

"Joining Hands for Healthy Schools"



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CAPCoD Schools-based Collaboration for Preventing Chronic Disease



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...against the 'backdrop' of the WHO Global Strategy for Diet and Physical Activity...

1. To reduce the risk factors for NCD's that stem from unhealthy diets and physical inactivity by means of public health action and health promotion;
2. To increase overall awareness of the impact of these risk factors and the benefits of preventive interventions;
3. To strengthen the development of global, regional, national, and community action plans, sustainable, comprehensive, and that engage all sectors of society;
4. To monitor scientific data and key influences on diet and physical activity, specifically to evaluate and strengthen interventions and associated human resources.

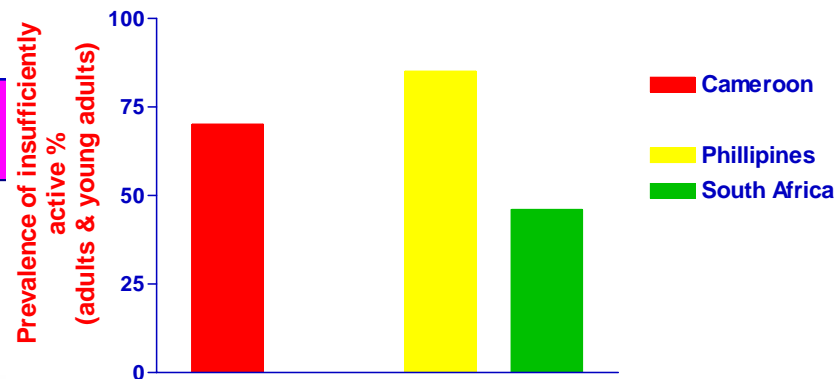
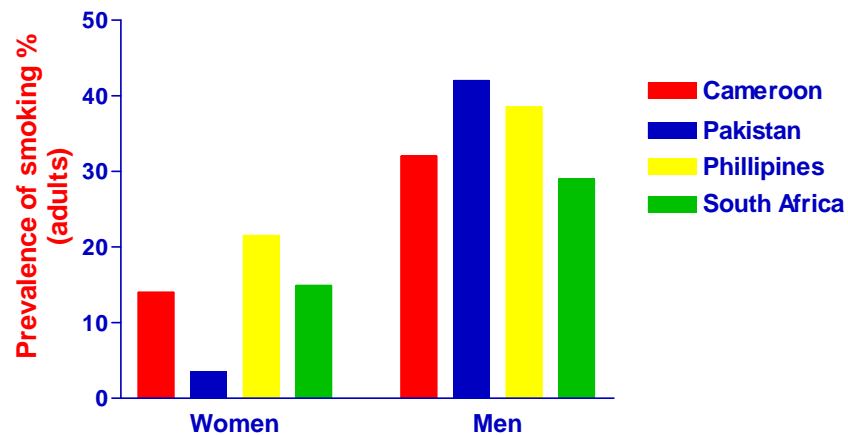
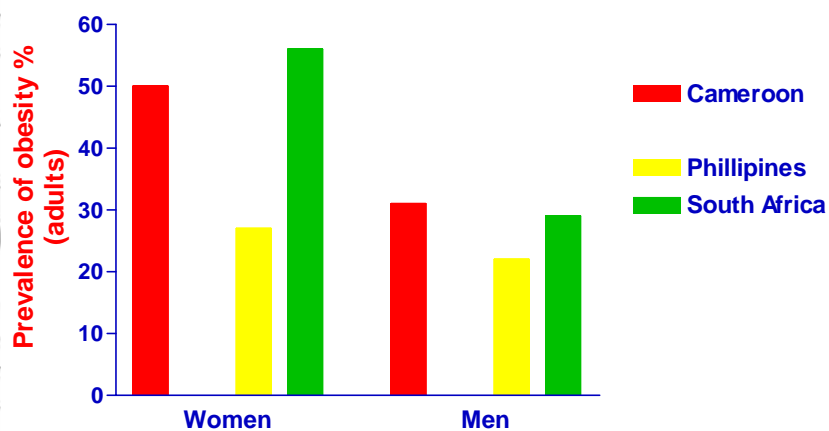
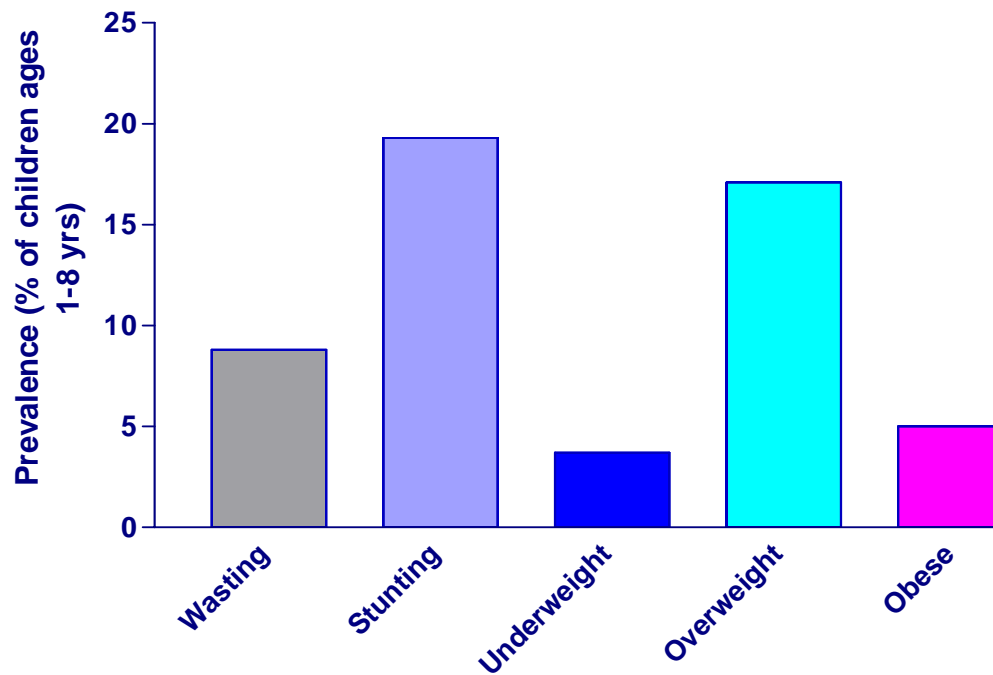
" ... a critical window of opportunity... "



Common driving forces:

Double burden of infectious & chronic disease;

Double burden of under- & over- nutrition;

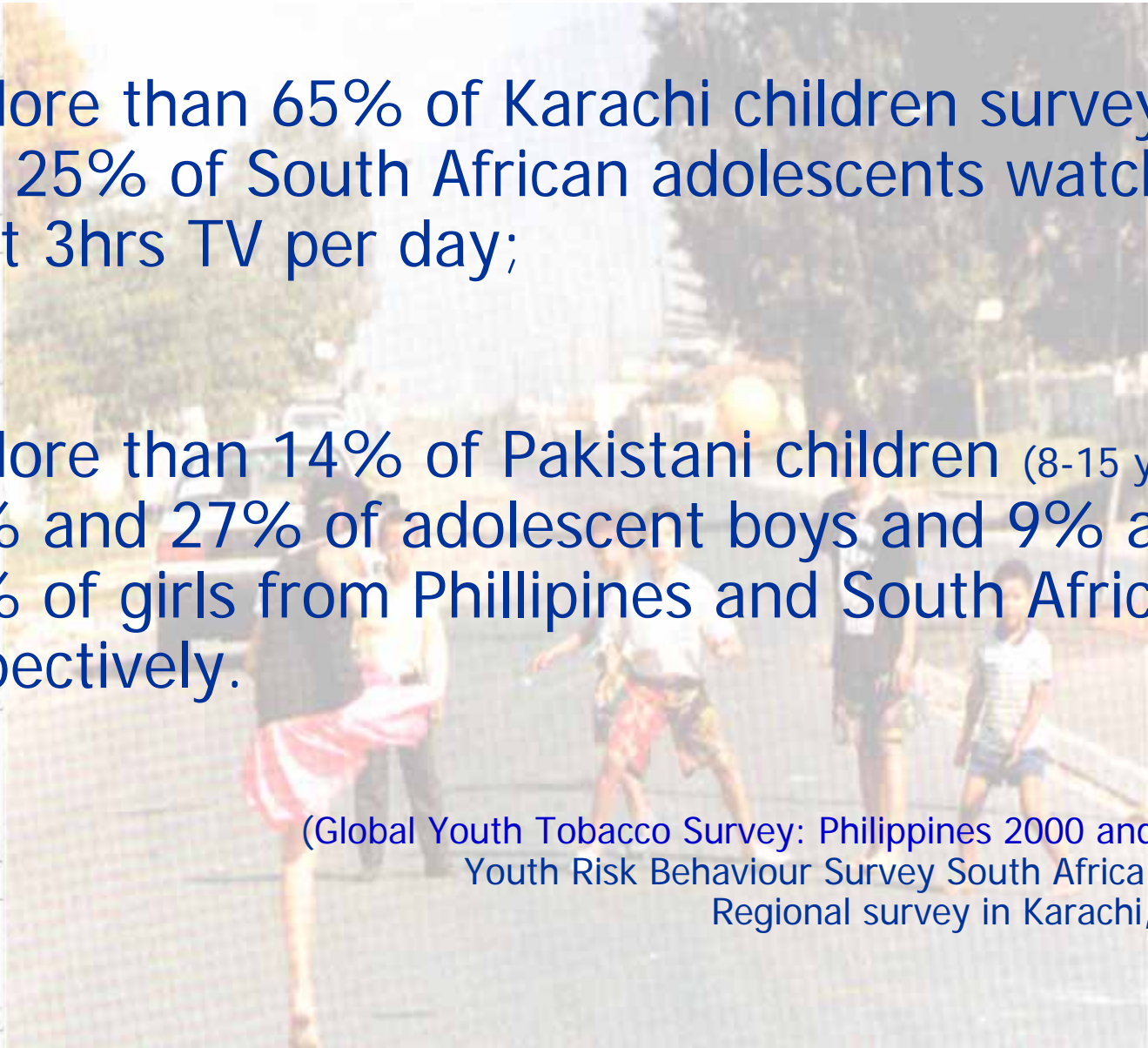


Source: NFCS; Reference: Steyn et al. 2005

More evidence for children 'at risk'?

- More than 65% of Karachi children surveyed and 25% of South African adolescents watch at least 3hrs TV per day;
- More than 14% of Pakistani children (8-15 yrs), 22% and 27% of adolescent boys and 9% and 12% of girls from Phillipines and South Africa, respectively.

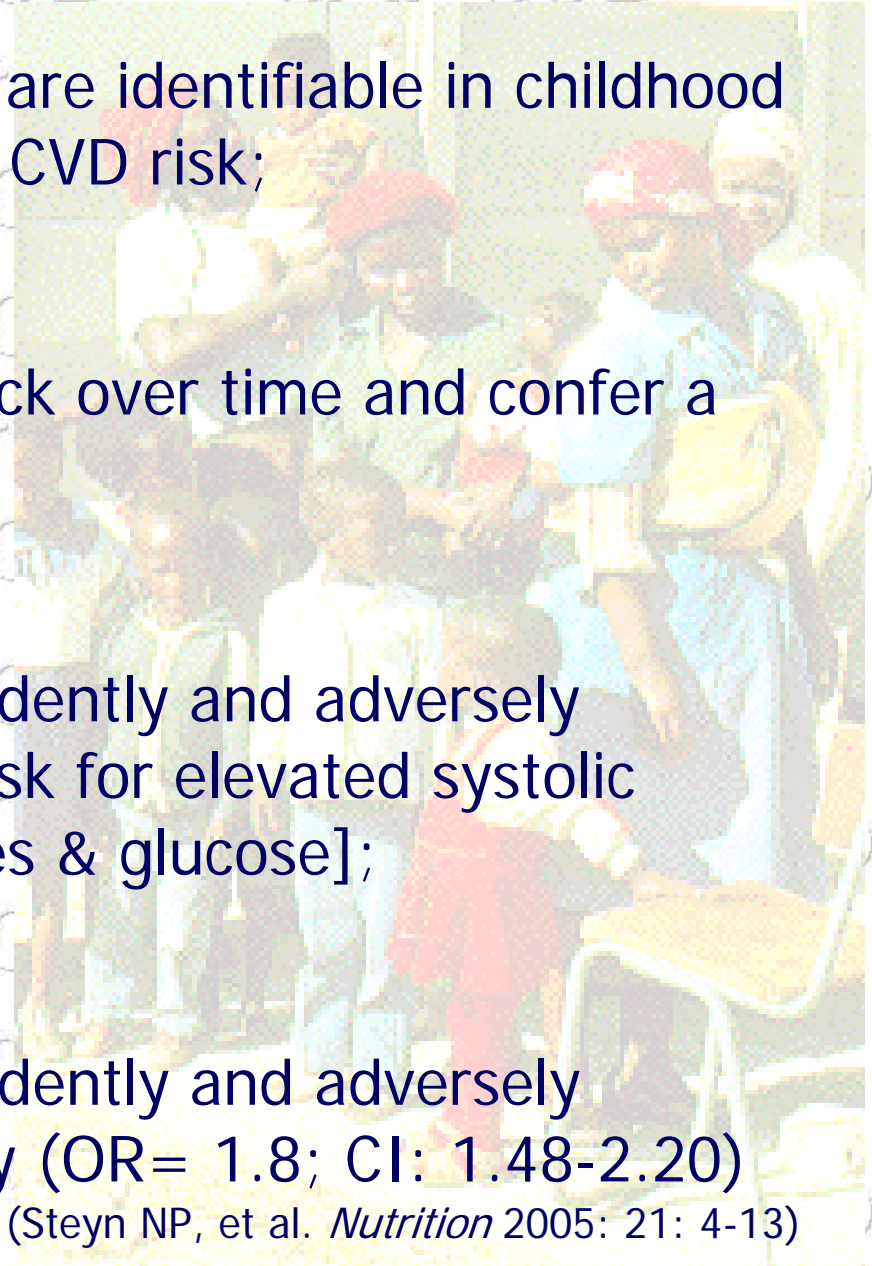
(Global Youth Tobacco Survey: Phillipines 2000 and 2003,
Youth Risk Behaviour Survey South Africa, 2002,
Regional survey in Karachi, 2003)



Why intervene in children?

- ✓ Chronic disease risk factors are identifiable in childhood and are predictive of future CVD risk;
- ✓ Levels of CD risk factors track over time and confer a life-long burden of risk;
- ✓ Low birth weight is independently and adversely associated with increased risk for elevated systolic blood pressure, [triglycerides & glucose];
- ✓ Further, stunting is independently and adversely associated with later obesity (OR= 1.8; CI: 1.48-2.20)

(Steyn NP, et al. *Nutrition* 2005; 21: 4-13)



Rationale for schools-based interventions

- ✓ Potential to influence on attitudes and health related behaviours early in “health career”;
- ✓ Potential for wide reach to secondary targets such as parents and teachers, as well as the community as a whole;
- ✓ Schools provide a setting where education and training is the norm;
- ✓ In some settings, respect for authority figures such as teachers may be greater and diffusion through social networks stronger.

Justification of the multi-country collaboration: "Is the whole greater than the sum of the parts?"

- ✓ **Paucity of data concerning school-based interventions in developing country and under-resourced settings;**
- ✓ **Complementarity of skills;**
- ✓ **Efficiency in designing & testing of instruments, and developing interventions;**
- ✓ **Potential for greater impact on policy having outcomes from a variety of settings, with diverse cultures, but which are similarly under-resourced;**
- ✓ **Capacity-building.**

Phase 1: Formative Assessment

Aim:

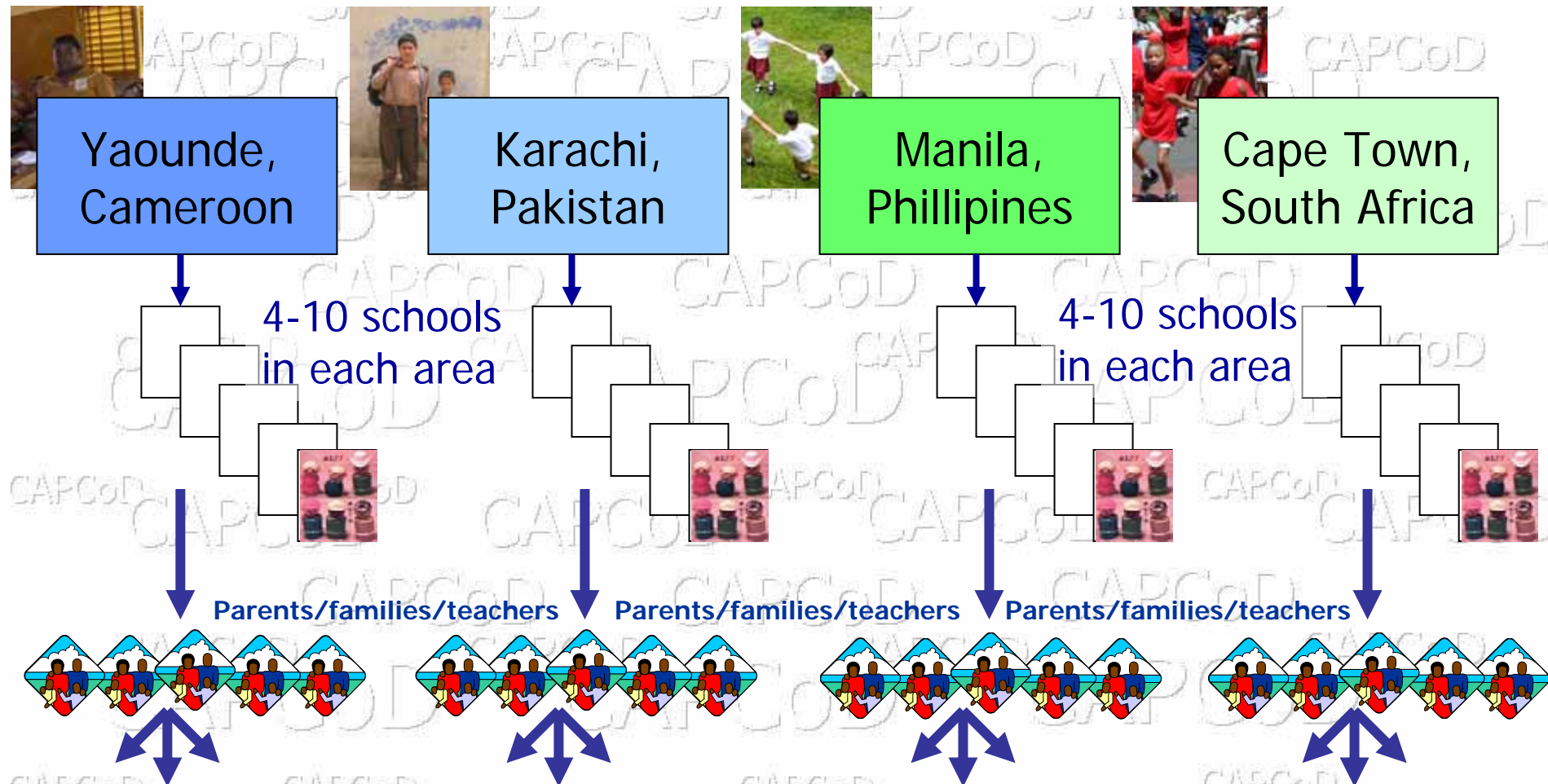
To conduct a collaborative (multi-country) formative assessment...

of the risk behaviours (unhealthy eating, inactivity and smoking) & associated determinants...

for the prevention of chronic diseases in children and/or their families from disadvantaged communities.

Proposed study sample:

Children between the ages of 10-11 yrs, from SES disadvantaged communities, in 4 countries



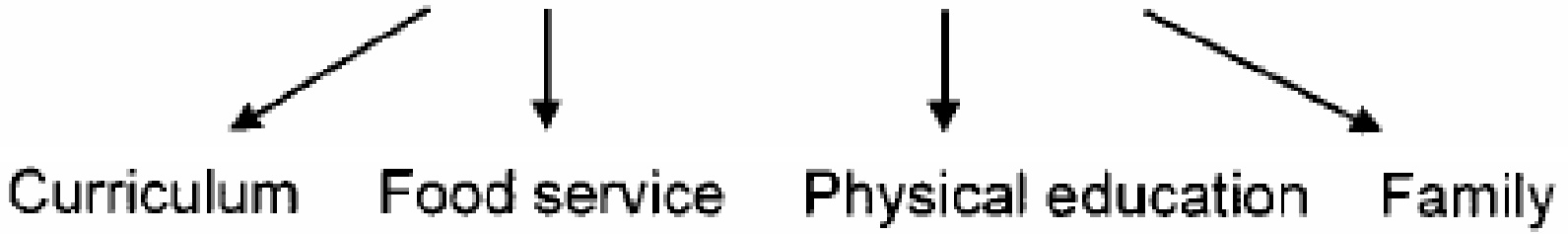
Formative assessment undertaken including these components: food service, physical education, curriculum & environment; combined quantitative & qualitative methods

Development of a school-based intervention modeled on the Pathways programme

Identification and prioritization of environmental, personal, and behavioral factors

Building on existing methodology successfully implemented in a multi-site, culturally-specific, under-resourced school-based setting in North America

intervention components



Phase 1: Formative Assessment

Objectives:

- To identify the prevalence of risk behaviours (unhealthy eating habits, physical inactivity & smoking tobacco) in the target population of learners.
- To identify environmental, interpersonal & intrapersonal determinants of these risk behaviours in the target population.
- To assess the feasibility and acceptability of the proposed school-based intervention with learners, teachers and parents and school authorities.
- To compare results of the formative assessment across settings and countries with a view to developing a common conceptual framework for a best practice intervention for the prevention of chronic diseases.

Model for Formative Assessment:

Primary Target Group: Learners			
Behaviours	Environmental Determinants	Intra and Interpersonal Determinants	Research Methods
Nutrition			
Physical activity			
Smoking			
Secondary Target Group: Parents			
Behaviours	Environmental Determinants	Intra and Interpersonal Determinants	Research Methods
Nutrition			
Physical activity			
Smoking			
Secondary Target Group: Teachers			
Behaviours	Environmental Determinants	Intra and Interpersonal Determinants	Research Methods
Nutrition			
Physical activity			
Smoking			
Secondary Target Group: Coaches, headmasters, vendors, NGO's etc.			
Behaviours	Environmental Determinants	Intra and Interpersonal Determinants	Research Methods
Nutrition			
Physical activity			
Smoking			

Model for Formative Assessment: example

Nutrition behaviours for primary target group- learners

Primary Target

Behaviors
<p>Eating Behavior</p> <ul style="list-style-type: none"> Eating less than 5 vegetables daily Excessive consumption with added sugar High intake of refined Excessive consumption Insufficient intake of food sources High intake of processed Purchasing unhealthy Not having a balanced Having a meal plan
<p>Meal Patterns</p> <ul style="list-style-type: none"> Irregular eating pattern Omitting breakfast
<p>Portion Sizes</p> <ul style="list-style-type: none"> Eating portion sizes which is required

Behaviors	Environmental Determinants	Intra and Interpersonal Context	Research Methods
<p>Eating Behavior</p> <ul style="list-style-type: none"> Eating less than 5 vegetables daily; Excessive consumption with added sugar High intake of refined Excessive consumption Insufficient intake of food sources High intake of processed Purchasing unhealthy Not having a balanced Having a meal plan 	<p>Enabling Factors</p> <ul style="list-style-type: none"> Availability of and access to unhealthy foods in schools and at home Cheaper cost of unhealthy in comparison to healthy <p>Reinforcing Factors</p> <ul style="list-style-type: none"> Social norms: <ul style="list-style-type: none"> -cultural perception of weight status (being healthy) -cultural perception of portion sizes (eating more is better practice) Actual social support -encouragement from family and teacher to eat (portion sizes, seconds) -allowing behavior change skipping breakfast or indulging in unhealthy Cues to action Media and advertising 	<p>Predisposing Factors (PRECEDES)</p> <p>Knowledge</p> <ul style="list-style-type: none"> Risk for chronic diseases related to eating (high fat, low fiber, salt, processed food) Importance of a balanced diet Benefits of eating vegetable, rich foods <p>Health Belief Model</p> <ul style="list-style-type: none"> Beliefs and perceptions related to weight status and eating patterns Perceived susceptibility to obesity and chronic diseases Perceived severity of chronic diseases Perceived benefits of eating a healthy diet (e.g. more fiber, less fat and sugar) Perceived barriers to having a healthy eating pattern (cost, availability, access) <p>Social Learning Theory</p> <ul style="list-style-type: none"> Subjective norms (peer influence, friends, society) Perceived social support from family Perceived behavioral control (self-efficacy, media and advertising) Self-efficacy and skill 	<ul style="list-style-type: none"> Knowledge questionnaires for children Attitude questionnaires for children Audit of food cost and availability in school Observation of children purchasing behavior Dietary assessments Home and school visits School observation Focus group discussion for all target groups In-depth interview

Impact and innovation:

- Identify a CORE and minimal data set to be used across all countries for comparability, with country-specific expanded data sets;
- Utilising EXISTING infrastructure; coalitions, NGO's, and identifying local resources and partners;
- Addressing social and health equity;
- Geographic and cultural diversity, with a commonality of purpose;
- Broad-based competencies;
- Demonstrated successful collaboration;
- Producing an internationally applicable product for school-based interventions addressing environment, curriculum and behaviours;

With a view to developing cost effective interventions through sustainable infrastructure.



Project model & evaluation matrix: CAPCoD

	Determinants	Interventions	Impact	Health and
Primary objectives				
To improve eating habits in children, parents and teachers, through the increased and appropriate consumption of healthy foods, as a means to reduce malnutrition and prevent chronic diseases;	<ul style="list-style-type: none"> Indicators Data sources Methods for acquiring data 			
To increase regular participation in health-enhancing physical activity in children, parents and teachers;				
To increase awareness regarding health consequences of smoking and to prevent or reduce initiation of smoking in children and reduce smoking prevalence in parents and teachers;				
To promote the development of an environment within the school & community which facilitates the adoption of healthy lifestyles.				
Secondary Objectives:				
To build capacity of the school staff and stakeholders in the development, implementation and assessment of school-based lifestyle intervention programmes;				
To quantify the role of the implementation of an integrated lifestyle and nutrition intervention on school performance.				

**Phase 1:
Collaborative
Formative
Assessment**

Common situational analysis;

Identify, culturally adapt and validate instruments for measure indicators;

Potential ancillary studies within countries;

Training workshop for selection of instruments, data quality, data management,

Scholarly outputs & follow-up workshop for the development of interventions based, in part, on formative assessment and situational analysis



Way forward:

To further the Oxford Health Alliance commitment “to provide the needed evidence by developing community-based intervention projects that either initiate and evaluate new approaches to prevention, or build on fledgling and promising initiatives ..”