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Cost-Benefit Projection for Employee Health Programmes

A Pilot Study with Kenyan Employers

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CBA Tool for Employers

1. Background and Introduction
2. Process
3. Proxy epidemiological profile for employee population
4. Estimate the problem: productivity losses
5. Tailoring solutions: EWP intervention inputs
6. Choosing the best options: CBR and net benefits
7. Discussion

Background

- Following a long history of German support to business health engagement, GIZ in Ghana supports Employee Wellbeing Programs and developed in collaboration with Swiss Tropical and Public Health Institute methodologies to analyze the cost-benefit of these programs.
- Within Kenyan-German Development Cooperation, the GIZ Health Sector Program (GIZ-HSP) in collaboration with the National AIDS Control Council commissioned the Swiss Tropical and Public Health Institute to adapt the tool to the Kenyan context and populate it with national statistics.
- The tool was piloted in Kenya at Kenya Airways, the Ministry of Health, and Thika Municipal Council. Furthermore, the following partners were involved in the pilot: The National AIDS Control Council, the University of Nairobi, and the Federation of Kenyan Employers.

Ministry of Health

1. Introduction

Employers face enormous productivity losses

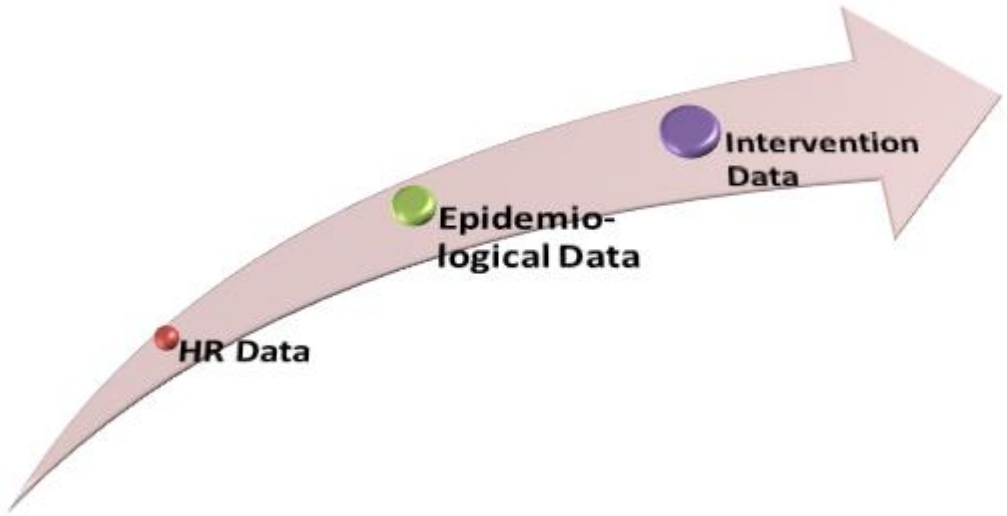
due to:

- double burden of disease
- health risk factors and
- financial stress

faced by their employees!

2. Process

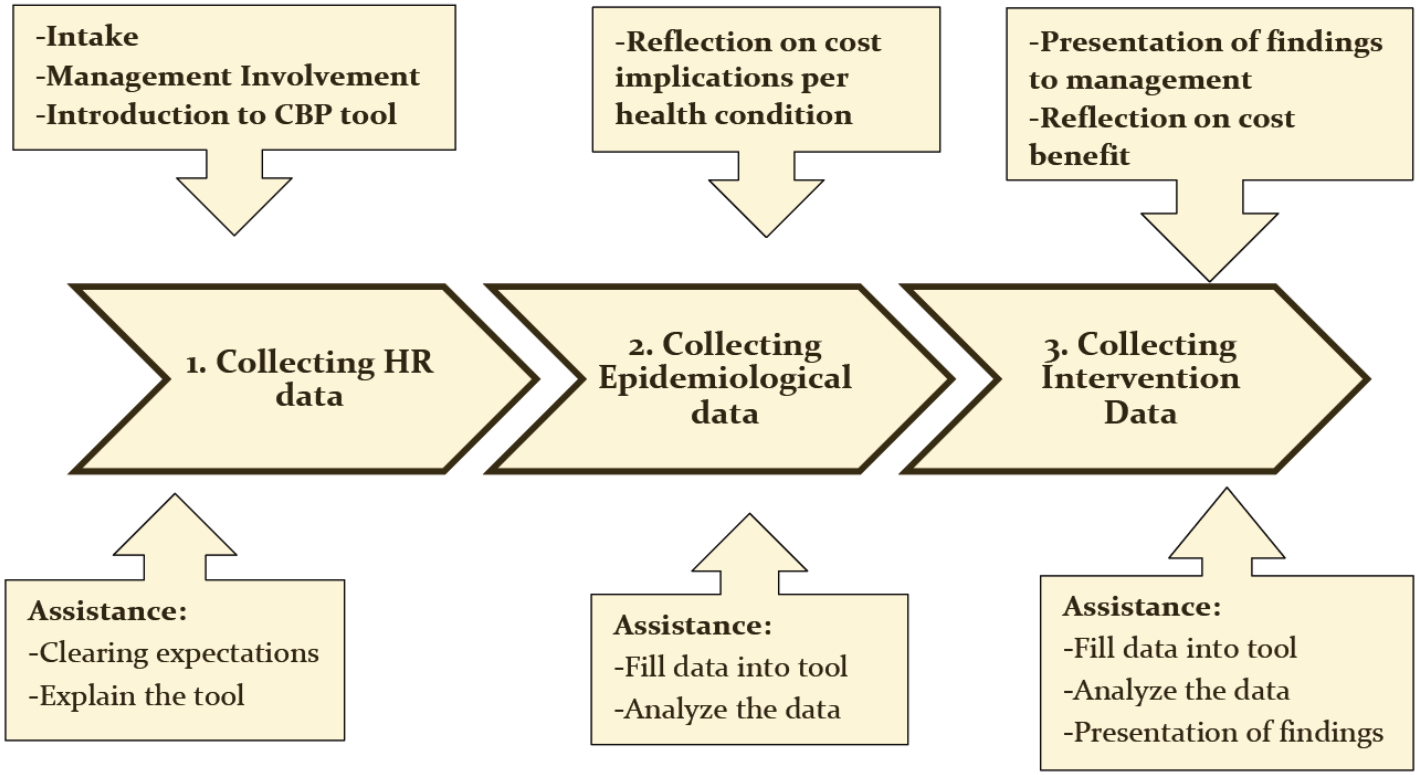
- Process to tailor model to specific employers



Source: GIZ Health Sector Program Kenya, Pilot Report (2013)

2. Process

- Process to tailor model to specific employers



Source: GIZ Health Sector Program Kenya, Pilot Report (2013)

3. Proxy epidemiological profile
for employee population (by gender)

- Top twenty causes of morbidity (sickness)
- Top ten causes of mortality (death)
- Top ten prevalence health risk factors

SOURCES: WHO, GBD, **public health experts**, Ministry of Health, national statistics for (urban) adult population, relevant studies, insurance data…

3. Proxy epidemiological profile

for employee population (by gender)

- Tailor to Employer situation
  - Kenya Airways own clinic statistics – back injuries
  - health interventions already implemented – Thika MC malaria programmes

4. Estimate the problem:

lost productive days

- sick leave
- hospital stays
- employee turn-overs
- presenteeism as a % of sick leave
- risk factor presenteeism

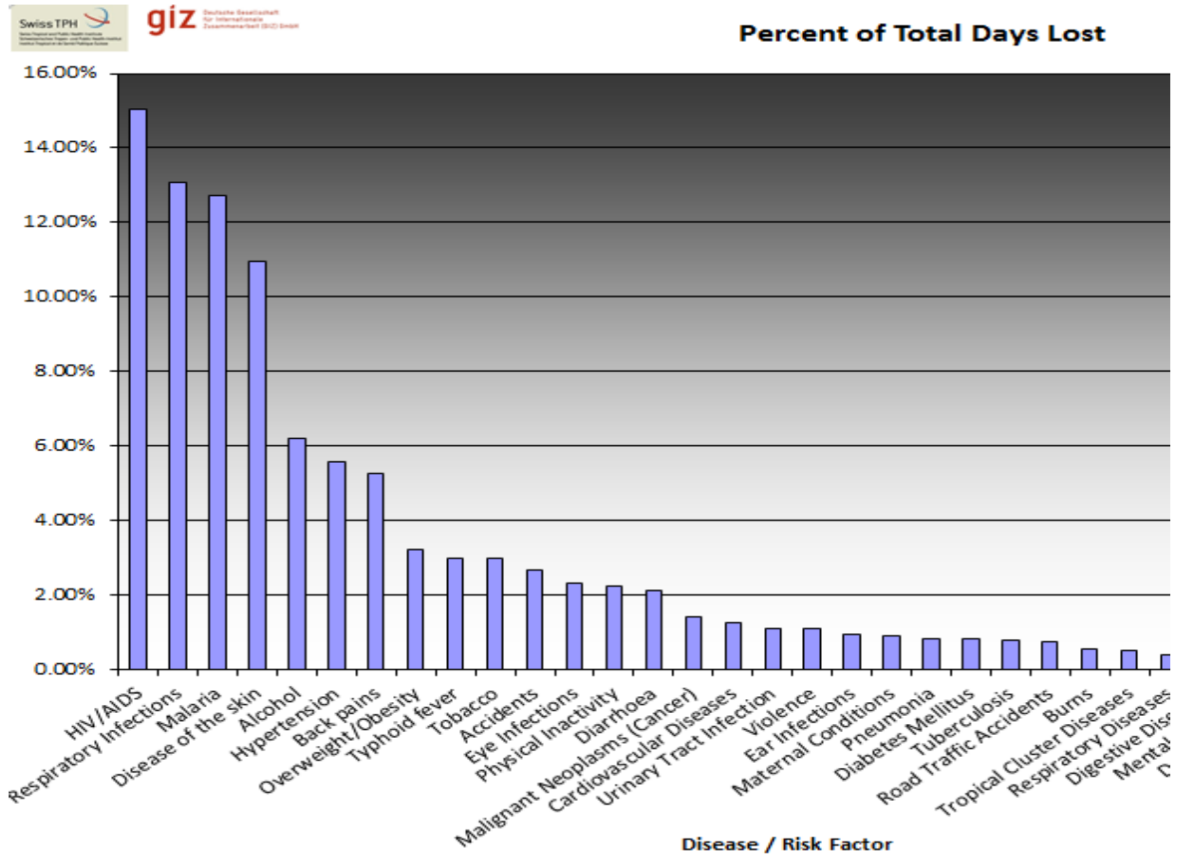
4. Estimate the problem:

lost productive days based on:

- average duration of an episode of sickness
  - outpatient – inpatient split
- death & disability benefits, recruitment, training
  - presenteeism as a % of sick leave
    - risk factor presenteeism

4. Prioritize the problem: Days lost by disease/risk factor

Table: Percentage of Total Days lost (KQ)



Source: GIZ Health Sector Program Kenya, Pilot Report (2013)

4. Prioritize the problem: Cost by disease/risk factor

Table: Total cost for Kenya Airways per disease/risk factor

Total Costs [KES] and Contribution of Morbidity, Mortality and Risk Factors

	Costs				
Disease / Risk Factor	Costs Morbidity	Costs Presenteeism (due to morbidity)	Costs Presenteeism (due to risk factors)	Costs Mortality	Total Costs per Disease / Risk Factor
Upper Respiratory Infections	80,596,378.53	6,865,112.11			87,461,490.64
Malaria	70,460,910.14	5,989,179.95		3,355,219.26	79,805,309.34
Disease of the skin	67,382,880.57	5,737,565.48			73,120,446.05
HIV/AIDS	38,239,631.43	3,257,210.33		23,138,459.44	64,635,301.21
Back pains	32,517,479.14	2,769,803.61			35,287,282.74
Typhoid fever	18,372,021.48	1,561,794.81			19,933,816.28
Accidents	16,522,813.77	1,402,967.12			17,925,780.88
Alcohol			16,239,255.29		16,239,255.29
Eye Infections	14,326,008.37	1,219,520.81			15,545,529.17
Hypertension			14,663,297.14		14,663,297.14
Diarrhoea	13,028,184.52	1,106,114.03			14,134,298.56
Overweight/Obesity			8,457,016.43		8,457,016.43
Tobacco			7,818,934.56		7,818,934.56
Urinary Tract Infection	6,915,716.09	587,861.07			7,503,577.16
Ear Infections	5,764,455.72	490,846.22			6,255,301.94
Physical Inactivity			5,918,644.11		5,918,644.11
Pneumonia	5,139,826.32	435,671.39			5,575,497.71
Malignant Neoplasms (Cancer)				3,687,813.37	3,687,813.37
Burns	3,389,835.99	287,571.61			3,677,407.60
Diabetes Mellitus	2,052,861.79	172,433.09	1,100,985.85	156,557.49	3,482,838.22
Cardiovascular Diseases				3,283,943.31	3,283,943.31
Violence				2,880,073.25	2,880,073.25
Maternal Conditions	680,116.45	49,525.64		2,061,340.27	2,790,982.36
Tuberculosis				2,120,345.44	2,120,345.44
Road Traffic Accidents				1,994,419.73	1,994,419.73
Tropical Cluster Diseases				1,345,495.48	1,345,495.48

Source: GIZ Health Sector Program Kenya, Pilot Report (2013)

5. Tailoring solutions: EWP intervention inputs

- Intervention Name & Description
- Intervention Duration [years] & Coverage [%]
- Annual(ized) Cost of intervention per Employee
- Annual Reduction (in Cost) due to Incidence / Prevalence [%] (estimated)
- Annual Reduction in Mortality [%] (estimated)

6. Choosing the best options: intervention outputs

- cost benefit ratio (CBR) and
- net benefit

for each intervention

and a

summary table

for each package of interventions

5. Choosing the best options: intervention outputs

- cost benefit ratio (CBR)
  - net benefit

Microsoft Excel - Book1

	A	B	C	D	E	F
1	Intervention Type	Cost of Problem [KES]	Annual Cost of Intervention [KES]	Annual Benefit [KES]	Cost / Benefit Ratio	Net Benefit [KES]
2	MAL-1 : Insecticide-treated bed nets (ITN)	2'637'785.47	586'520.00	1'310'853.99	0.4474	724'333.99
3	MAL-3 : Indoor residual spraying (IRS)	2'637'785.47	794'200.00	1'310'853.99	0.6059	516'653.99
4	MAL-18: Combination (IRS & ITN)	2'637'785.47	1'380'720.00	1'861'573.44	0.7417	480'853.44
5	**Total**	**7'913'356.40**	**2'761'440.00**	**4'483'281.42**	**0.6159**	**1'721'841.42**
6						

Source: GIZ Health Sector Program Kenya, Pilot Report (2013)

7. Conclusion

- engage management in evidence-informed discussion of employee health
  - model provides tailored estimate of health problems in days and money
  - allows cost-benefit analysis to address priorities
- challenges: need for public health expertise for
  - tailoring health profile of employees
  - estimating effect of interventions

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Thank you for your attention!

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Introduction

A growing burden of communicable and non-communicable diseases causes an increasing problem for productivity in Kenya. Companies invest in health promotion at the workplace and prioritized interventions on prevention of diseases, HIV being one of them. This means an increased need for HR-managers to monitor the efficiency and effectiveness of employee health interventions.

Following a long history of German support to business health engagement, GIZ in Ghana supports Employee Wellbeing Programs and developed methodologies to analyze the cost-benefit of these programs.

Within Kenyan-German Development Cooperation, the GIZ Health Sector Program in collaboration with the National AIDS Control Council commissioned the Swiss Tropical and Public Health Institute to adapt the tool to the Kenyan context and populate it with national statistics.

Description

The Cost-Benefit Projection tool assists employers to calculate productivity losses in terms of costs of workdays lost due to sickness and estimates the cost-effectiveness of interventions to reduce the number of lost workdays. Based on national statistics for the working-age population of morbidities, mortalities, and health risk factors, the tool provides projections of the health problems of a company's employees. The model estimates cost-effectiveness of workplace interventions in addressing the identified problems.

The tool was piloted in three Kenyan workplaces:

1. Kenya Airways
2. Ministry of Health
3. Sub-County of Thika

Lessons learned

The CBP tool did work well in practice, providing estimates about the benefit of workplace health programs. It integrates the HIV&AIDS response at the workplace into the general employee health response. It can be used as an advocacy tool for HR-managers.
Findings from the Pilot include:

- Supporting HIV+ employees with antiretroviral treatment has a good cost-benefit ratio, bringing down the workdays lost due to HIV (example Kenya Airways).
- The second largest health problem, Malaria, was in all 3 cases inadequately addressed compared to HIV&AIDS.

Challenges

- To estimate effect of some workplace interventions on the reduction of the health problem.
- National statistics were challenging to retrieve.

Conclusion

The tool can be used as a health risk management tool by employers to prioritize interventions, and in M&E to monitor the occurrence of health productivity losses and benefits of interventions at the workplace.

Next steps

- To increase efforts to include private sector partners in workplace health development.
- To collaborate with strategic partners to improve data base on health trends to guide future investments in workplace health.