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Risk Elimination on Walks to School (REmWalks)

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Background

The road traffic death rate in Malawi in 2019 was 33.4 deaths per 100,000 population, among the highest in the world.

Pedestrians account for half of the road traffic deaths in the country.

Many children in Malawi walk to school on roads that are in poor condition, dangerous and heavily polluted.



Project Aims and Objectives

To improve the safety and health of children's journeys to school by addressing the dual risks of air pollution and road traffic injury.

Objectives

- 1 Identify environmental and behavioural risk factors associated with school commutes
- 2 Co-develop a context-sensitive, community-informed intervention package
- 3 Explore the feasibility and acceptability of integrated air quality and road safety solutions with key stakeholders.



KAP and mobility survey

Road safety

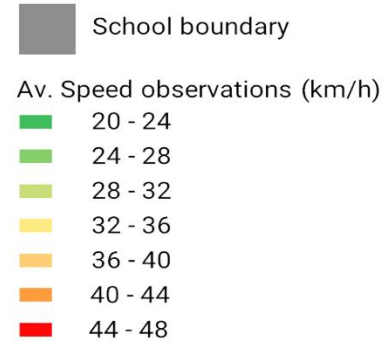
- Interviewed 2466 students from 6 schools in Blantyre
- 97% of children walk to school
- 30% of children had been involved in a near miss within past 12 months
- 5% reported being in a crash
- 50% of the children had knowledge of road signs, speed limits, crossing of the road
- 85% perceived to be at a high risk during their school commute
- 14.8% reported adhering to road safety principles on their commute to school

Air pollution

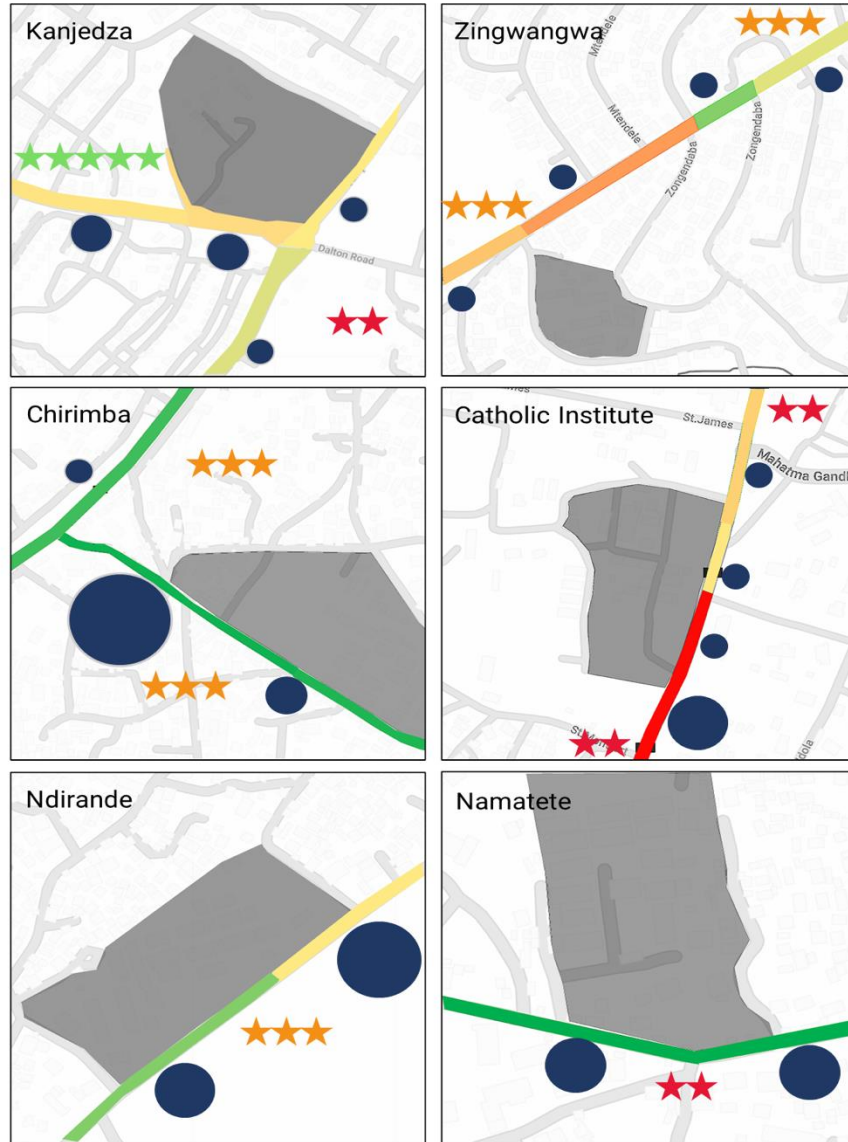
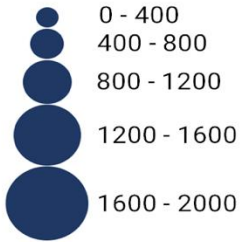
- 88% of children thought that “smoggy air” is bad for their health.
- 77% perceived the air quality on their journey to school as being “unclean”



Speed observation and SR4S



Total pedestrian observations
(student/non-student)

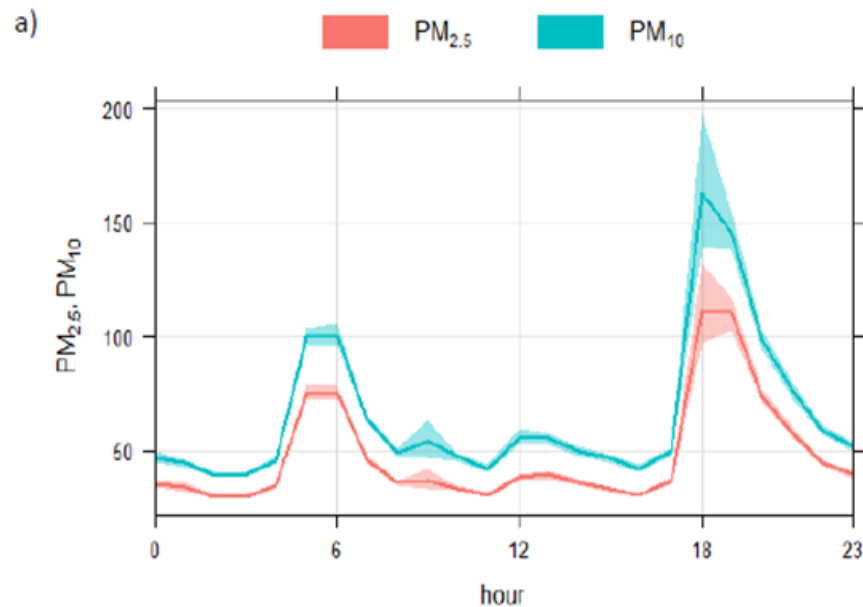


Children's Air Pollution Profiles in Africa (CAPPA)

The CAPPA study was aimed at describing the burden of personal air pollution exposure among urban children with asthma symptoms in sub-Saharan Africa using rucksacks equipped with PM2.5 monitors for school children across 7 sub-Saharan cities including Blantyre, Malawi



Air Pollution Exposure on School Routes



41.6

µg/m³ PM2.5

3x WHO limit on school routes

200+

µg/m³ Spikes

20x WHO guideline in hotspots

3

Key Hotspots

Construction sites, waste-burning,
markets

CAPPA Student Diaries: Lived Experiences from the Ground



Market places



Open Burning



Emotional Burden

FGD findings: Concerns & Solutions

Road Safety Risks

- Motorbikes near school zones
- Lack of safe pedestrian crossings
- Unsafe driver & child behaviors
- Excessive vehicle speeds

Road Safety Solutions

- Supervised arrival monitoring
- Student safety patrol program
- Road safety education

Air Pollution Risks

- Street waste accumulation
- Heavy truck traffic
- Unpaved, dusty roads
- Burning of waste materials

Air Quality Solutions

- Strategic tree planting
- Protective mask distribution
- Community waste management



Photovoice

- Photovoice allowed students to take photographs of risks they identify/perceive on their way to/from school
- *"The photo is telling us how polluted this area is because of the smoke coming from the fries vendor"*



Delphi Process: Prioritizing Integrated Interventions

12

Local Stakeholders

Community Input
and Feedback

15

International Experts



Traffic Calming

Speed bumps, limits, and enforcement



Pedestrian Infrastructure

Safe crossings, sidewalks, and barriers



Emission Controls

Restricting high-emission vehicles near
schools

Why Evidence Matters

Actionable Solutions

Invisible Burdens

Building Coalitions

Ensuring Equity

Enhanced Investments





Thank you
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