



Health behaviour interventions in low/middle income countries

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Social science that makes a difference



HSRC
Human Sciences
Research Council

Overview

1. **Global health risks**
2. **Global health behaviour interventions**
3. Childhood and maternal undernutrition (underweight, iron deficiency, vitamin A deficiency, zinc deficiency, suboptimal breast feeding)
4. **Other diet-related risk factors** and physical inactivity (high blood pressure, high blood glucose, high cholesterol, **overweight and obesity**, low fruit and vegetable intake, physical inactivity)
5. Sexual and reproductive health (unsafe sex, lack of contraception)
6. **Addictive substances** (tobacco, **alcohol, illicit drugs**)
7. **Road traffic injury** and violence
8. **Common mental health risk** (**depression**, anxiety disorders)
9. Parasitic infections (malaria, helminth infection)
10. Environmental risks (Unsafe water, sanitation and hygiene, urban air pollution, indoor smoke from solid fuels, lead exposure, climate change)

The Demographic Transition

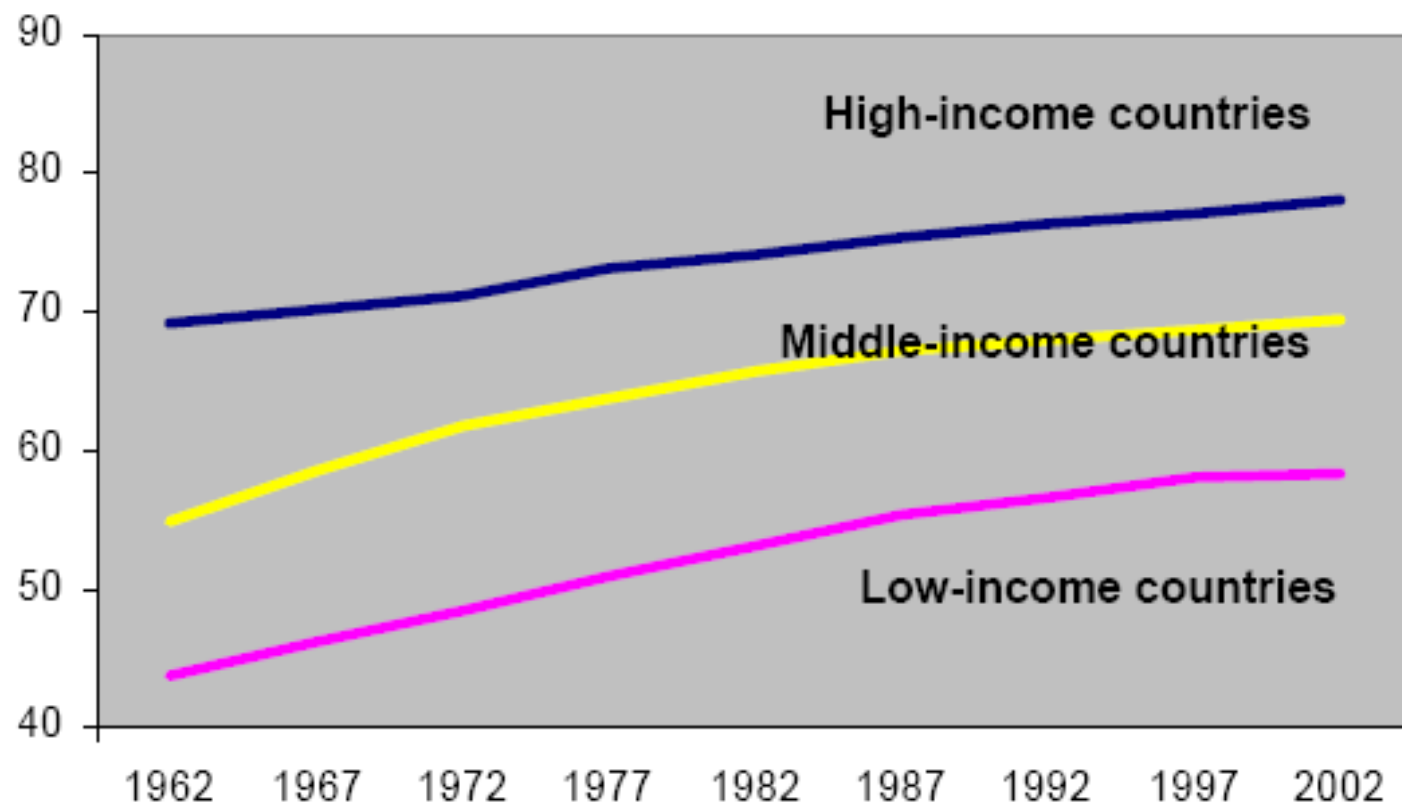
- **A change in the population dynamics of a country as it moves from high fertility and mortality rates to low fertility and mortality rates.**

The Epidemiologic Transition

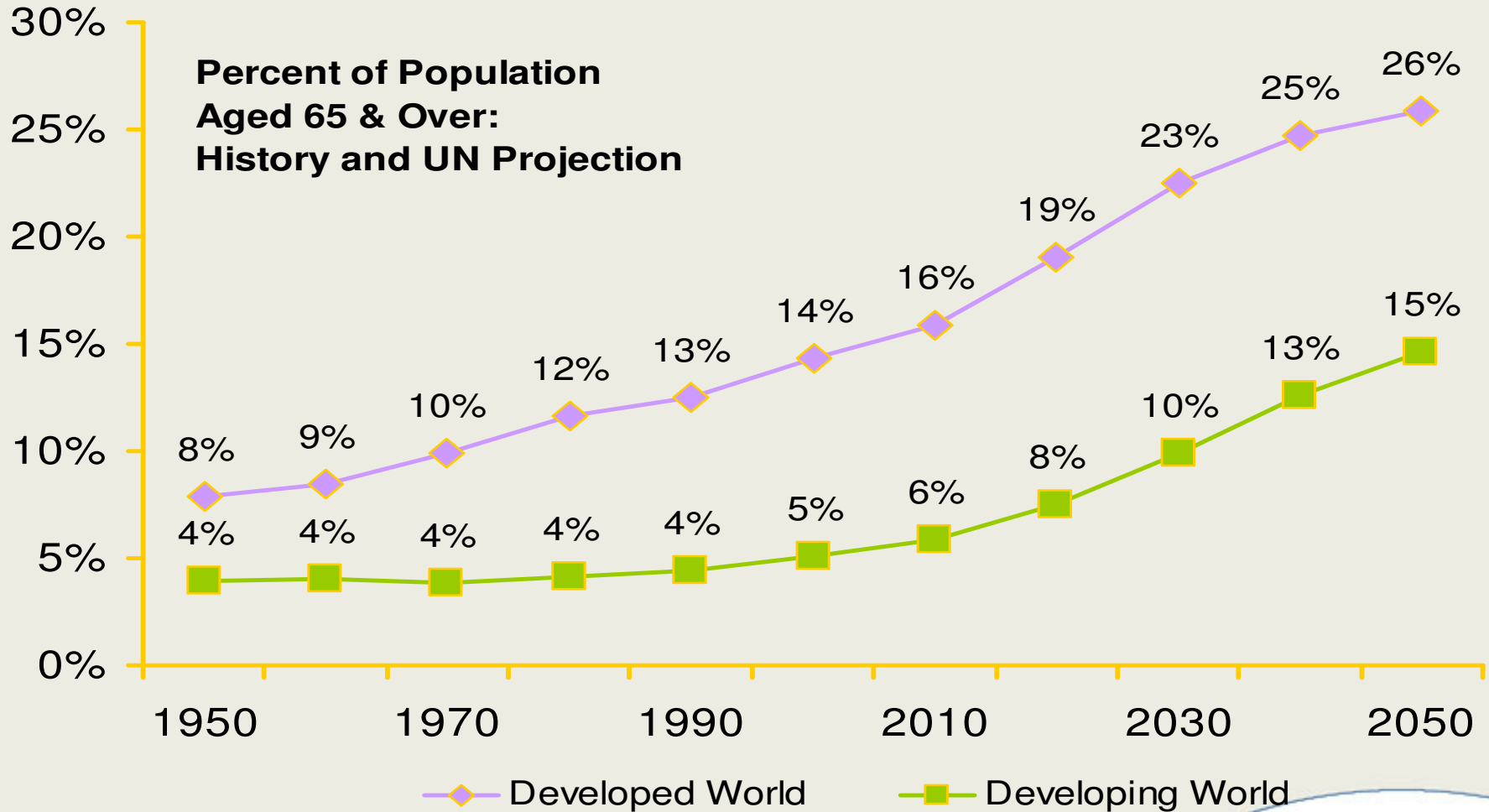
- **A transition from infectious disease to chronic, degenerative, or man-made diseases as the primary causes of mortality.**

Dramatic improvement in health in the 20th century...

Life Expectancy (years)



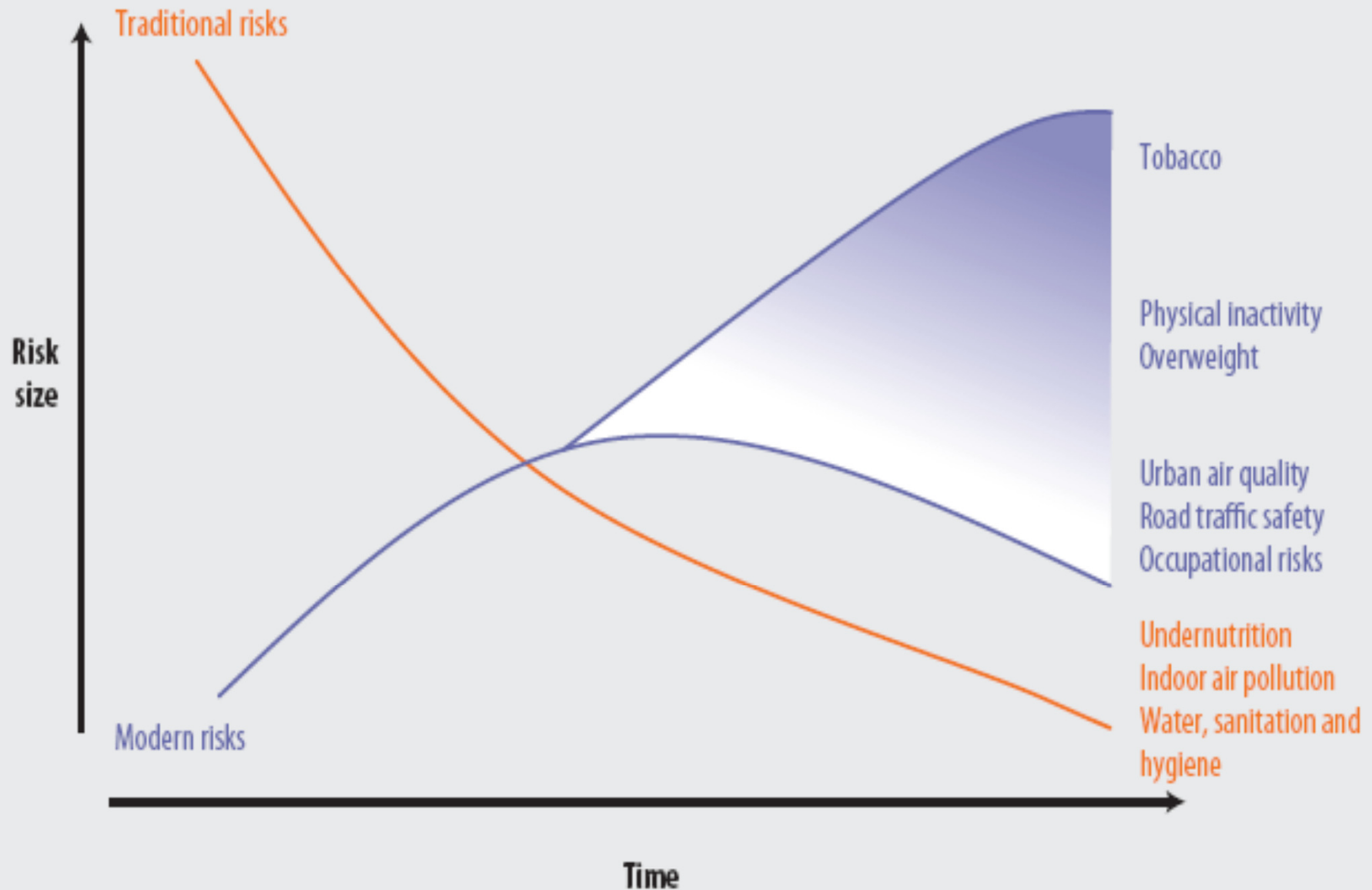
Trends in Global Ageing

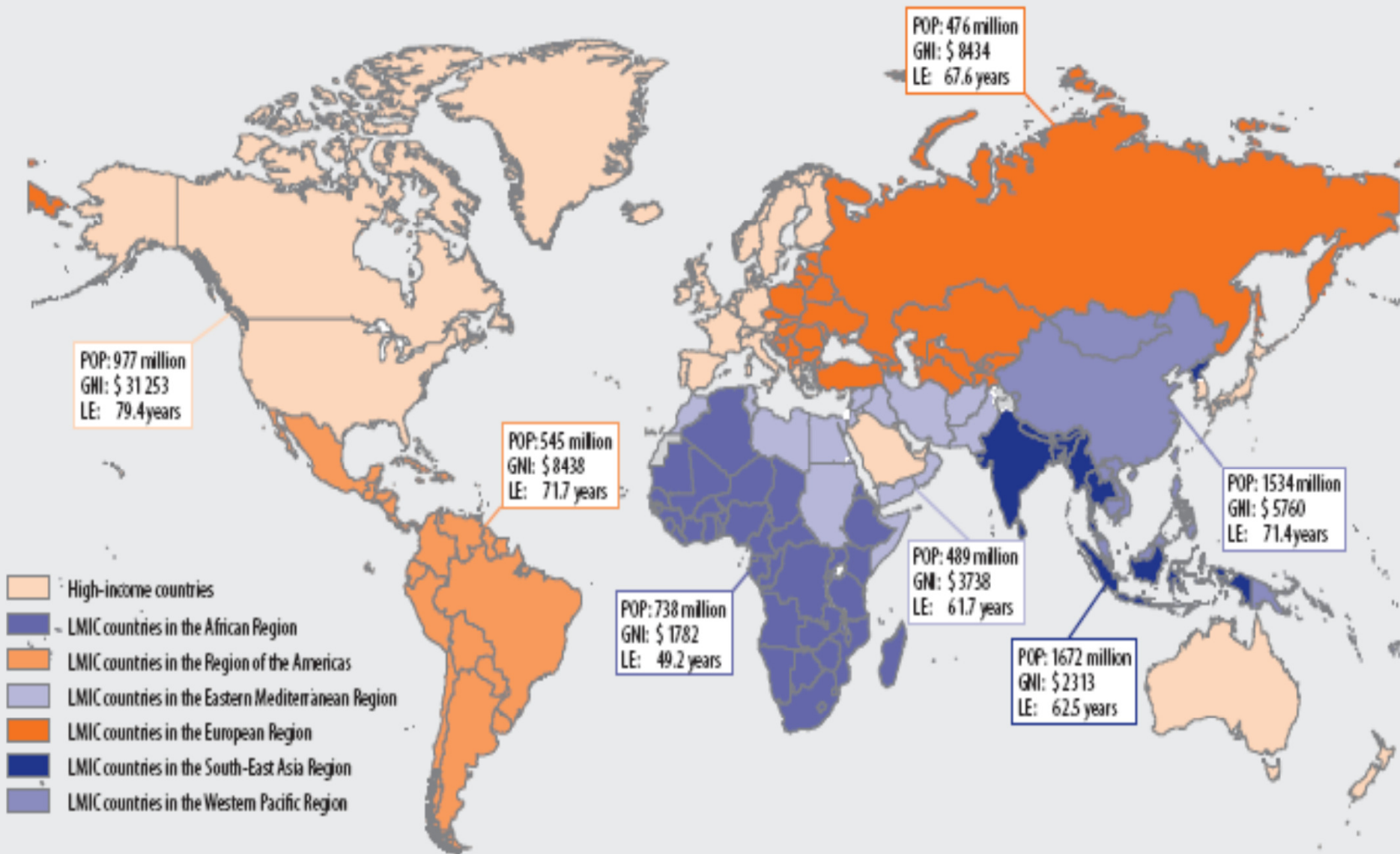


Source: UN (2005)

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Health risk transition





POP, population; GNI, gross national income per capita (international dollars); LE, life expectancy at birth;
LMIC, low- and middle-income countries.

low income, \$975 or less; middle income, \$976 - \$3855

Table 1: Ranking of selected risk factors: 10 leading risk factor causes of death by income group, 2004

Source: WHO (2009). Global health risks: mortality and burden of disease attributable to selected major risks. Geneva: WHO. Reprinted with permission from WHO.

Low-income countries			Middle income countries		
Rank	Risk factor	Death in millions (% of total)	Rank	Risk factor	Death in millions (% of total)
1	Childhood underweight	2.0 (7.8)	1	High blood pressure	4.2 (17.2)
2	High blood pressure	2.0 (7.5)	2	Tobacco use	2.6 (10.8)
3	Unsafe sex	1.7 (6.6)	3	Overweight and obesity	1.6 (6.7)
4	Unsafe water, sanitation, hygiene	1.6 (6.1)	4	Physical inactivity	1.6 (6.6)
5	High blood glucose	1.3 (4.9)	5	Alcohol use	1.6 (6.4)
6	Indoor smoke from solid fuels	1.3 (4.8)	6	High blood glucose	1.5 (6.3)
7	Tobacco use	1.0 (3.7)	7	High cholesterol	1.3 (5.2)
8	Physical inactivity	1.0 (3.8)	8	Low fruit and vegetable intake	0.9 (3.9)
9	Suboptimal breast feeding	1.0 (3.7)	9	Indoor smoke from solid fuels	0.7 (2.8)
10	High cholesterol	0.9 (3.4)	10	Urban outdoor air pollution	0.7 (2.8)

Table 2: Ranking of selected risk factors: 10 leading risk factor causes of DALYs by income group, 2004

Source: WHO (2009). Global health risks: mortality and burden of disease attributable to selected major risks. Geneva: WHO. Reprinted with permission from WHO.

Low-income countries			Middle income countries		
Rank	Risk factor	DALYs in millions (% of total)	Rank	Risk factor	DALYs in millions (% of total)
1	Childhood underweight	82 (9.9)	1	Alcohol use	44 (7.6)
2	Unsafe water, sanitation, hygiene	53 (6.3)	2	High blood pressure	31 (5.4)
3	Unsafe sex	52 (6.2)	3	Tobacco use	31 (5.4)
4	Suboptimal breast feeding	34 (4.1)	4	Overweight and obesity	21 (3.6)
5	Indoor smoke from solid fuels	33 (4.0)	5	High blood glucose	20 (3.4)
6	Vitamin A deficiency	20 (2.4)	6	Unsafe sex	17 (3.0)
7	High blood pressure	18 (2.2)	7	Physical inactivity	16 (2.7)
8	Alcohol use	18 (2.1)	8	High cholesterol	14 (2.5)
9	High blood glucose	16 (1.9)	9	Occupational risks	14 (2.3)
10	Zinc deficiency	14 (1.7)	10	Unsafe water,	11 (2.0)

Table 3: Leading causes of burden of disease (DALYs), countries grouped by income, 2004

Source: WHO (2008) The global burden of disease: 2004 update. Geneva: WHO. Reprinted with permission from WHO.

Low-income countries			Middle income countries		
Rank	Disease or injury	DALYs in millions (% of total)	Rank	Disease or injury	DALYs in millions (% of total)
1	Lower respiratory infections	76.9 (9.3)	1	Unipolar depressive disorders	29.0 (5.1)
2	Diarrheal diseases	59.2 (7.2)	2	Ischaemic heart disease	28.9 (5.0)
3	HIV/AIDS	42.9 (5.2)	3	Cerebrovascular disease	27.5 (4.8)
4	Malaria	32.8 (4.0)	4	Road traffic accidents	21.4 (3.7)
5	Prematurity and low birth weight	32.1 (3.9)	5	Lower respiratory infections	16.3 (2.8)
6	Neonatal infections and other ^a	31.4 (3.8)	6	Chronic obstructive pulmonary disease	16.1 (2.8)
7	Birth asphyxia and birth trauma	29.9 (3.6)	7	HIV/AIDS	15.0 (2.6)
8	Unipolar depressive disorders	26.5 (3.2)	8	Alcohol use disorders	14.9 (2.6)
9	Ischaemic heart disease	26.0 (3.1)	9	Refractive errors	13.7 (2.4)
10	Tuberculosis	22.4 (2.7)	10	Diarrheal diseases	13.1 (2.3)

6. Addictive substances

- Tobacco
- Alcohol
- Illicit drugs

Table 6.3: Evidence in support of reduction of harmful alcohol use

Intervention level	High-income countries		Low and middle income countries	
	Evidence	Level of evidence*	Evidence	Level of evidence*
Population	1. Pricing and Taxation: Alcohol taxes and other price controls (Elder et al. 2010; Gallet 2007; Wagenaar et al. 2009)	1	LMIC (Selvanathan and Selvanathan, 2005); China (Gallet 2007) India (Musgrave and Stern 1988)	1
	2. Regulating physical availability (Babor et al. 2010): -Total ban on sales -Minimum legal purchase age (Wagenaar and Toomey 2000) -Rationing -Government monopoly of retail sales -Hours and days of sale restrictions (Stockwell and Chikritzhs 2009) -Restrictions on density of outlets (Campbell et al. 2009; Livingston et al. 2007) -Different availability by alcohol strength	1 1 3 1 3 3 3	India (Rahman 2002) Russia, India (Babor et al. 2010) Brazil (Duailibi et al. 2007)	1 2 2

Table 6.3: Evidence in support of reduction of harmful alcohol use

Intervention level	High-income countries		Low and middle income countries	
	Evidence	Level of evidence*	Evidence	Level of evidence*
3. Altering the drinking context (Babor et al. 2010)	-Staff training and house policies relating to responsible beverage service (Ker and Chinnock 2008; Shults et al. 2009)	3	South Africa (Peltzer et al. 2006)	3
	-Training bar staff and managers to prevent and better manage aggression	2		
	-Voluntary codes of bar practice	0		
4. Drinking-driving countermeasures (Babor et al. 2010):	-Enforcement of on-premise regulations and legal requirements	2	Thailand (Suriyawongpaisal et al. 2002).	3
	-Lowered BAC limits (Desapriya et al. 2003; Fell and Voas 2006)	1		
	-Low BAC for young drivers ('zero tolerance') (Shults et al. 2001)	1		
	-Sobriety checkpoints (Goss et al. 2008)	2		
	-Random breath testing (Shults et al. 2001)	1		
-Administrative license suspension	2			
-Graduated licensing for novice drivers (Hartling et al. 2009)	1			
5. Regulating alcohol promotion (Babor et al. 2010):	-Advertising bans	3	Brazil (Vendrame et al. 2010)	0
	-Voluntary controls by alcohol industry	0		

Table 6.3: Evidence in support of reduction of harmful alcohol use

Intervention level	High-income countries		Low and middle income countries	
	Evidence	Level of evidence*	Evidence	Level of evidence*
Community	6. Education and persuasion: provide information to adults and young people especially through mass media and school-based alcohol education programmes (Foxcroft et al. 2008; Wood et al. 2006)	4	South Africa (Karnell et al. 2006; Smith et al. 2008b)	4
Individual	7. Screening and Brief intervention			
	-Screening tools (AUDIT, CAGE, and RAPS4) for alcohol problems in primary health care and other health care settings (Bengal et al., 2009)	1	Validation of AUDIT: Vietnam (Giang et al. 2005), Brazil (Lima et al. 2005), Nigeria (Adewuya 2005)	2
	-Brief intervention with at-risk drinkers (Bertholet et al. 2005; Kaner et al. 2009; Moreira et al. 2009)	1	Costa Rica, Kenya, Mexico, Russia, Zimbabwe (Babor et al. 1994); Brazil	2
	-During pregnancy (Nilsen 2009; Stade et al. 2009)	2	(Simão et al. 2008); India (Pal et al.	
	-Motivational interviewing (Vasilaki et al. 2006)	2	2007)	
	-Personalized-feedback interventions (Riper et al. 2009)	2		
	-College students (Carey et al. 2007; 2009)	2		
-Emergency departments: interventions reduce alcohol-related injuries (Havard et al. 2008)	3			
-Individual treatment (Tripodi et al. 2010)				

Table 6.3: Evidence in support of reduction of harmful alcohol use

Intervention level	High-income countries		Low and middle income countries	
	Evidence	Level of evidence*	Evidence	Level of evidence*
	8. Psychosocial therapies for relapse prevention Structured interventions (Berglund et al. 2003; Walters 2000); Alcohol ignition interlock programmes (Willis et al. 2009) Alcoholics Anonymous and other self-help groups (Ferry et al. 2009a)	3 2 4	India (Suresh Kumar and Thomas 2007)	4
	9. Pharmacotherapy in detoxification and relapse prevention (Ntais et al. 2005)	1	India (Kumar et al. 2009; De Sousa et al. 2008); Iran (Ahmadi et al. 2004)	1

*Levels of evidence: 1=good evidence; 2=emerging or promising evidence; 3=mixed evidence; 4=no evidence

Table 6.4: Evidence in support of reduction of illicit drug use

Intervention level	High-income countries		Low and middle income countries	
	Evidence	Level of evidence*	Evidence	Level of evidence*
Population	1. Regulating physical availability -Use of civil penalties to reduce social harms with criminal penalties (Dutra et al. 2008)	1		
Community	2. Education and persuasion: provide information to adults and young people especially through mass media and school or community-based illicit drug education programmes (Faggiano et al. 2008; Gates et al. 2009)	3	Thailand (Barrett and Palo 1999; Keawkingkeo 2005) China (Wu et al. 2002) Thailand [Peer network intervention] (Sherman et al. 2009)	3 2

Individual	3. Treatment			
	-Brief intervention [Illicit drugs] (WHO 2008b)	2	Brazil, India (WHO 2008b)	2
	-Psychotherapeutic interventions for cannabis abuse or dependence (Denis et al. 2008)	3		
	-Case management (Hesse et al. 2009)			
	-Treatment for methaqualone dependence (McCarthy et al. 2008)	4		
		4		
	-Psychosocial treatment for opiate abuse and dependence (Mayet et al. 2010)	4		
	-Psychosocial treatments offered in addition to pharmacological opioid detoxification treatments (Amato et al. 2009)	2	Thailand (Verachai et al. 2009)	3
	-Psychosocial intervention (opiates, cocaine, cannabis) (Dutra et al. 2008)	2	China: Acupuncture (Wu et al. 2003)	2
	-Rehabilitation			
-Therapeutic communities (Smith et al. 2008a)	4	Peru (Johnson et al. 2008);		
-Needle exchanges, hepatitis B vaccination for users (Dutra et al. 2008)	1	Thailand (Verachai et al. 2003)		

4. Pharmacotherapy

-Amphetamine dependence and abuse (Srisurapanont et al. 2008), cocaine dependence (Amato et al. 2010; Castells et al. 2010; Connock et al. 2007), heroin dependence (Ferri et al. 2009b)
Prescribed heroin (Dutra et al. 2008)

4

3


2

Iran (Ahmadi et al. 2004)

China (Tang and Hao 2007)

3

3



**The Effectiveness of a Brief Intervention
for Illicit Drugs Linked to the Alcohol,
Smoking and Substance Involvement
Screening Test (ASSIST) in Primary Health
Care Settings:**

Phase III Findings of the WHO ASSIST
Randomized Controlled Trial

What is Screening, Brief Intervention and Referral (SBIR)?

- **S**creening to find:
 - at-risk drinkers (and drug users)
 - possible alcohol (and drug) dependence
- **B**rief **I**ntervention
 - Early detection
 - Time limited
 - Low cost, easy to use
- Referral of more serious cases to further diagnostic assessment specialized care

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

Content Domain	Question
1) Life-time use	Which of the following substances have you ever used? (tobacco products, alcoholic beverages, cannabis, cocaine, stimulants, inhalants, sedatives/hypnotics, hallucinogens, opioids, and 'other drugs'; non-medical use only)?
2) Current use	In the past three months, how often have you used the substances you mentioned?
3) Dependence	How often have you had strong desire or urge to use (first drug, etc.)?
4) Problems	How often has your use of (first drug, etc.) led to health, social, legal or financial problems?
5) Problems	How often have you failed to do what was normally expected of you because of your use of (first drug, second drug, etc.)?
6) Problems	Has a friend or relative or anyone else ever expressed concern about your use of (first drug, etc.)?
7) Dependence	Have you ever tried to control, cut down or stop using (first drug, etc.)?
8) HIV Risk	Have you ever used any drug by injection (non-medical use only)?

Specific Substance Involvement Scores

Substance	Score	Risk Level
a. Tobacco products		0-3 Low 4-26 Moderate 27+ High
b. Alcoholic Beverages		0-10 Low 11-26 Moderate 27+ High
c. Cannabis		0-3 Low 4-26 Moderate 27+ High
d. Cocaine		0-3 Low 4-26 Moderate 27+ High
e. Amphetamine type stimulants		0-3 Low 4-26 Moderate 27+ High
f. Inhalants		0-3 Low 4-26 Moderate 27+ High
g. Sedatives or Sleeping Pills		0-3 Low 4-26 Moderate 27+ High
h. Hallucinogens		0-3 Low 4-26 Moderate 27+ High
i. Opioids		0-3 Low 4-26 Moderate 27+ High
j. Other - specify		0-3 Low 4-26 Moderate 27+ High

What do your scores mean?

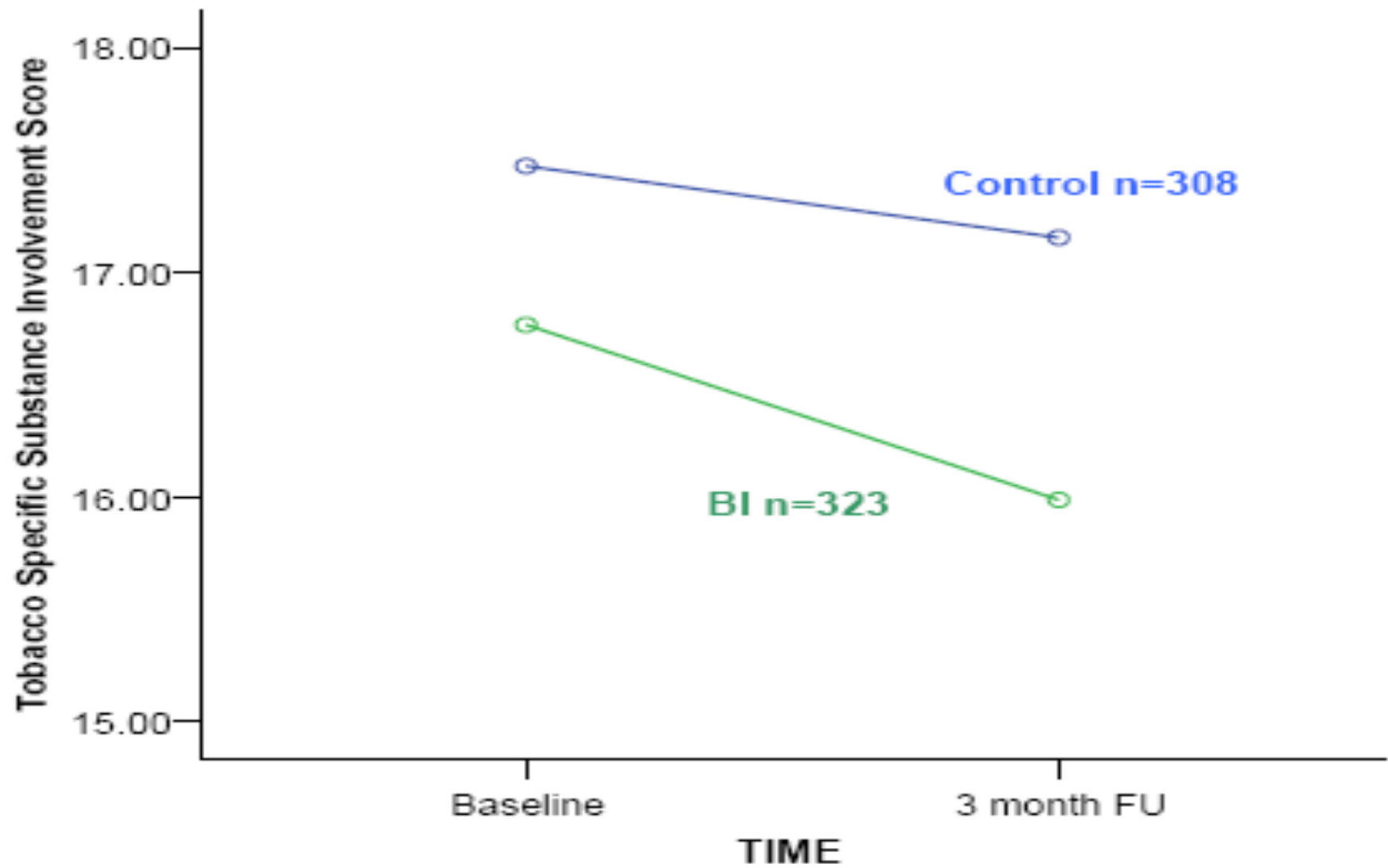
- Low:** You are at low risk of health and other problems from your current pattern of use.
- Moderate:** You are at risk of health and other problems from your current pattern of substance use.
- High:** You are at high risk of experiencing severe problems (health, social, financial, legal).

THE TYPE OF INTERVENTION IS DETERMINED BY THE PATIENT'S SPECIFIC SUBSTANCE INVOLVEMENT SCORE

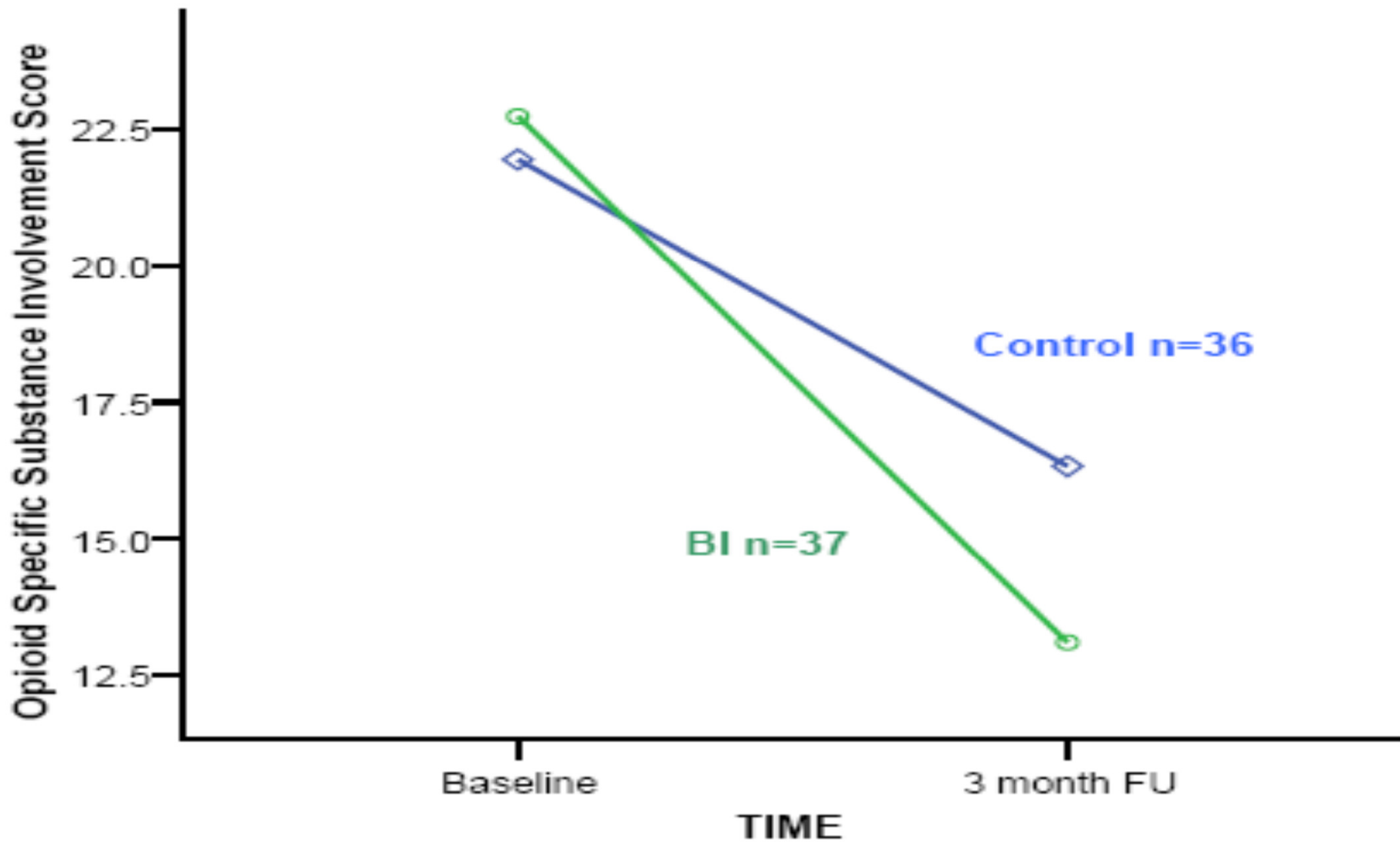
	Record specific substance score	no intervention	receive brief intervention	more intensive treatment *
a. tobacco		0 - 3	4 - 26	27+
b. alcohol		0 - 10	11 - 26	27+
c. cannabis		0 - 3	4 - 26	27+
d. cocaine		0 - 3	4 - 26	27+
e. amphetamine		0 - 3	4 - 26	27+
f. inhalants		0 - 3	4 - 26	27+
g. sedatives		0 - 3	4 - 26	27+
h. hallucinogens		0 - 3	4 - 26	27+
i. opioids		0 - 3	4 - 26	27+
j. other drugs		0 - 3	4 - 26	27+

NOTE: *FURTHER ASSESSMENT AND MORE INTENSIVE TREATMENT may be provided by the health professional(s) within your primary care setting, or, by a specialist drug and alcohol treatment service when available.

Tobacco



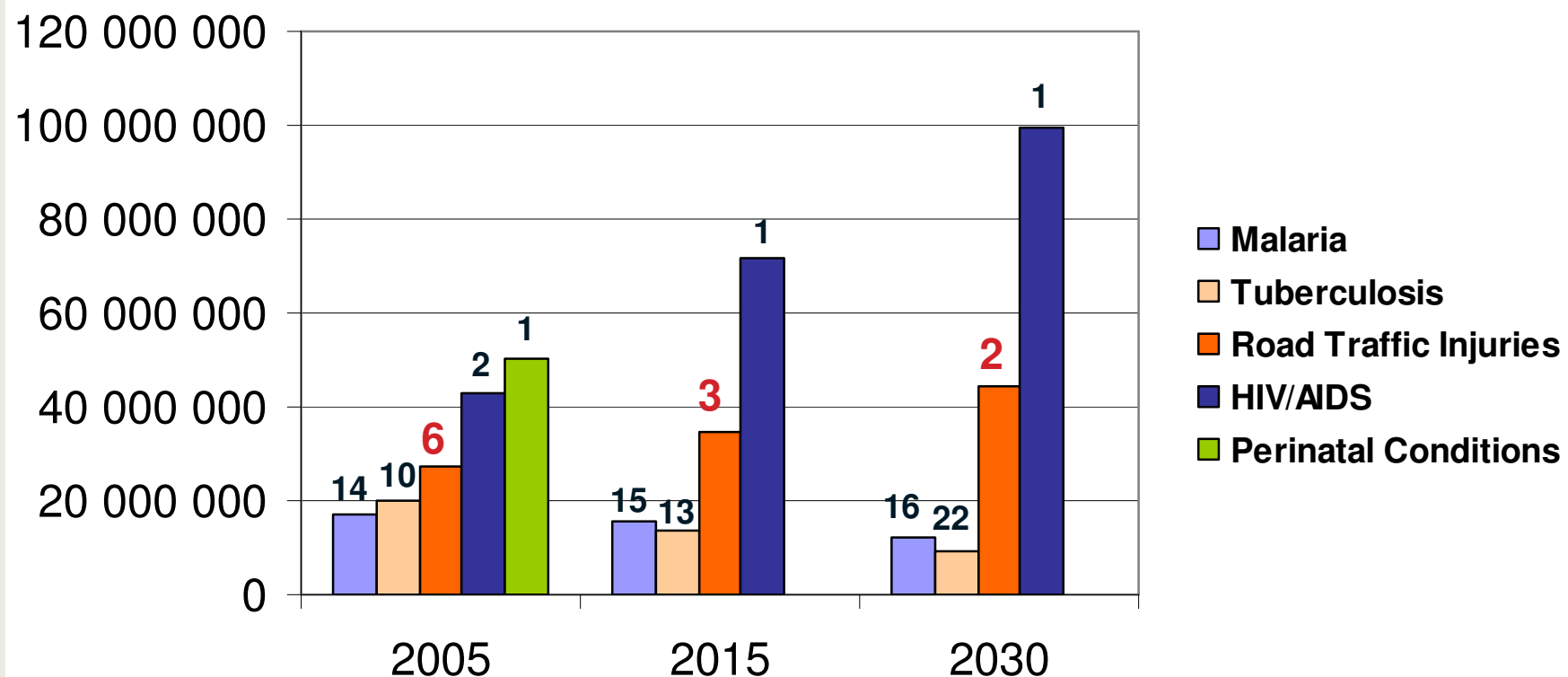
Opioid



7. Road traffic injury

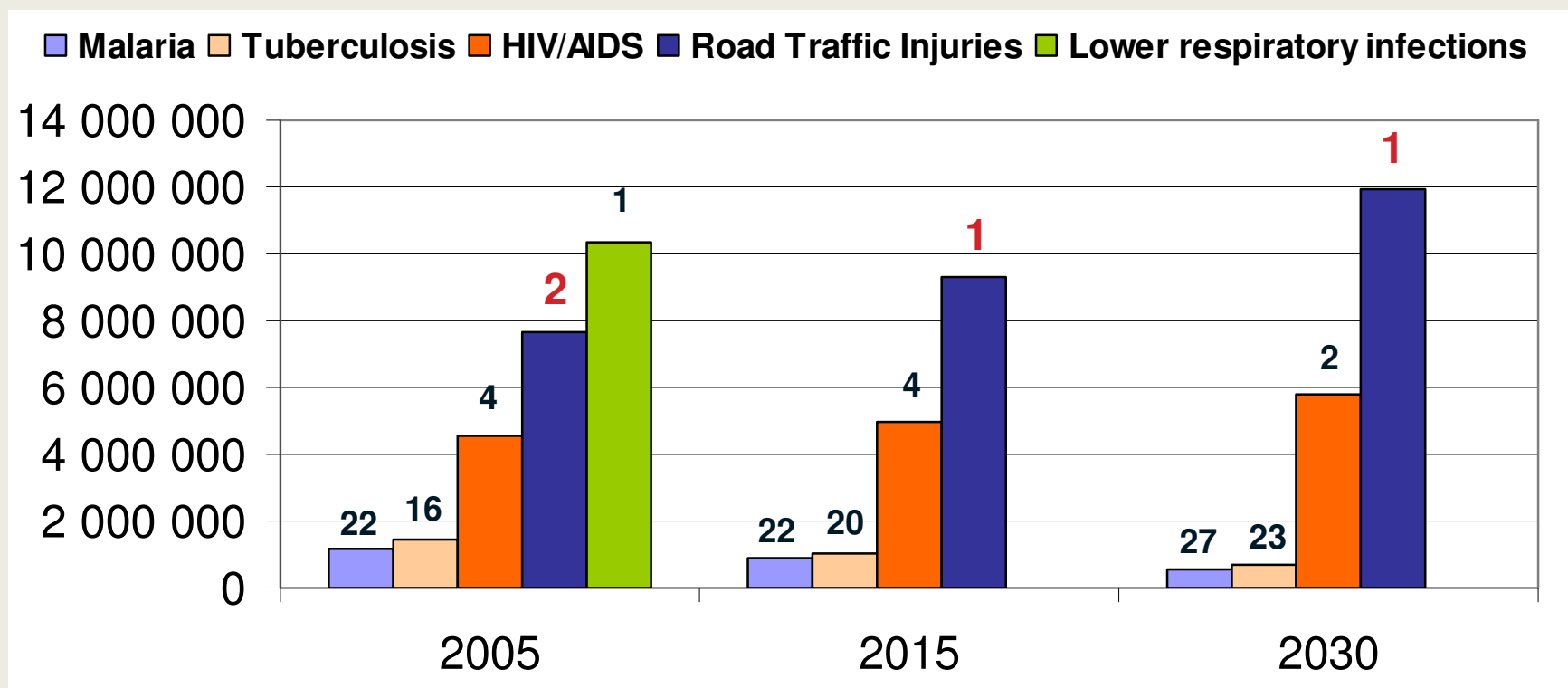


DALYS in low and middle income countries (male population)



Source: Mathers C, Loncar D. Updated projections of global mortality & burden of disease, WHO, 2005

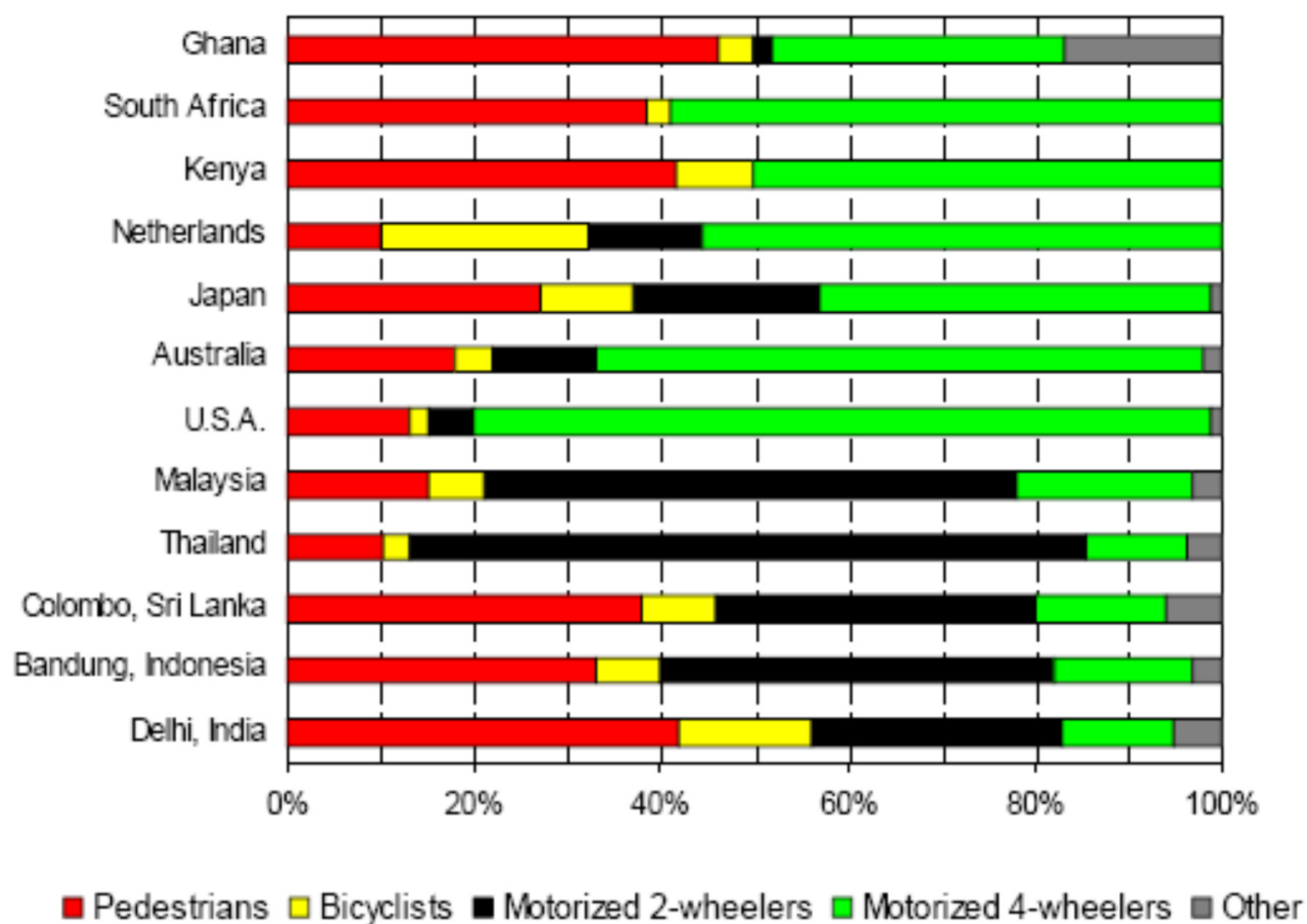
DALYS in low and middle income countries (children age 5-14)



Source: Mathers C, Loncar D. Updated projections of global mortality & burden of disease, WHO, 2005



Road User fatalities



Human factors (Information, attitudes, impairment, police enforcement)

- a) Excessive speeding and driver negligence
- b) Alcohol and drug use
- c) Poor skills/knowledge
- d) Driver fatigue, stress and aggression
- e) Other impairment: vision
- f) Seatbelt, helmet use

b) Alcohol related death in South Africa

	Driver	Pedestrian	Cyclist
	BAC positive (Mean BAC)	BAC positive (Mean BAC)	BAC positive (Mean BAC)
NIMSS* (2002)	55.3% (0.17)	59.4% (0.22)	36.9% (0.2)
NIMSS* (2005)	53.5% (0.16)	58.7% (0.15)	45.0% (0.16)

*National Injury Mortality Surveillance System

f) Lack of seatbelt use (observed)

	Country	Non-wearing of seatbelt (observed)
Nantulya et al. (2001)	Kenya	99% of car occupants injured in crashes
Sangowawa et al. (2006)	Nigeria	52% drivers 95.9% restraint use among children
Iribhogbe & Osime (2008)	Nigeria	47.7% drivers 81.6% front seat passengers 93.9% rear seat passengers
Peltzer (2003)	South Africa	53% drivers
Department of Transport (2003)	South Africa, rural roads	67.5% drivers unobserved 14.2% drivers at roadblock 33.3% front passengers at roadblock 92.3% back passenger at roadblock

f) Non-helmet use

Author	Country, sample	Non-helmet use on motor cycle
Asigwa (1982)	Nigeria, motorcyclist	8%
Amoran et al. (2005)	Nigeria, commercial motorcyclists	100%
Oginni et al. (2007)	Nigeria, commercial motor cyclists	82.4%
Flisher et al. (1993)	South Africa, school children on motorcycle	47.9%
Flisher et al. (2006)	South Africa, school children on motorcycle	18.9%

What works?

- Literature in road traffic injury control interventions in low and middle income countries is slim
- Systematic review limited to low and middle income country intervention evaluations
 - Speed bumps (Afukaar 2003).
 - Bicycle helmets (Li and Baker 1997)
 - Motorcycle helmets (Tsauo 1999)
 - Traffic enforcement (Poli de Figuereido 2001)

Safer people interventions

(Forjuoh, 2003)

Prevention target	Proven	Applicability in developing countries
Occupant	Seatbelt* Airbags Child safety seats Seat belt use laws Child seat use laws	*affordable/feasible Combined strategy: laws, public education, enforcement (primary & secondary)
Motorcyclist	Helmets*	*affordable/feasible
Bicyclist	Helmets*	*Readily usable Combined with other strategies Policies? Barriers (attitudes/costs)

**Denotes intervention with some evaluation in LICs*

Safer people interventions

(Forjuoh, 2003)

Prevention target	Proven	Applicability in developing countries
Pedestrian	Sidewalks Roadway barriers* Pedestrian crossing signs* Education on conspicuity-enhancement measures	*Feasible Combined with public education
Cross-cutting	Speed limits* Speed ramps/bumps* Alcohol sobriety checkpoints Lower BAC laws Minimum drinking age laws	*Useable Need strict enforcement & other traffic-calming strategies →Hours of driving for commercial and public drivers →Policy to prevent culture of impunity

**Denotes intervention with some evaluation in LICs*
Social science that makes a difference

Table 7.1: Evidence in support of road traffic injury prevention

	High-income countries		Low and middle income countries	
Intervention level	Evidence	Level of evidence *	Evidence	Level of evidence *
Population/ environmental	Safer transport and land use policies (Peden et al. 2004)	1		
	Graduated licensing system (Shope 2007; Hartling et al. 2009; Novoa et al. 2009)	1		
	Road safety mass media campaigns (Delaney et al. 2004)	2	South Africa (Peden and Butchart 1999)	3
	Separating different types of road user (Reynolds et al. 2009)	2		
	Area-wide traffic calming (Bunn et al. 2009; Novoa et al. 2009)	1	Ghana (Afukaar 2003)	2
	Red-light cameras for the prevention of road traffic crash (Aeron-Thomas & Hess, 2009)	2		
	Speed limit reductions (Richter et al. 2006)	1	South Africa (Wilks 1974)	2
	Speed enforcement detection devices (Novoa et al. 2009; Wilson et al. 2009; 2010)	1		
	Street lighting (Beyer and Ker 2010)	1		
	Helmets for preventing head and facial injuries in bicyclists (Thompson et al. 2009)	3		
	Bicycle helmet legislation (Macpherson and Spinks 2010)	1		
	Helmets for preventing injury in motorcycle riders (Liu et al. 2009)	2	India (Sood 1988) Vietnam (Hung et al. 2006; Passmore et al. 2010) Indonesia (Conrad et al. 1996) Thailand (Ichikawa et al. 2003; Nakahara 2005)	2 3
	Interventions for promoting booster seat use in four to eight year olds travelling in motor vehicles (Ehiri et al. 2009)	3		
	Drinking-driving countermeasures (see chapter 6: addictive substances, alcohol)	1,2		
Regulating drivers' hours of work in commercial and public transport (Peden et al. 2004)				

Com munit y/vehi cle	Community-based programmes to prevent pedestrian injuries in children 0–14 years (Turner et al. 2004)	2		
	Community-based programmes to promote car seat restraints in children 0-16 years (Turner et al. 2005)	3		
	School-based driver education for the prevention of traffic crashes (Ian and Irene 2001; Roberts and Kwan 2008)	2		
	Safety education of pedestrians for injury prevention (Duperrex et al. 2009)	3		
	Vehicle design (Ameratunga et al. 2006); seatbelt, airbag (Crandall et al. 2001; Peden et al. 2004)	1		
	Conspicuity: Daytime running lights on cars (Zador 1985; Elvik 1996)	2	Malaysia (Radin et al. 1996)	2
	Conspicuity: Increasing pedestrian and cyclist visibility (Kwan and Mapstone 2009)	3		
	Non-legislative interventions for the promotion of cycle helmet wearing by children (Royal et al. 2008)	2		
	Group intervention in young children for car restraint, street crossing skills, pedestrian skills, seatbelt use (Bruce and McGrath 2005)	3		
	Traffic law enforcement (Zaal 1994); Increased police patrols (Goss et al. 2008)	2	Brazil (Poli de Figueiredo et al. 2001); Iran (Soori et al. 2009)	2
Utilizing appropriate child restraints and seat-belts (Dinh-Zarr et al. 2001)	1	China (Stevenson et al. 2008)	2	
Indivi dual/r oad user	Primary care interventions to prevent motor vehicle occupant injuries (Williams et al. 2007)	3		
	Motor cycle rider training	3	Thailand (Swaddiwudhipong et al. 1998)	3
	Post-licence driver education (Ker et al. 2005)	4		
	Older driver retraining (Korner-Bitensky et al. 2009) Vision screening of older drivers (Subzwari et al. 2009)	3		
	Licence suspension and demerit point penalties (Pulido et al. 2010)	2		
	Problem driver remediation (Masten and Peck 2004)	3		

**Levels of evidence: 1=good evidence; 2=emerging or promising evidence; 3=mixed evidence; 4=no evidence*

8. Common mental health risk

- Depression
- Anxiety disorders

Depression is now the #1
global cause of disability

- *121 million people currently suffer from depression.*
- *5.8% of men and 9.5% of women will experience a depressive episode in any given year.*

[WHO fact sheet]

#1 leading cause of years of life lived with disability (YLDs)

[WHO World Health Report 2001]



The evidence in support of behavioural depression treatment (Patel et al., 2009)

Depression Treatment	Evidence from LMICs
Detection and monitoring	<ul style="list-style-type: none"> -GHQ, K6, and SRQ in primary care in India [14] -SRQ for perinatal depression in Ethiopia [15] -K6 for postnatal depression in Burkina Faso [16] -SRQ for women of childbearing age in Mongolia [22] -GHQ in 15-site primary care study [23] -HSCCL in pregnant women positive for HIV in Tanzania [59] GHQ and SRQ in primary care in Chile and in Brazil [17,18,20,21] -CIS-R in the community setting in Chile [19]
Cognitive-behavioural therapy (CBT)	<ul style="list-style-type: none"> RCT of CBT delivered by community health workers for perinatal depression in Pakistan [46] RCT of group CBT for depressed primary care patients in Chile [35]
Interpersonal therapy (IPT)	<ul style="list-style-type: none"> RCT of group interpersonal psychotherapy [47,48]

Cognitive-behavioural therapy for perinatal depression in women in Pakistan

- Mothers in the intervention clusters received the Thinking Healthy Programme through 40 specially trained Lady Health Workers .
- The intervention consisted of a session every week for 4 weeks in the last month of pregnancy, three sessions in the first postnatal month, and nine 1-monthly sessions thereafter.
- Health workers received monthly supervision, and were monitored by the research team to ensure that they were attending the scheduled visits.

Thinking Healthy Programme

- *Cognitive behaviour therapy techniques:*
- active listening,
- collaboration with the family, guided discovery (i.e., style of questioning to both gently probe for family's health beliefs and to stimulate alternative ideas), and
- homework (ie, trying things out between sessions, putting what has been learned into practice), and applied these to health workers' routine practice of maternal and child health education.

Comparison of changes in rates of diagnosable major depression after intervention at 6 & 12 months

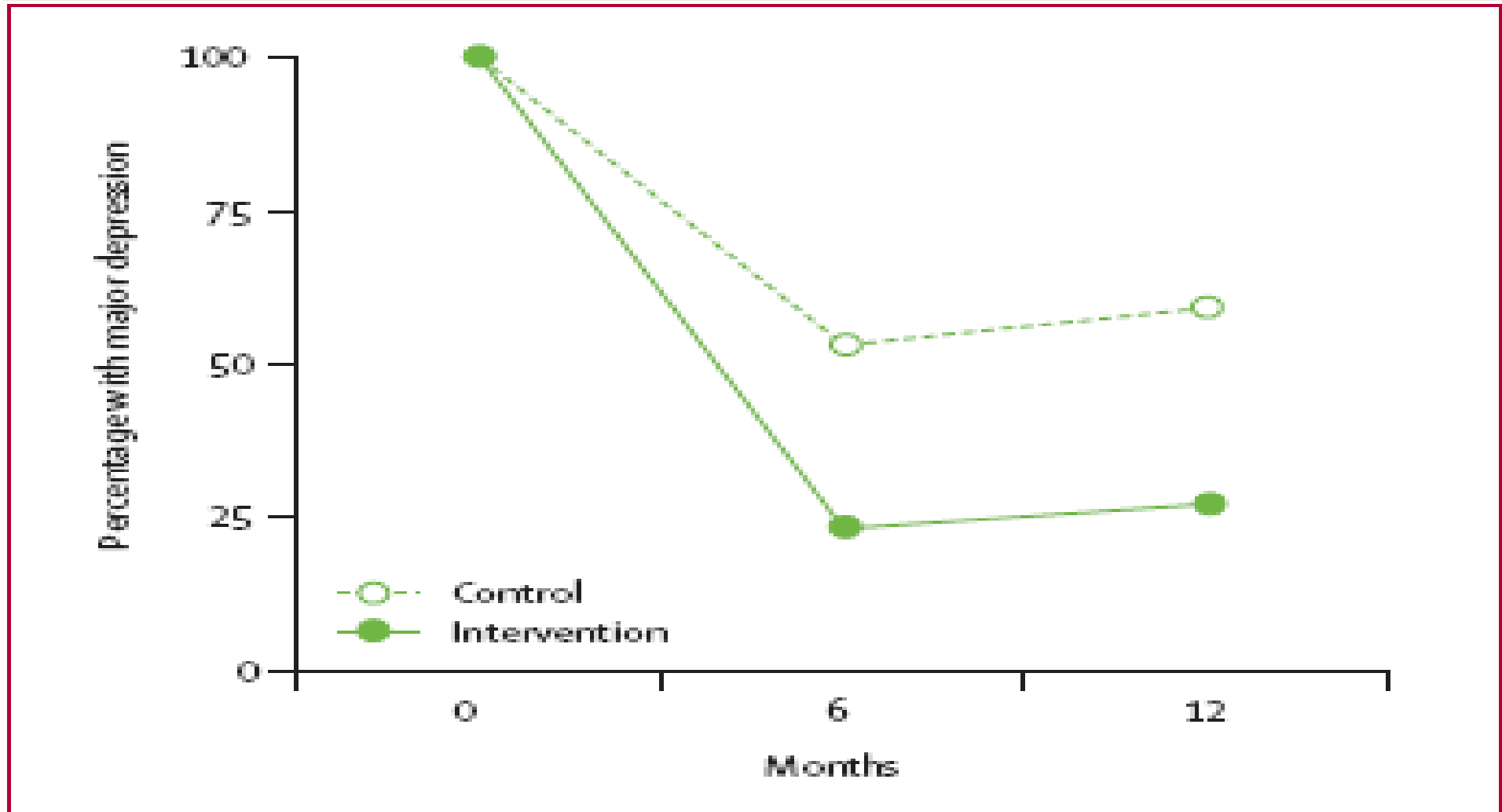


Figure 2: Rates of depression in women in the control and intervention groups at 6 months and 12 months

Table 8.1: Evidence in support of depressive disorders prevention and treatment

Intervention level	High-income countries		Low and middle income countries	
	Evidence	Level of evidence *	Evidence	Level of evidence *
Population	Primary prevention of depression or depressive symptoms (Jané-Llopis et al. 2003; Horowitz and Garber 2006; Flament et al. 2007; Merry et al. 2009; Brunwasser et al., 2009; Gladstone and Beardslee 2009; Calear and Christensen 2010) older adults (Forsman et al. 2010)	3	China (Yu & Seligman 2002)	2
	Community setting		Pakistan (Ali et al. 2003) Uganda (Bolton et al. 2003)	2
Community	Detection and monitoring: Sensitivity and specificity for nine screening measures including BDI, CES-D, SDS, HSCL and two-item and nine-item PHQ depression scale (Garrison et al. 1991; Sharp and Lipsky 2002; Shafer 2006; Patel et al. 2009; Wittkamp et al. 2009)		-GHQ in Brazil, Chile, India and others (Araya et al. 1992; Goldberg et al. 1997; Mari and Williams 1985; Patel et al. 2008) -SRQ in Chile, Brazil, Ethiopia, India, Malawi (Araya et al. 1992; Hanlon et al. 2008; Mari and Williams, 1985, 1986; Patel et al. 2008; Stewart et al. 2009) -K6 in Burkina Faso (Baggaley et al. 2007) -HSCL in Tanzania (Kaaya et al. 2002) -BDI in Brazil (Gorenstein and Andrade 1996) Nigeria (Adewuya et al. 2007) -EPDS in China (Lau et al. 2010; Wang et al. 2009), Ethiopia (Hanlon et al., 2008), Zimbabwe (Chibanda et al. 2010) -PHQ 9 in Nigeria (Adewuya et al. 2006), Thailand (Lotrakul et al., 2008) -CES-D in Brazil Batistoni et al. 2007), Columbia (Camacho et al. 2009)	
	Group psychological treatment (Weisz et al. 2006; Cuijpers et al. 2009)	2	Chile [Group & multi-component intervention] (Araya et al. 2003; Rojas et al. 2007), Mexico (Lara et al. 2003)	2
	Home visitation [maternal depression] (Ammerman et al. 2010)	3	South Africa (Cooper et al. 2009)	2

Individual	Cognitive behavioural therapy (Dobson 1989; Gloaguen et al. 2007) for children and adolescents (Compton et al. 2004). via the internet (Griffiths et al. 2010)	1	Pakistan (Rahman et al. 2008)	2
	Interpersonal therapy (De Mello et al. 2005)	1	Nigeria [surgical patients, depression and anxiety prevention] (Osinowo et al. 2003)	3
	Problem-solving therapy (PST) (Cuijpers et al. 2007)	1	Mexico [postpartum depression prevention]	3
	Psycho-educational treatment (Cuijpers et al. 2009)	1	(Lara et al. 2010)	
	Short-term psychodynamic therapy (Abbass et al. 2009b; Driessen et al. 2010)	1		
	Psychological interventions in primary care (Bortolotti et al. 2008)	1		
	Psychological treatment of depression in children and adolescents (Harrington et al. 1998; Weisz et al. 2006)	1		
	adults (Cuijpers et al. 2008) older people (Frazer et al. 2005)	1		
Pharmacotherapy (Crompton et al. 2007; Panel 1993; Williams et al. 2000; Wilson et al. 2009) Relapse prevention: antidepressant (Glue et al. 2010) cognitive therapy (Paykel 2007)	1	India (Patel et al. 2003)	1	

*Levels of evidence: 1=good evidence; 2=emerging or promising evidence; 3=mixed evidence; 4=no evidence