneficiaries. It is also a challenge, however, to keep in constant connection with the nutrition and policy community that is centralized in Maputo. The author recognizes that there may be interventions addressing adolescent nutrition that are occurring in Mozambique that may not be reflected.

Adolescent Nutrition in Mozambique: A Call to Action

In Mozambique, the circumstances are similar to the global situation for adolescent nutrition. Policies are in place that target and address adolescents, these policies, however, have not been translated into action. Many adolescents are currently underserved and undernourished. This is reflected in the comparative health outcomes between adolescent female girls and their adult female counterparts. Little is known about the micronutrient deficiencies at the population level in Mozambique (Korkalo et al., 2014), although 54% of girls and women between the ages of 15-49 are anemic (Ministerio da Saúde (MISAU) et al., 2011). While nutrition data has not been disaggregated to provide evidence for the lack of attention being given to adolescents, the HIV infection rate among teens does, for example, provide evidence that the health needs of adolescents are not being addressed. The “HIV prevalence in Mozambique is 16.2%, with young people under the age of 25 accounting for 60% of new HIV infections and young women aged 20-24 being infected at a rate that is triple that of men the same age” (Hainsworth et al., 2009). The fact that there is limited data about this group suggests that they are an underserved group (Patton et al., 2014). “Between the age of the last childhood vaccination (typically five years old) and the first pregnancy, girls, and boys, are largely ignored by the health sector (Temin & Levine, 2009).

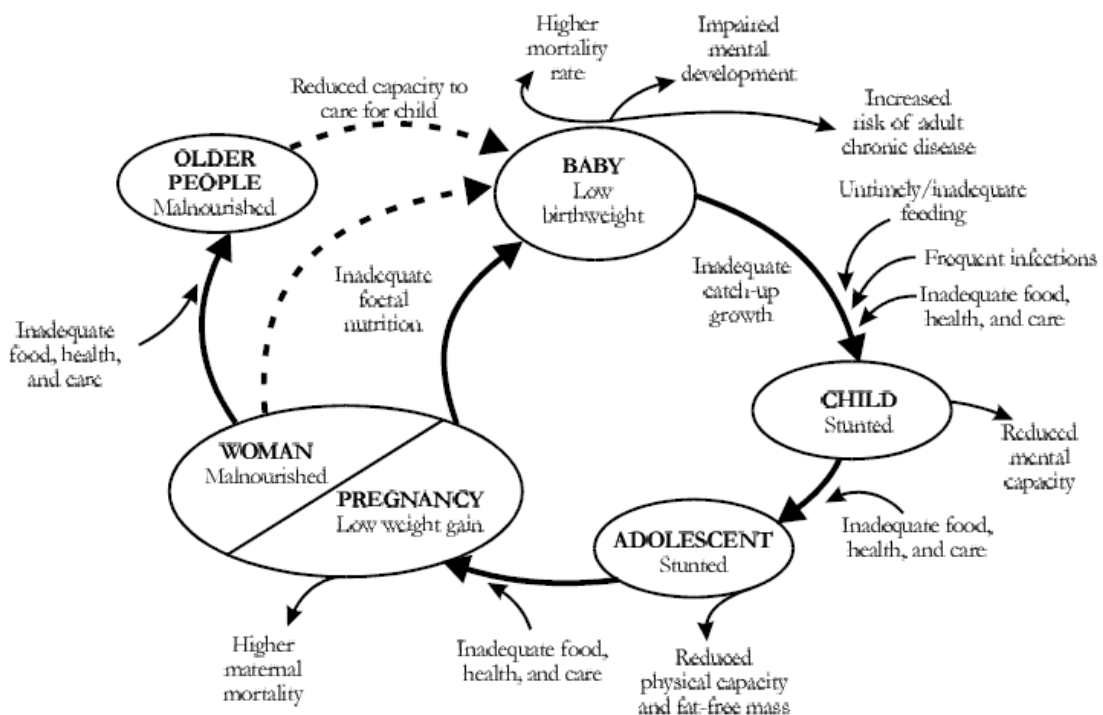
Given that the rate of pregnancy among adolescents is so high in Mozambique, – 44.4% (rural), or 33.2% (urban), of females become pregnant before the age of 18 (UNICEF, 2015) – special attention should be placed on adolescent nutrition and the prevention of early marriage to ensure the health of the mother and her future child. The nutritional status of adolescents should be addressed in order to ensure healthy pregnancies among this group. More importantly, programmatic work should address pregnancy and early

⁸ Isabel Mateo (Save the Children), conversation with author, 12 June 2015.

marriage among adolescents in order to reduce the teen pregnancy and prevent early marriage rate and subsequently the rate of chronic undernutrition. The reduction of pregnancy and early marriage among adolescents should be seen as crucial in improving undernutrition rates and should be integrated, streamlined and addressed simultaneously. In addressing adolescent pregnancy there will not only be improved nutrition outcomes for female adolescents but also, future generations (Larsson, 2015; Sawyer et al., 2012; Temin & Levine, 2009). Addressing adolescent reproductive health and nutrition is therefore likely to contribute substantially to the reduction in chronic undernutrition.

Currently under the Scaling Up Nutrition (SUN) movement, nutrition is addressed during the ‘1,000 day’ period beginning at conception and lasting until a child’s second birthday (Black et al., 2013). While this model seeks to take advantage of this ‘window of opportunity’ it does not take the pre-pregnancy phase into account, which oftentimes coincides with adolescence. If nutrition were addressed during adolescence we would be directly addressing the ‘intergenerational cycle of undernutrition’ (Save the Children, 2015). While the 1,000 day framework addresses all pregnancies, including adolescent, we should also be looking at ways to prevent teen pregnancy and early marriage. To address adolescent nutrition and health, a life cycle approach should be accounted for in programme design and implementation. Programmatic work addressing adolescent nutrition would align with the SUN objective to increase exclusive breastfeeding given that adolescents are 33% less likely to breastfeed (Save the Children, 2015). Addressing adolescent pregnancy will lead to the reduction of maternal mortality, neonatal mortality, and will decrease stunting and increase rates of exclusive breastfeeding (Save the Children, 2015; Temin & Levine, 2009). The figure below depicts nutrition throughout the life cycle, including all the different stages of life. If nutrition programming ignores the critical stage of adolescence there will be little change in the chronic malnutrition rates as the system is not being addressed in its entirety.

FIGURE 1.1 : Nutrition throughout the life cycle



Source: Prepared by Nina Seres for the ACC/SCN-appointed Commission on the Nutrition Challenges of the 21st Century.

(ACC/SNC, 2000)

The diagram below illustrates ways in which nutrition can be addressed throughout the lifecycle⁹. We would argue that pregnancy prevention and reduction should also be addressed amongst adolescent girls and boys before and during the adolescence stage in the life cycle.

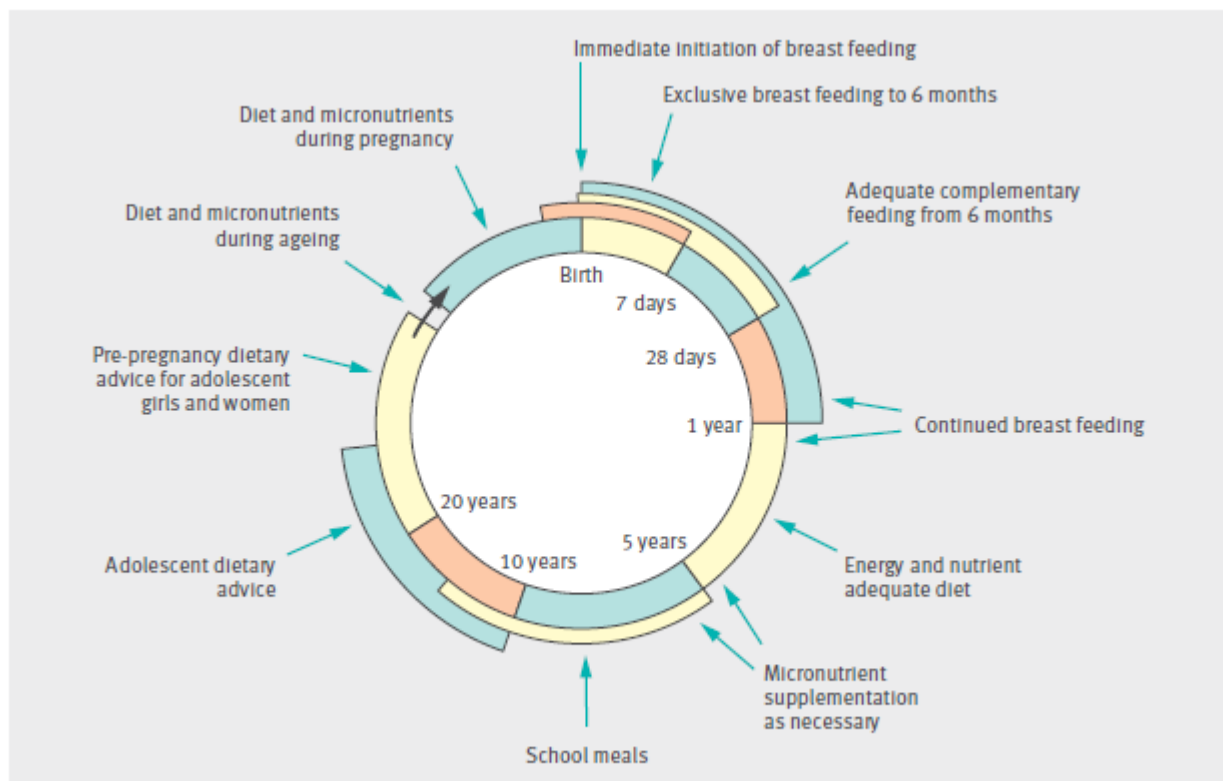


Fig 2 | Improving nutrition throughout the life course¹⁵

(World Health Organization, 2013)

Conclusions

The evidence presented demonstrates that there is a lack of targeting and attention given to adolescent nutrition within programmes that aim to improve nutrition despite an existing national policy. Programme design oftentimes does not take the needs of adolescent girls and boys into account, but there are some examples of how to engage with them. Mozambique, compared to other SUN countries, is “ahead of the game” with regards to adolescent nutrition policy. Although policy does not always translate into action, it is important to note that this policy exists because NGO partners use the policy as a framework with which to align their programmes. Furthermore, the PAMRDC is multi-sectoral and includes the health, education and agricultural sectors (Republic of Mozambique, 2010; Save the Children, 2015), as the drivers of inadequate adolescent nutrition are not just health related but span across various areas. While it is a milestone that adolescents’ health was specifically addressed in the national framework to reduce chronic malnutrition, this framework has not translated into the action it merits, especially given the glaring health indicators of this group. At the provincial level, adolescents are specifically named in Manica’s PAMRDC, yet there are currently very few interventions that target specifically female adolescents or adolescents in general.

Recommendations

In order for Mozambique to reduce chronic undernutrition, there needs to be a paradigm shift in the way populations are targeted, taking into consideration the life cycle approach. By only targeting children and pregnant women, Mozambique will not see a reduction in chronic undernutrition. Adolescent health and nutrition must be prioritized. We should not wait for adolescent girls to become pregnant before we engage

⁹ See Annex 2 for a table of “Recommended Actions to improve adolescents’ nutrition”

them, the men who marry them and the key influencers¹⁰ who decide to marry them off (Concern Worldwide, March, 2014). Only when a life cycle approach is adopted, taking into account all life stages, including adolescence, will we see improved nutritional status at the population level.

Several recommendations can be adopted to ensure adolescent nutrition and chronic undernutrition in Mozambique improves: **(1)** Nutrition interventions should define female adolescents as a separate target group apart from their older adult counterparts acknowledging that their needs are different from adult women. To this end, interventions will define indicators specific to adolescents and will have data to improve services and interventions in the future. This will help close the data gap that currently exists with respect to this group (Save the Children, 2015). **(2)** The reduction of pregnancies in female adolescents should be mainstreamed into nutrition programmes that seek to reduce chronic undernutrition, taking gender into account and engaging men. **(3)** All outreach mechanisms should address early child marriage considering this is one of the strongest drivers of teen pregnancy (Save the Children, 2015). This is aligned with Mozambique's National Strategy for the Prevention and Elimination of Early Marriage adopted by the national government in 2015. To this end we should also be engaging men, recognizing that there are many determinate factors that implicate early marriage. **(4)** The current delivery platform, Geração Biz, should be utilized to full capacity in order to increase care-seeking behavior and ensure that SAAJ services are being accessed by the intended consumers. **(5)** The interventions should be equitable; female adolescents who are not in school, and are arguably the most marginalized group, should receive outreach in a different way – namely through a “youth care groups model”, youth centers, and vocational training – and other community-based programs (Roche, 2015; Save the Children, 2015). If female adolescents were targeted using a life cycle approach to nutrition (Sawyer et al., 2012), Mozambique would make greater strides in the reduction of not only chronic undernutrition, but teen pregnancy, maternal mortality, and would increase the rates of exclusive breastfeeding.

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¹⁰Concern Worldwide's formative research in Barue, Guro and Tambara districts in Manica province highlights the need to address key influencers at the household and community level in order to facilitate behaviour change.

Annex 1:

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(Republic of Mozambique, 2010)

Annex 2:

| Table 2 Recommended actions to improve adolescents' nutrition | |
|--|---|
| Recommendations and actions | Who needs to take action? |
| Improve maternal nutrition and health | |
| Establish policies and strengthen interventions to ensure that pregnant and lactating adolescent mothers are adequately nourished | National policy makers, health service providers |
| Introduce measures to prevent adolescent pregnancy and to encourage pregnancy spacing | National policy makers, health service providers, education sector |
| Prevent and control anaemia | |
| Promote healthy and diversified diets containing adequate amounts of bioavailable iron | National policy makers, food and agriculture sectors, health and education sectors |
| Promote consumption of nutrient dense foods, especially foods rich in iron | National policy makers, health and education, food and agriculture sectors |
| Where necessary, implement supplementation strategies and consider fortification of wheat and maize flours with iron, folic acid, and other micronutrients in settings where these foods are major staples | National policy makers, food and agriculture sectors |
| Prevent and treat malaria in pregnant women as part of strategies to prevent and control anaemia | |
| Ensure universal access to and use of insecticide treated nets | National policy makers, health service providers, development partners |
| Provide preventive malaria treatment for pregnant women in areas with moderate to high malaria transmission | National policy makers, health service providers |
| Offer a healthy diet to all populations | |
| Create coherence in national policies and investment plans, including trade, food, and agricultural policies, to promote a healthy diet and protect public health ^{18*} | Regional and national policy makers, food and beverage industries, creative and media industries |
| Encourage consumer demand for healthy foods and meals [*] | |
| Promote physical activity in adolescents | |
| Create a conducive environment that promotes physical activity to tackle sedentary lifestyle ^{19†} | Regional, national, and local policy makers, urban planners, early years education, health services |
| Promote optimal nutrition in adolescents with HIV/AIDS | |
| Provide nutrition counselling to improve health outcomes in adolescents with HIV ^{20‡} | Health service providers, development partners |

All recommended actions are based on those proposed in the Framework for Action issued by the Second International Conference on Nutrition in November 2014 except (*), which is based on a WHO healthy diet fact sheet; (†), which is based on WHO guidelines on physical activity; and (‡), for which evidence is available but no formal WHO recommendation.

(World Health Organization, 2013)

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