



A multi-intervention project to combat unhealthy diets and physical inactivity among adolescents in Sub Saharan Africa

A study conducted in two urban settings representing low and high socioeconomic status in Nairobi, Kenya and Accra, Ghana

Content of this presentation

- Background
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- Project operationalization & Timeline
- Status of the project
- Dissemination

Background

- The rising burden of non-communicable diseases (NCDs) is a global health concern.
- To reduce the burden of morbidity, mortality and disability due to NCDs, the World Health Organization (WHO) developed **‘best buys’ and other interventions** for the prevention and control of NCDs by member countries.
- However, their **implementation and evaluation is suboptimal**, especially in sub-Saharan African countries.
- Gen H project aims to **reduce unhealthy diets and physical inactivity** and their underlying social determinants among **adolescents in Ghana & Kenya** by designing, deploying, and evaluating the **strategies for implementation** of evidenced interventions mapped on to the **WHO ‘best buys’**.

Sustainable Development Goals (SDG)

- The Generation H project contributes to the following [Sustainable Development Goals](#) of the UN:



Best buys of the WHO

Four key risk factors for NCDs: tobacco, harmful use of alcohol, unhealthy diet and physical inactivity

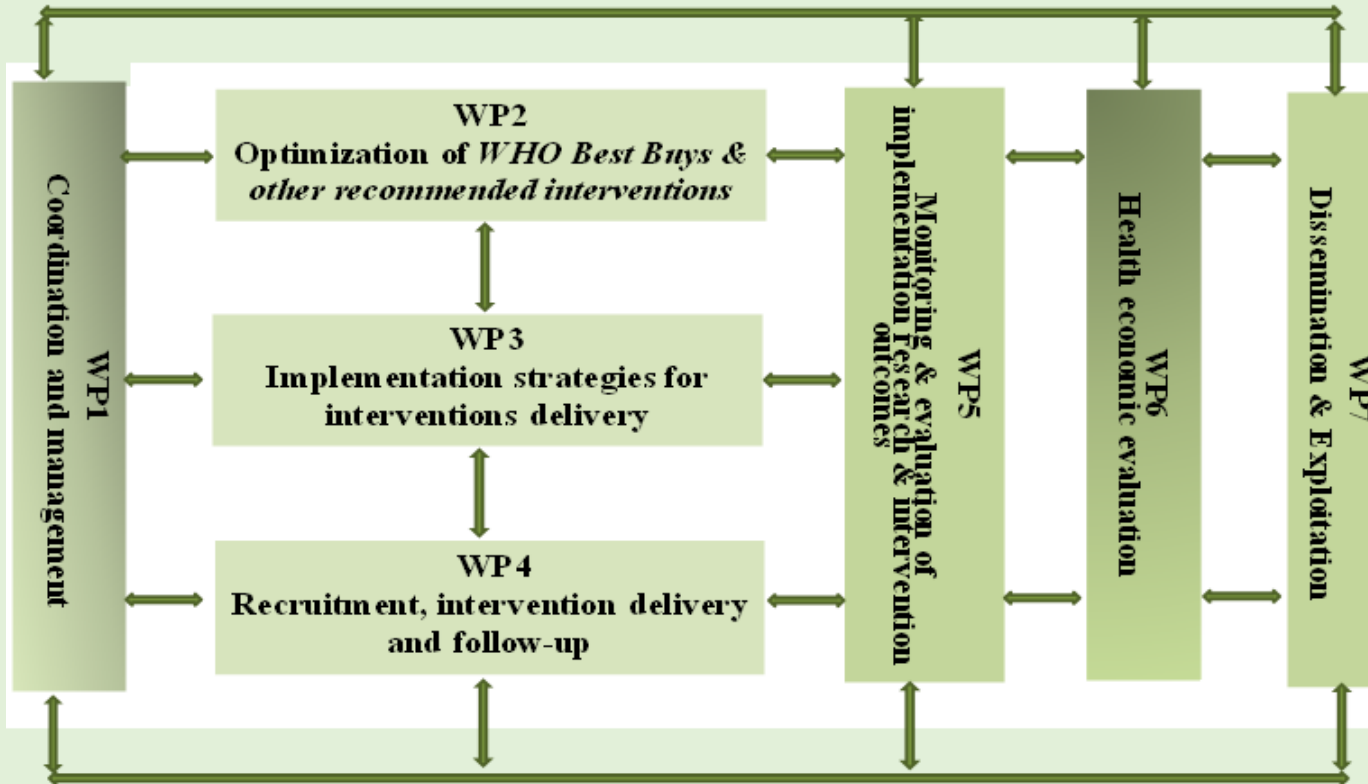
Appendix 2: Indicative intervention areas by NCD risk factors (diet and physical activity) to be used to inform the co-construction process with stakeholders

NCD Risk Factor	WHO Best Buys and other recommended interventions selected	Example intervention component/ delivery platform	Goal and activities	Target population
Unhealthy diets & Physical inactivity	1. Reduce salt intake through a behaviour change communication and mass media campaign ¹	Social media/digital: edutainment campaigns via dedicated project e.g. Facebook and YouTube Channels	Publish, and publicize content and mount social media campaign via project Website, Facebook and YouTube Channels promoting healthier diets and physical activity across the life course (may include web series and storytelling, using role models. To be determined during co-design)	Adolescents & youth
	2. Implement community-wide public education and awareness campaign for physical activity which includes a mass media campaign combined with other community-based education ¹			
	3. Implement mass media campaign on healthy diets, including social marketing to reduce the intake of total fat, saturated fats, sugars and salt, and promote the intake of fruits and vegetables ²	Counter marketing campaign designed in collaboration with the target group of adolescents and youth delivered via digital media platforms (dedicated project Website, Facebook and YouTube Channel) and community events.	Publish, and publicize content and mount social media campaign via Facebook and YouTube Channels as well as community events.	Adolescents & youth
	4. Implement whole-of-school programme that includes quality physical education, active lessons/homework and healthy diet, availability of adequate facilities and programs to support physical activity and healthy diet for all children ²	School environment including policy actions at schools to improve food environment (such as removal of sugar-sweetened beverages from the school premises), encouraging fruit/vegetables consumption through 'fruit day' initiatives as well as policy actions at schools to promote physical activity and high quality physical education. Walking buses to create a safe way for adolescents to walk to (or part the way) to school.	Institute and implement school level policies preventing vending and provision of sugar-sweetened beverages, and other unhealthy foods in and near schools) as well as encouraging a whole school approach to physical activity	Adolescents & youth, School authorities and etc.
	5. Provide convenient and safe access to quality open space at school and support active transport ²			
	6. Promotion of physical activity/healthy diets through organized sport groups and clubs, programmes and events ²	Films clubs at school; active after school clubs	Broadcast edutainment content (on healthy diets and physical activity) developed for the social media and conduct post-screening discussions with celebrities Conduct out of classroom activities such as mock parliament on health, health-related essay or art competitions, activities advocating for healthy physical activity environments	In-school & out of school. Adolescents – as applicable
	7. Implement nutrition and physical activity education and counselling in different settings (e.g. schools and FBOs) to increase the intake of fruits and vegetables ² and meet physical activity guidelines	Family/community intervention via faith-based platforms (churches/mosques) targeting both in-school and out of school adolescents, youth groups (both educational and entertaining).	Reach family, community and out of school adolescents and youth fortnightly through churches/mosques targeting both in-school and out of school adolescents. With healthy diets/physical activity edutainment activities (details to be determined during co-design)	In-school & Out of school adolescents and youth Family & community members

¹'Best buys': effective interventions with cost effectiveness analysis (CEA) ≤ I\$100 per DALY averted in LMICs

² Other recommended interventions from WHO guidance (CEA not available)

Work packages & leads



Short name	Organisation	PI or representative	Type of organisation	Country
IRD	INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT	Michelle Holdsworth	Research institute	France
LU	LOUGHBOROUGH UNIVERSITY	Lauren Sherar Paula Griffiths	University	United Kingdom
APHRC	AFRICAN POPULATION & HEALTH RESEARCH CENTRE KENYA	Gershim Asiki	Research institute	Kenya
VU	STICHTING VU	Judith Bosmans	University	The Netherlands
UG	UNIVERSITY OF GHANA	Amos Laar	University	Ghana
S CIENSANO	SCIENSANO	Stefanie Vandevijvere	Research institute	Belgium
AMC	ACADEMISCH MEDISCH CENTRUM BIJ DE UNIVERSITEIT VAN AMSTERDAM	Charles Agyemang	University	The Netherlands



GENERATION H

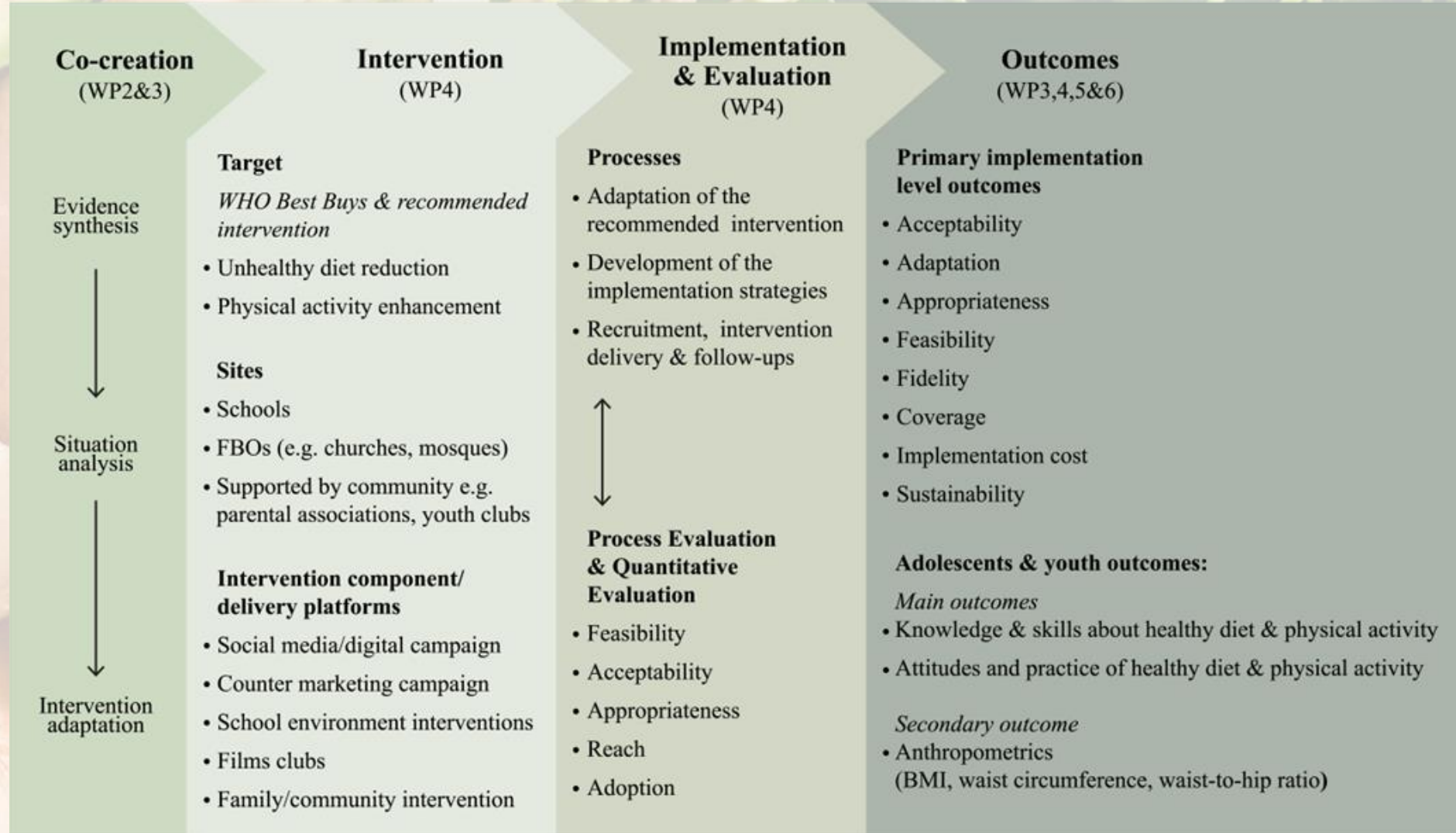
The specific objectives of Generation H



Funded by European Union

- To adapt and optimise evidence-based interventions that map onto 7 WHO Best Buys for unhealthy diet & physical inactivity with the relevant stakeholders in education, health, the community and target group for use amongst adolescents ensuring that they are culturally acceptable, equitable and scalable within 2 years (WP2);
- To co-create effective implementation strategies and tools with the relevant stakeholders for the delivery of the interventions, ensuring that they are culturally acceptable, equitable and scalable within 2 years (WP3);
- To recruit the target population from different socio-economic backgrounds & deliver interventions focusing on three settings: school environment, family/community/faith-based environment & digital environment using social media and follow them up in months 6 & 18 (WP4);
- To determine whether the implementation strategies developed for the delivery of optimised interventions influence i. implementation level outcomes (e.g., acceptability, adoption, appropriateness,) and ii. uptake of promoted healthy behaviours (improvements in knowledge, attitude & practice of dietary behaviours, food environment, physical activity; and anthropometric indices, self-efficacy, health literacy and psychosocial stress in a short-term (6 month) and a long-term (18 months) (WP5);
- To conduct a health economic analysis of the implementation of the optimized interventions to determine whether the implementation strategies for the delivery of the interventions are cost-effective (WP6);
- To disseminate and exploit the study findings through engagement of local, national, and regional experts and policy makers in translating and embedding the findings into practice and policy in Ghana and Kenya and other SSA countries and beyond throughout the project cycle and beyond (WP7).

Project operationalization



Design

- **Mixed methods, Hybrid design type 3** (more weight on implementation outcomes than on effectiveness outcome)
 - WP2: Realist review - Stakeholder consultations - Co-production - Prototyping (MRC)
 - WP3: Implementation Mapping, Community based participatory approach
 - WP4-5-6: Pre-post repeated cross-sectional *design* (Qual & Quant: 0, 6, 18 months)
Process-Implementation-Behavioral-Health-Health economic *outcomes*.
- **Study population**
 - Adolescents (10-19 yr) in primary and secondary schools & Faith-Based Organizations, and stakeholders in education-health-community leadership in Accra, Ghana & Nairobi, Kenya

Sample size

Outcome	Baseline	End-line	Change	Sample size
Fruit consumption	28.8%	36.1%	25.3%	2130
Veg consumption	2.7%	6.3%	113%	1717
SSB consumption	22.5%	14.3%	36.4%	1155
Physical Activity	38.7%	53.0%	36.8%	630

Assumptions based on a study in Eldoret, Kenya, sample size adjusted for design effect 1.5, correlation pre- and post,0.3, attrition

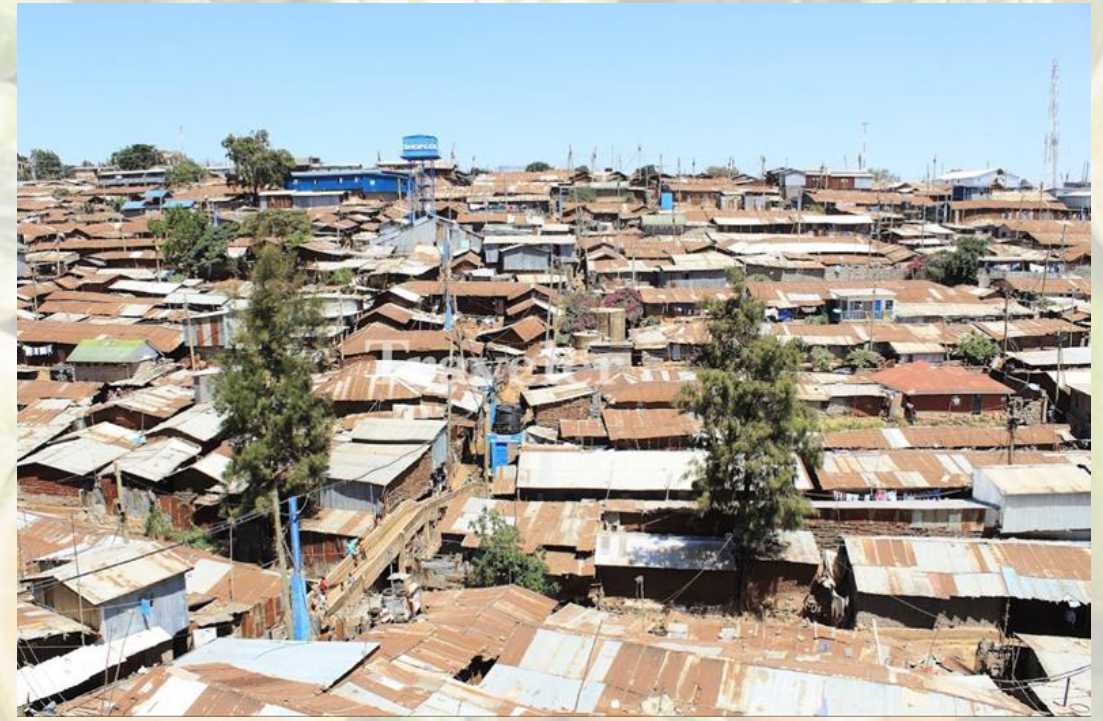
Study location - Kenya

High SES

Low SES



Buruburu (Nairobi)



Kibra (Nairobi)

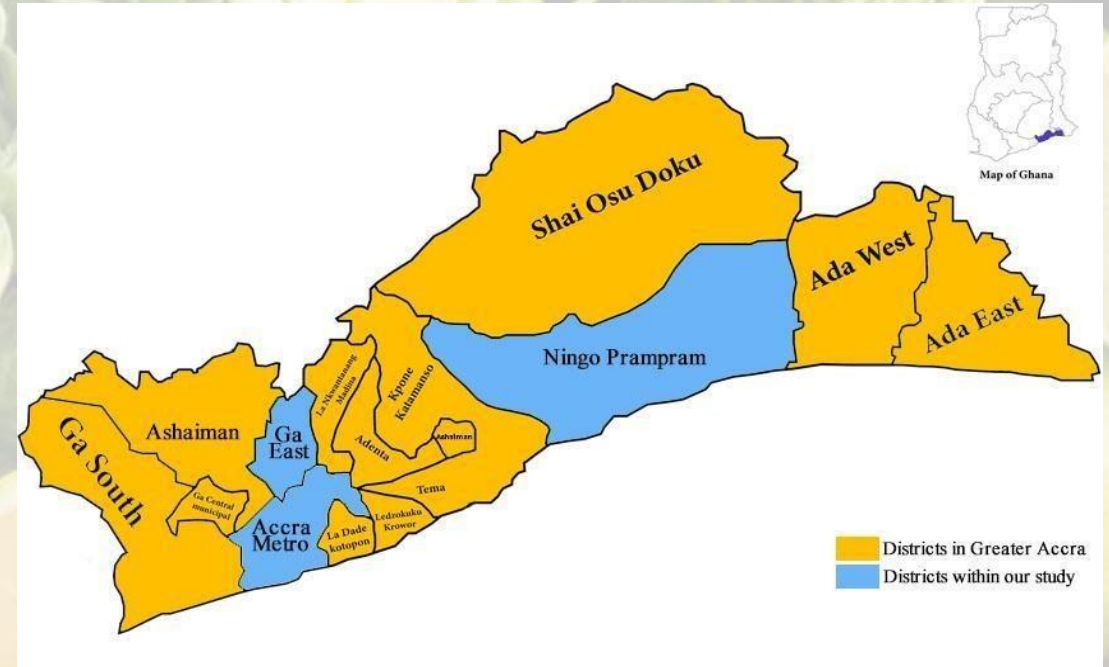
Study location - *Ghana*

High SES

Low SES



Accra Metropolis



Ga East



Time frame & Duration of the project

Gantt charts for the <i>Generation-H</i> project																						
Work packages and Tasks	Year		1				2				3				4				5			
	Month		Quarter				Quarter				Quarter				Quarter				Quarter			
	start	end	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
WP1 Coordination and Management	1	60																				
Project management, Scientific, Financial & Project meetings	1	60																				
Project and scientific meetings	1	60																				
Ethics approval, & data management plan	1	6																				
European Commission Reports	18	60																				
WP2 Adaption of the WHO recommended interventions	1	30																				
Initial meeting	1	3																				
Evidence reviews and stakeholder consultation	4	12																				
Co-production	12	15																				
Prototyping	15	24																				
WP3 Development of the implementation strategies	6	30																				
Initial meeting	1	3																				
Formation of Implementation Steering Group	3	6																				
Select evidence-based methods for implementation strategies	6	14																				
Development of implementation materials	14	24																				
Develop implementation protocol	16	24																				
WP4 Recruitment, intervention delivery and follow-up	1	60																				
Identification of field-work sites	1	6																				
Community engagement	3	6																				
Prepare for intervention delivery (SOPs-staff-training, etc..)	7	14																				
Recruitment	7	10																				
Baseline health assessment	16	20																				
Delivery of the interventions	24	38																				
Follow up (Months 6)	36	42																				
Follow up (Months 18)	48	56																				
Monitoring, evaluation of intervention delivery	4	56																				
WP5: Data monitoring and analysis	4	60																				
Develop data management and analysis plan & study database	1	6																				
Data monitoring and quality checks	6	53																				
Analysis of implementation level outcomes	30	51																				
Analysis of health outcome	50	60																				
WP6: Health economic evaluation	7	60																				
Preparatory work	7	15																				
Cost effectiveness analysis	43	60																				
Cost implications for scaling up	43	60																				
WP7: Dissemination, and exploitation	1	60																				
Project website development and updates	1	60																				
Project reports	18	60																				
Stakeholder engagement through multiple channels	1	60																				
Dissemination of the scientific results	1	60																				
Consultation meetings and Focus Groups	51	60																				

Status (10 months)

- WP1: Collaboration → 2-days Kick off meeting + 2 online Steering Group meetings
- WP1: Advisory Board
- WP1: Communication structure
- WP1: Recruitment of staff (Amsterdam UMC: RA & 2 PhD-students)
- WP2: Rapid Realist Review, PROSPERO
- WP4: Institutional Ethics Approvals (Kenia & Ghana)
- WP5: Data management plan, Protocol paper, Publication guidelines, Project Management Handbook & Data Analysis Plan
- WP7: Project website, Communication and Dissemination plan & Press release Amsterdam UMC and IRD

Dissemination channels per target audience

Area of impact	Key results of interest	Aim	Means
Scientists	<ul style="list-style-type: none"> • Scientific basis • Strategies for implementation • Project outcomes • Cost-effectiveness 	<ul style="list-style-type: none"> • Uptake of project results • Leveraging output to other NCD research fields • Conduct research in other SSA countries • Engagement for project input 	<ul style="list-style-type: none"> • At least 10 open access scientific publications • At least 20 presentations at scientific conferences e.g., African Nutrition Society, FERN, PASCAR, EUPHA • Peer-to-peer interactions • Social media (X, Facebook, LinkedIn) • Press release/interviews in newspapers, magazines and possibly national television
Professional organisations	<ul style="list-style-type: none"> • Scientific basis & project outcomes • Cost-effectiveness 	<ul style="list-style-type: none"> • Uptake of project results • Implementation strategies • Engagement for project input 	<ul style="list-style-type: none"> • At least 10 Open access scientific publications • At least 20 Scientific conferences • Social media (X, Facebook, LinkedIn)
Community organisations	<ul style="list-style-type: none"> • Scientific basis & main findings • Culturally tailored information for lifestyle changes • Training materials 	<ul style="list-style-type: none"> • Commitment to the project • Commitment to wide post-project implementation • Capacity building of the community staff • Engagement for project input 	<ul style="list-style-type: none"> • Generation H project website • Information material (brochure/flyer) • Social media (Facebook, X etc.) • Media e.g. newspapers & TV • Site visits & Training events

Dissemination channels per target audience

Area of impact	Key results of interest	Aim	Means
Policymakers & public health authorities	<ul style="list-style-type: none"> • Scientific basis & strategies for implementation • Methods & tools • Medium and long-term impact of the project • Cost-effectiveness 	<ul style="list-style-type: none"> • Implementation of Generation H results into policy • Enhanced efforts for NCDs prevention • Inclusion of adolescents in policy landscape • Engagement for project input 	<ul style="list-style-type: none"> • Generation H project website • 3 monthly newsletter throughout project • Dissemination meetings - study outcomes • Open access scientific publication • Liaising with international governments which have wide reach and influence • Policy briefs
Advocacy groups	<ul style="list-style-type: none"> • Main aims and findings • Strategies for implementation • Health and quality of life impact 	<ul style="list-style-type: none"> • Foster advocacy for NCDs prevention in young people • Commitment to post-project implementation • Engagement for project input 	<ul style="list-style-type: none"> • Generation H project website • Periodic newsletter throughout project • Meeting with patient advocacy groups • Dissemination meetings - study outcomes
Advisory Board	<ul style="list-style-type: none"> • Scientific basis • Methods & tools • Strategies for implementation • Project outcomes • Cost-effectiveness 	<ul style="list-style-type: none"> • Provide advice on the project • Foster advocacy for NCDs prevention in young people • Commitment to post-project implementation • Engagement for project input 	<ul style="list-style-type: none"> • Generation H project meetings • Periodic newsletter throughout project • Social media (X, Facebook, LinkedIn) • Dissemination meetings - study outcomes • Project website
Citizens/general society/youth groups	<ul style="list-style-type: none"> • Main aims and findings • Health and quality of life impact 	<ul style="list-style-type: none"> • Uptake of project results • Engagement for project input 	<ul style="list-style-type: none"> • Social media (X, Facebook, LinkedIn) • Press release/interviews in Newspapers, magazines and possibly national television • Generation H project website

Thank you

For further details about the Generation H project and opportunities for engagement, please visit our website: <https://www.generationh.org/>