

TRAINING FOR HEALTH CARE PROVIDERS

[Date ...Place ...Event...Sponsor...Organizer]

儿童环境健康指标

Children's Health and the Environment

WHO Training Package for the Health Sector

World Health Organization

www.who.int/ceh

学习目的

- ❖ 学习什么是儿童环境健康指标，怎样使用？
- ❖ 理解儿童环境健康指标的重要性
- ❖ 介绍儿童环境健康指标
 - ❖ 指标种类
 - ❖ 环境中的指标
- ❖ 举例回顾儿童环境健康指标及其应用
- ❖ 考虑为什么、什么时候、什么地点、如何监测儿童环境健康

“能够测量的才
能够改善？”



内容大纲

- I. 介绍与背景
- II. 儿童环境健康指标
- III. 正在使用中的指标举例

为什么是儿童？

儿童对环境危险因素尤其易感

- ❖ 每公斤体重暴露量更大
- ❖ 更易受到暴露的伤害
- ❖ 由于行为动作的原因，某种暴露是独有的
- ❖ 较难意识到危害
- ❖ 儿童所处的环境较难控制
- ❖ “易感窗口期”
- ❖ 受到政策的忽视或者重视不足

为什么是儿童？

新的研究发现建议：

- ❖ 儿童和发育中的胎儿对某些毒物表现的特别脆弱（比如，铅）
- ❖ 暴露的影响取决于：毒性、剂量和时间
- ❖ 暴露的影响在以下情形下会加剧：
 - 贫穷
 - 营养缺乏
 - 城市化
 - 不良环境
 - 紧张的氛围



儿童环境健康指标是什么？

表现环境和儿童健康之间的联系，目的是服务于特殊政策或者管理事项，通过一种有助于高效决策的方式表现出来。

儿童环境健康指标是什么？

- ❖ 是用来测量某种条件影响到了哪部分人群的一种方式
- ❖ 使得决策成为可能

儿童环境健康指标是什么？

举例：

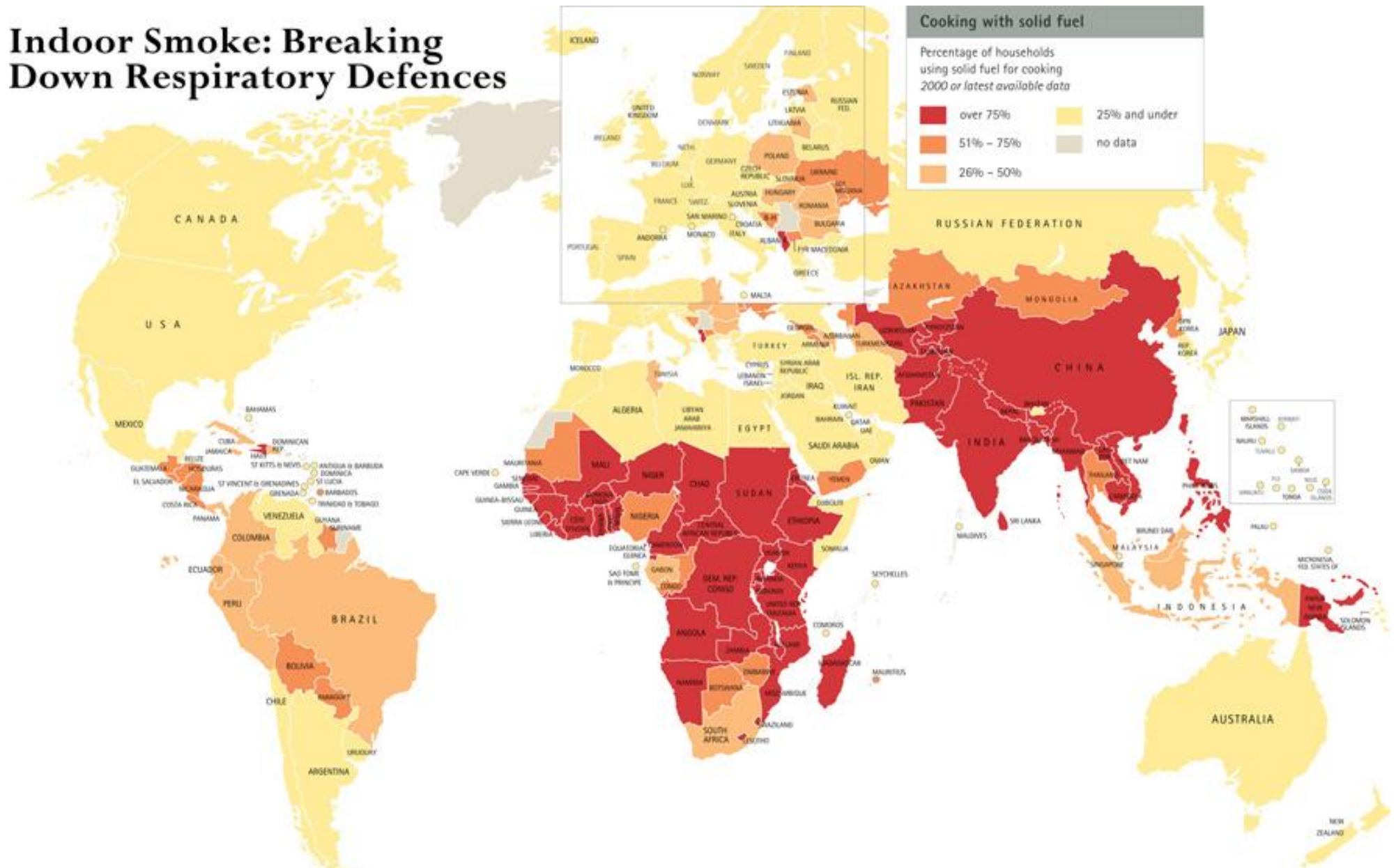
- ❖ 5岁以下儿童道路交通伤害——道路交通健康危害的一个指标
- ❖ 生活在不安全、不健康或者危险的房子中的儿童比例——房屋和庇护所不足造成健康危害的一个指标
- ❖ 居住在至少有1名成人吸烟的屋子里的儿童比例——烟草环境健康危害的一个指标

一个指标能用来做什么？

- ❖ 监测环境变化和对儿童健康造成的特异影响（比如，趋势）
- ❖ 将环境情况和健康状况联系起来
- ❖ 比较地域状况或人群状况
- ❖ 使我们意识到问题地区
- ❖ 设置优先考虑的问题
- ❖ 高效配置资源
- ❖ 监测目标环境与健康干预效果
- ❖ 确定信息差异
- ❖ 提供讨论机会

Children's Environmental Health Indicators

Indoor Smoke: Breaking Down Respiratory Defences



背景

- ❖ 全球启用儿童环境健康指标（CEHI）
- ❖ 使用指标监测儿童环境健康状况

儿童环境健康指标的战略目标

- ❖ 促进儿童环境健康领域的合作
- ❖ 发展和促进使用儿童环境健康指标
- ❖ 提升政策制定者获得的信息质量，可以使他们通过更好地决策来改善环境状况和儿童健康

卫生保健提供者的作用

- ❖ 识别儿童健康环境危险因素
- ❖ 理解环境怎样影响儿童健康
- ❖ 获得暴露史
- ❖ 为儿童环境健康知识领域做出贡献



CHILDREN'S ENVIRONMENTAL INFORMATION- "GREEN PAGE" (Draft May 04)

Patient's name:		Address:	Date:	Case record (number):
Sex:	Date of birth:			Professional recording data (name & position):
With whom does the child live?		Living environment: - Rural - Urban - Peri-Urban	Other data:	
Is he/she working?				
BUILDING: - Home - School or child-care - Recreation place - Community				
GEOGRAPHICAL AREA				
FOOD				
AIR QUALITY				
WATER QUALITY				
SOIL TYPE AND QUALITY				
EXCRETA DISPOSAL				
SOLID WASTE DISPOSAL				
NOISE				
CHEMICALS				
TRAFFIC				

Does the mother/care giver express concerns about the environment? Which ones? Why?

Are there any well-known environmental risk factors in the area? Which ones?

Mother's and father's occupation

Is there exposure to venomous/poisonous animals?

Are there pet animals at home and in the surroundings? Which ones?

Are there vectors of disease? Which ones?

Is there exposure to extreme temperatures? Describe

Has the child suffered traffic-related injuries? Describe

Has the child suffered fire-related injuries or other? Describe

Has the child been exposed to chemical incidents? Describe

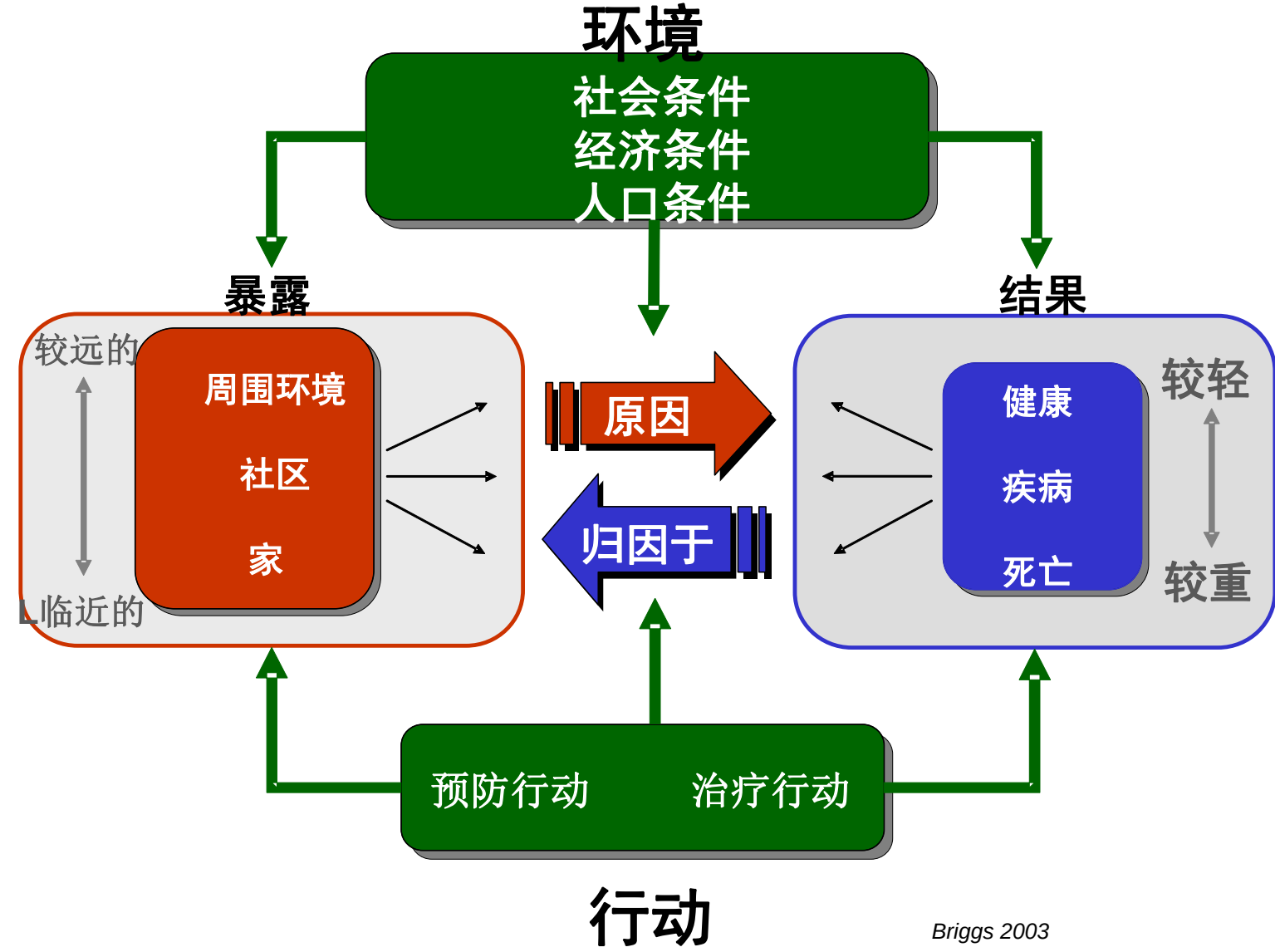
Has the child had poisoning due to chemicals and/or food poisoning? Describe

Observation (other relevant information)

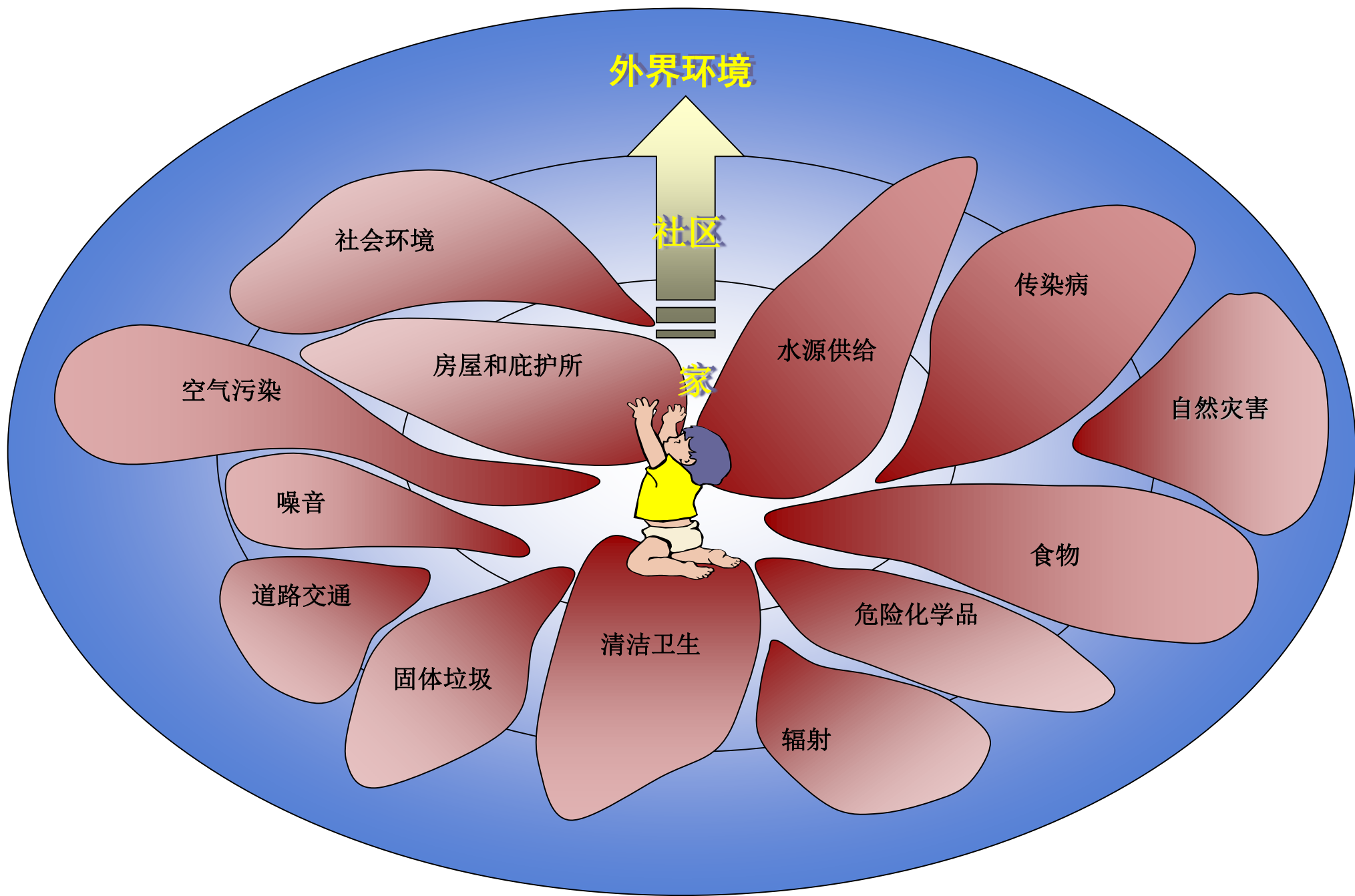
联系暴露和健康

	Natural hazards	Vector-borne diseases	Social environment	Road traffic	Noise	Radiation	Hazardous chemicals	Air pollution	Solid waste	Sanitation and hygiene	Food	Water supply	Housing and shelter
All-cause and infant mortality													
Nutritional diseases													
Diarrhoeal diseases													
Other infectious parasitic diseases													
Respiratory diseases													
Cancers and tumours													
Circulatory diseases													
Birth defects and perinatal conditions													
Eye and ear diseases													
Accidents and injuries													
Poisonings													
Mental/behavioural disorders													

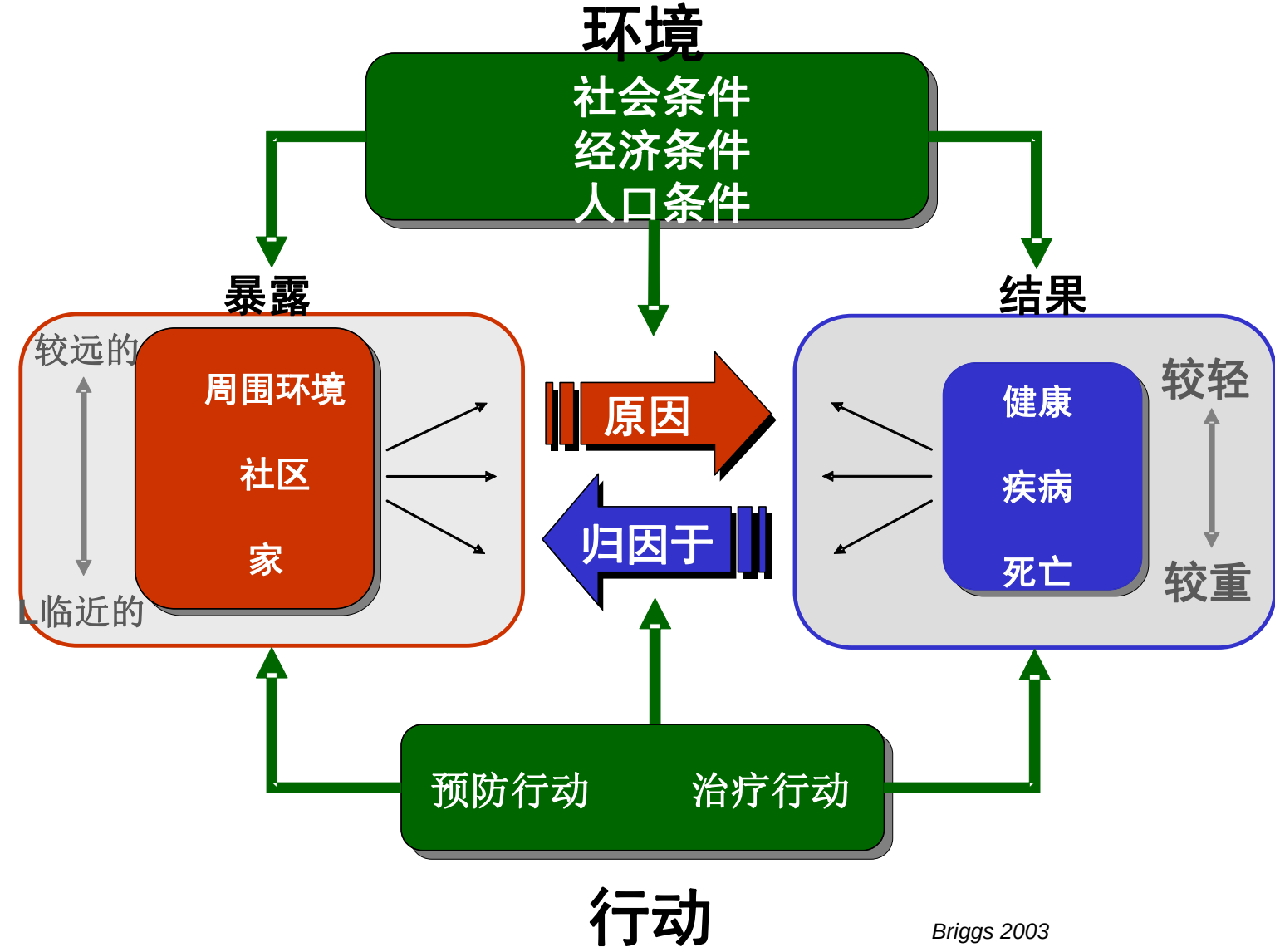
多暴露因素多影响结果模型 (MEME)



Briggs 2003



多暴露因素多影响结果模型 (MEME)



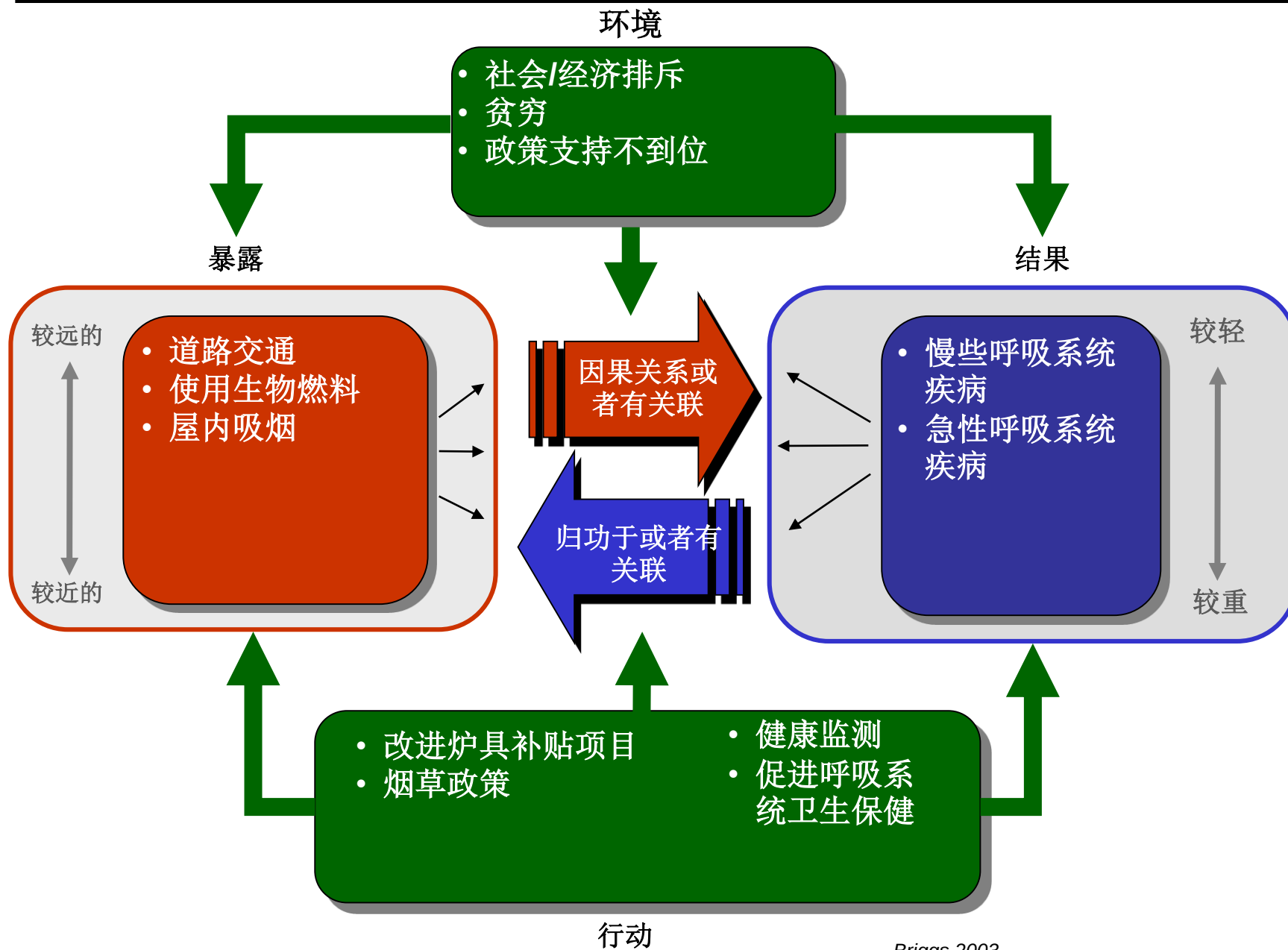
Briggs 2003

使用MEME 模型

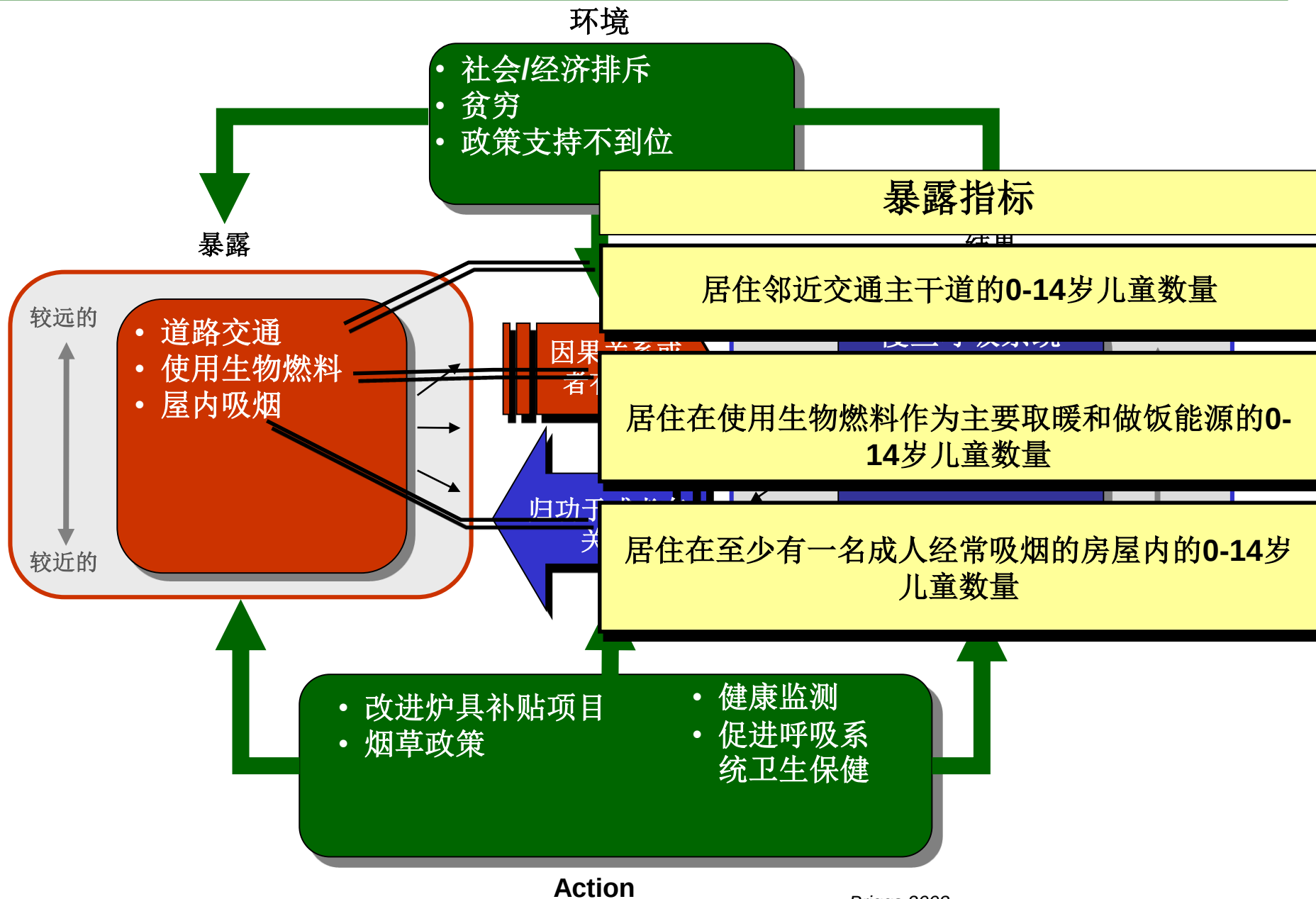
举例：儿童呼吸系统疾病

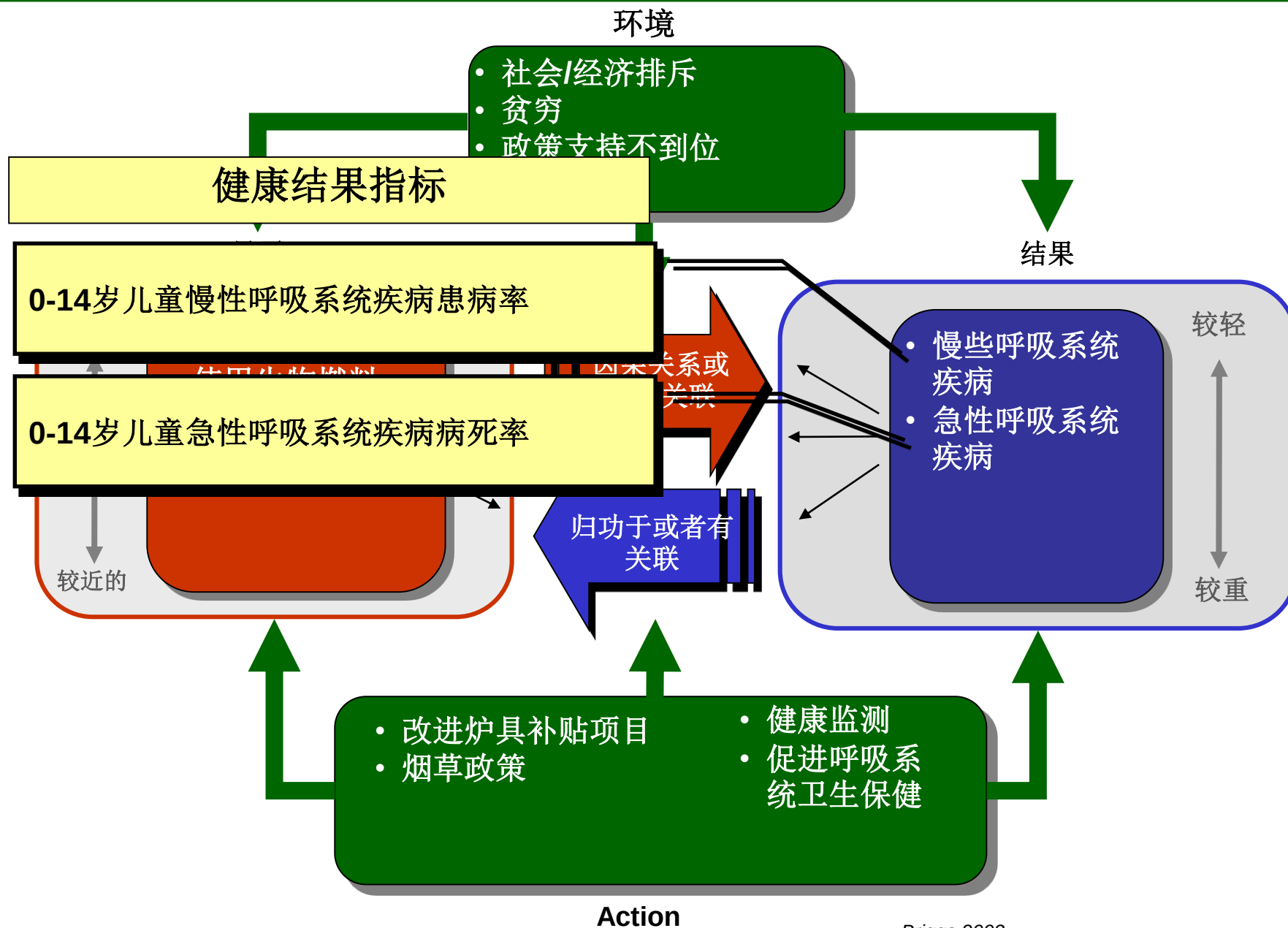


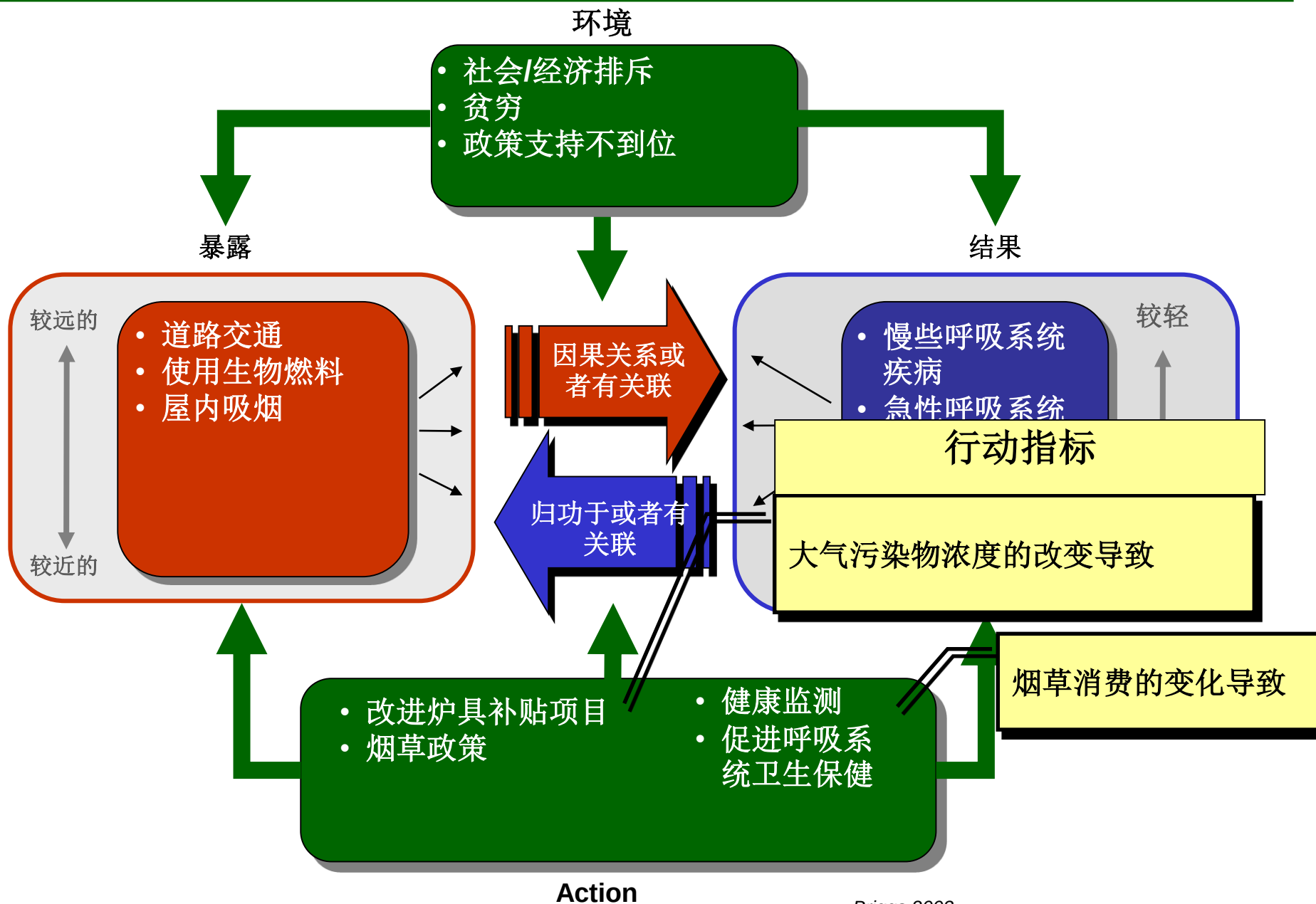
儿童呼吸系统疾病MEME模型











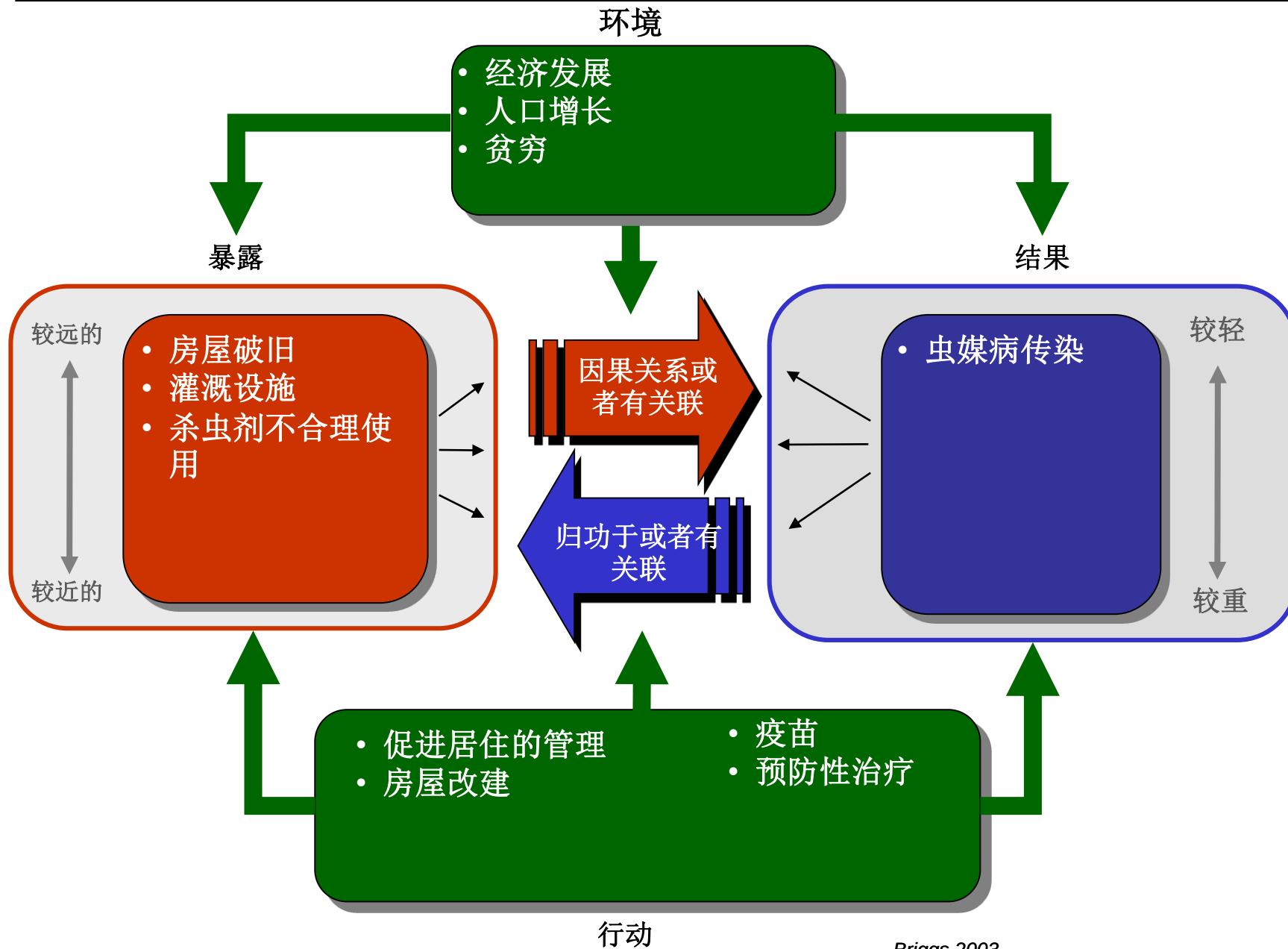
使用MEME模型

举例：儿童虫媒病



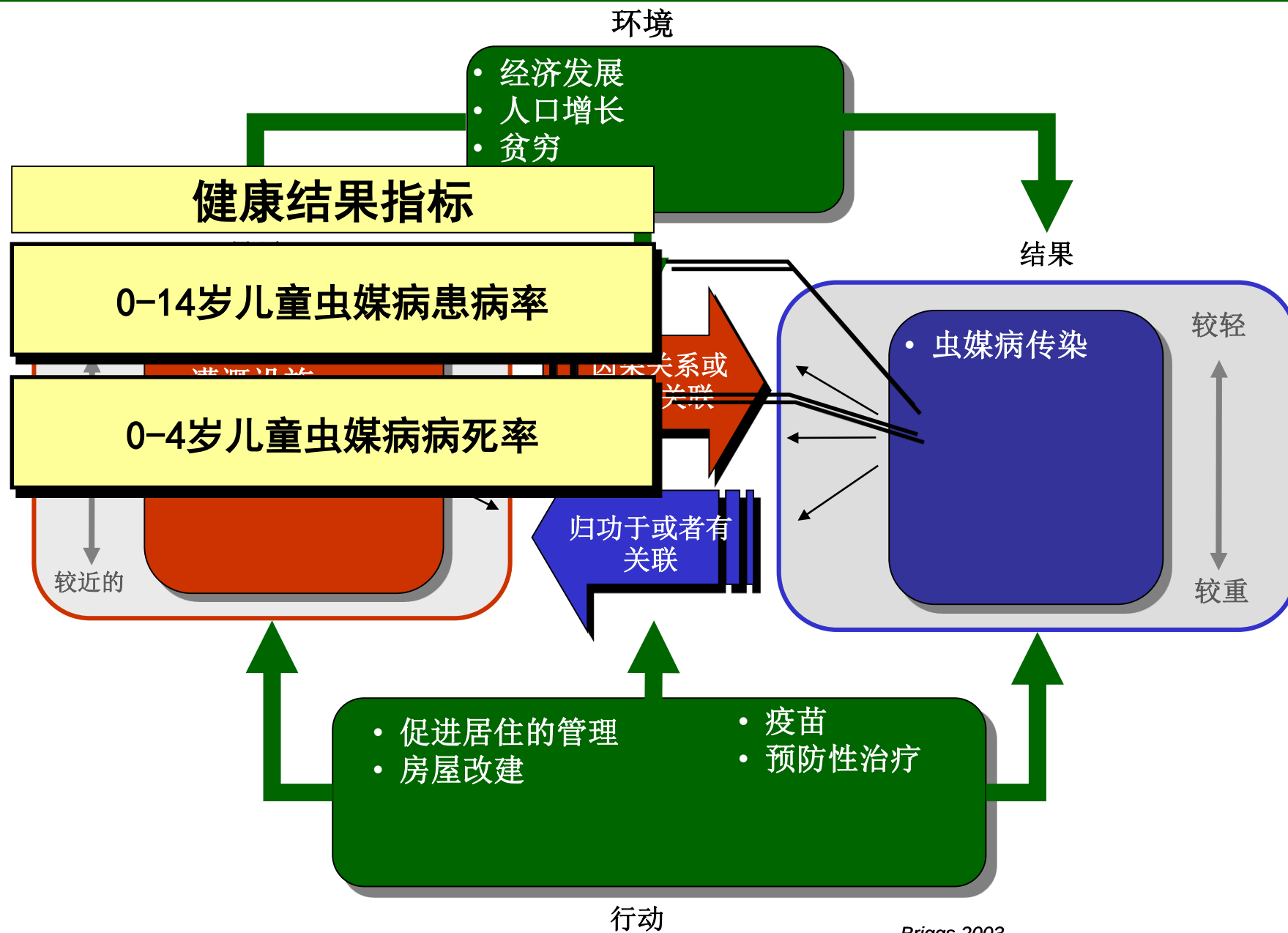
WHO

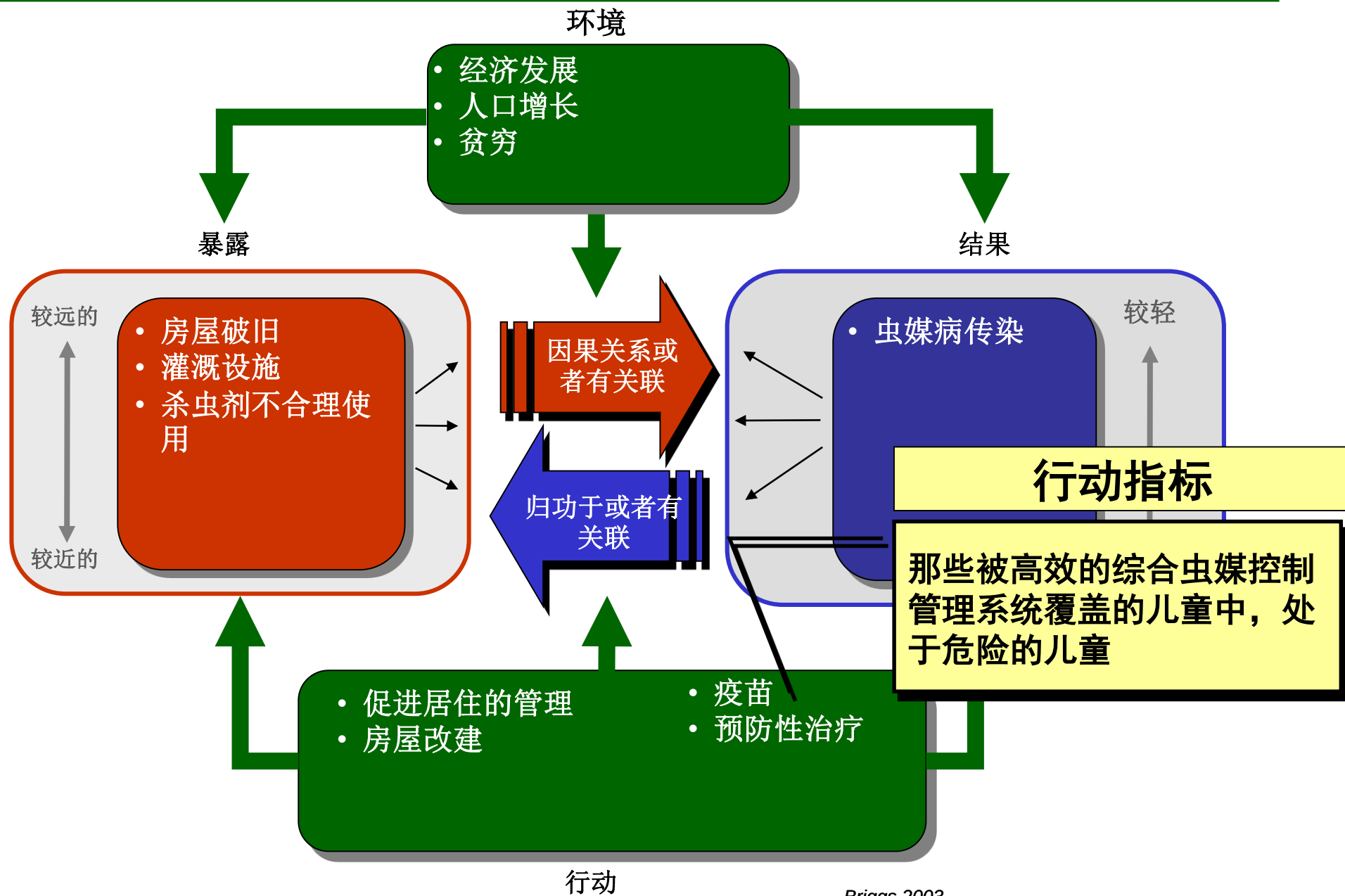
儿童虫媒病MEME 模型











这些信息来自哪里？

- ❖ 国际调查项目
- ❖ 国家普查数据
- ❖ 卫生监测
- ❖ 卫生保健数据
- ❖ 科学研究
- ❖ 其它

报告指标数据

- ❖ 通过美国统计部门报告(千年发展目标指标)
- ❖ 通过世界卫生组织和其它国际组织报告(比如, UNICEF, UNDP,...)
- ❖ 通过人道主义组织和非政府组织报告(NGOs)
- ❖ 同过国家政府或环境部门报告



WHO

政策制定者使用

指标...

- ❖ 重点问题地区
- ❖ 筛选优先考虑的危险因素和问题
- ❖ 高效配置资源
- ❖ 有助于决策
- ❖ 评估干预效果
- ❖ 提供讨论的机会

卫生保健提供者使用

指标...

- ❖ 关联环境条件和健康状况
- ❖ 使干预合理化
- ❖ 筛选对患者优先设置的健康教育投入
- ❖ 有助于政策制定
- ❖ 评估干预效果
- ❖ 识别信息差距
- ❖ 提供讨论的机会

Children's Environmental Health Indicators

新数据：相对于指标(和卫生保健提供者)

- ❖ 对调查、国家和本地的系统进行修改
- ❖ 将指标整合到现有的儿童健康报告系统中
- ❖ 将环境健康培训加入到医学和护理教学中
- ❖ 环境暴露史(“绿页”)

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WATER QUALITY			
SOIL TYPE AND QUALITY			
EXCRETA DISPOSAL			
SOLID WASTE DISPOSAL			
NOISE			
CHEMICALS			
TRAFFIC			
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Are there any well-known environmental risk factors in the area? Which ones?			
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Are there vectors of disease? Which ones?			
Is there exposure to extreme temperatures? Describe			
Has the child suffered traffic-related injuries? Describe			
Has the child suffered fire-related injuries or other? Describe			
Has the child been exposed to chemical incidents? Describe			
Has the child had poisoning due to chemicals and/or food poisoning? Describe			
Observation (other relevant information)			

Children's Environmental Health Indicators

绿页

- ❖ 描述已知或者可能的环境暴露
- ❖ 提升卫生保健专家的能力
- ❖ 作为提醒当局需要改正的环境问题的基础
- ❖ 提供关于环境可能出现的有益影响的信息



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Observation (other relevant information)

Children's Environmental Health Indicators

绿页

- ❖ 记录儿童环境条件的工具
- ❖ 帮助卫生保健提供者评估潜在的疾病原因
- ❖ 发现最脆弱的患者和群体
- ❖ 记录暴露史
- ❖ 获取新的数据以便于在环境健康指标中使用



CHILDREN'S ENVIRONMENTAL INFORMATION- "GREEN PAGE" (Draft May 04)

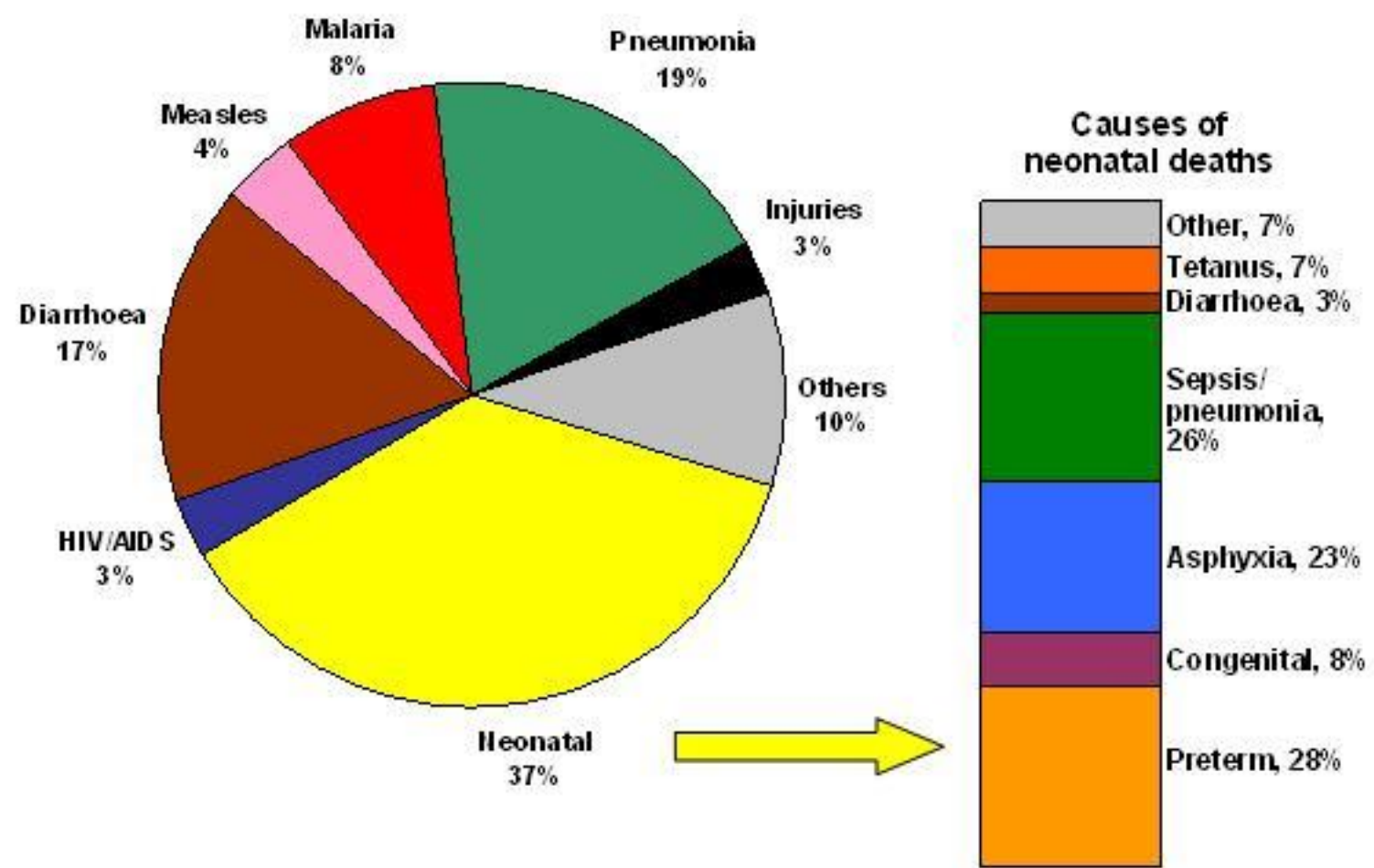
Patient's name:		Address:	Date:	Case record (number):
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Is he/she working?		- Rural - Urban - Peri-Urban		
BUILDING: - Home - School or child-care - Recreation place - Community				
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SOIL TYPE AND QUALITY				
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Observation (other relevant information)

内容大纲

- I. 介绍和背景
- II. 儿童的环境健康指标
- III. 行动指标举例

5岁以下儿童主要死亡因素，2000-2003



WHO儿童环境健康指标
已经收录了46个指标



Children's Environmental Health Indicators

1. 围产期疾病

环境	暴露	结果	行动
❖ 0-14岁生活在贫困中的儿童	❖ 饥荒 ❖ 生活在非正式的住所 ❖ 育龄女性营养不良 ❖ 育龄女性在不正规的地方工作 ❖ 母亲生活在不安全或者危险的房子里	❖ 围产期死亡率 ❖ 新生儿宫内生长迟缓 ❖ 先天畸形需要1岁以内外科矫正	• 育龄妇女生活在一小时内获得专业妇科和围产保健的地方 ❖ 归功于缺乏基础设施房屋数量的变化 ❖ 0-4岁儿童生长迟缓率

2. 呼吸系统疾病

环境	暴露	结果	行动
❖ 0-14岁生活在贫困中的儿童	❖ 生活在不安全、不健康、充满危险的住所里的0-14岁儿童 ❖ 过度拥挤 ❖ 生活在邻近交通主干道的地方0-14岁儿童 ❖ 0-4岁儿童平均每年大气微粒污染暴露量 ❖ 生活在使用生物燃料或者煤炭作为主要取暖和烹饪能源的房屋中的0-4岁儿童 ❖ 生活在至少有1名成人经常在室内吸烟的房屋中的0-14岁儿童	❖ 新生儿宫内生长迟缓 ❖ 0-4岁儿童急性呼吸系统疾病病死率 ❖ 0-4岁儿童急性呼吸系统疾病发病率 ❖ 0-14岁儿童慢性呼吸系统疾病患病率	❖ 改变烟草消费 ❖ 改变大气污染浓度 ❖ 改变依靠生物燃料或煤炭作为主要取暖和烹饪能源的房屋数量

3. 腹泻疾病

环境	暴露	结果	行动
❖ 0-14岁生活在贫困中的儿童	❖ 供给的饮用水不符合国家水质微生物标准 ❖ 人们生活在不正规的住所 ❖ 生活受到灾难影响的0-14岁儿童 ❖ 生活在没有水供给、卫生、清洁等基础设施的房屋内的0-14岁的儿童	❖ 0-4岁儿童腹泻死亡率 ❖ 0-4岁儿童腹泻发病率 ❖ 0-4岁儿童腹泻爆发复发率	❖ 改变缺乏基础设施的房屋数量 ❖ 改变供应不符合食物卫生标准的食品店 ❖ 能够在24小时之内获得补液治疗的0-4岁儿童

4. 虫媒病

环境	暴露	结果	行动
❖ 虫媒病流行地区的人口增长率	❖ 虫媒栖息地总面积 ❖ 生活在为虫媒病传播提供适合条件的房屋内的0-14岁儿童 ❖ 虫媒病流行地区的0-14岁儿童	❖ 0-4岁儿童虫媒病病死率 ❖ 0-14岁儿童中虫媒病患病率	❖ 使那些处在危险汇总的0-14岁儿童受到高效、综合的虫媒控制和管理系统的保护

5. 身体伤害

环境	暴露	结果	行动
❖ 0-14岁生活在贫困中的儿童	❖ 人们生活在不正规的房屋内 ❖ 生活在受到灾害威胁地区的0-14岁儿童 ❖ 生活在邻近交通主干道的地方的0-14岁儿童 ❖ 0-14岁的儿童参加固定工作 ❖ 生活在不安全、不健康、充满危险的住所里的0-14岁儿童 ❖ 生活在缺乏管道水供给评估的房屋内的0-14岁儿童	❖ 身体伤害导致的0-14岁儿童死亡率 ❖ 受到需要治疗的 身体伤害的0-14岁儿童发病率	❖ 0-14岁儿童生活在拥有特别突发情况医疗服务的地方 ❖ 改变0-14岁儿童身体伤害

从列表中选择

- ❖ MEME 模型突出重点问题
- ❖ 区域优先卫生问题
- ❖ 区域标准

科学标准	通用和实用标准
❖ 可信的 ❖ 对变化反应敏感 ❖ 空间和时间的一致性和可比性 ❖ 坚定的 ❖ 代表所关注的情况 ❖ 准确 ❖ 可衡量的	❖ 与问题相关 ❖ 可执行的 ❖ 使用者可以理解 ❖ 及时 ❖ 特别针对关注的问题 ❖ 可测量的 ❖ 经济

内容大纲

- I. 介绍和背景
- II. 儿童环境健康指标
- III. 正在使用中的指标举例

例1

低出生体重

Children's Environmental Health Indicators

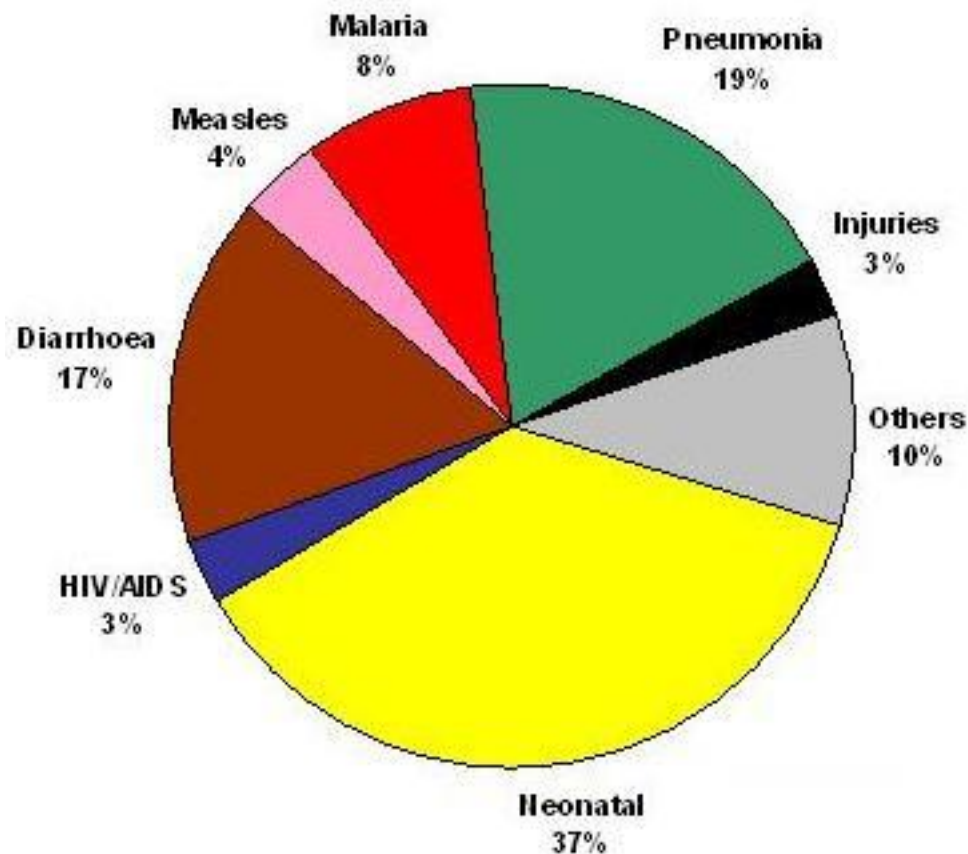


**实际应用指标：
低出生体重**

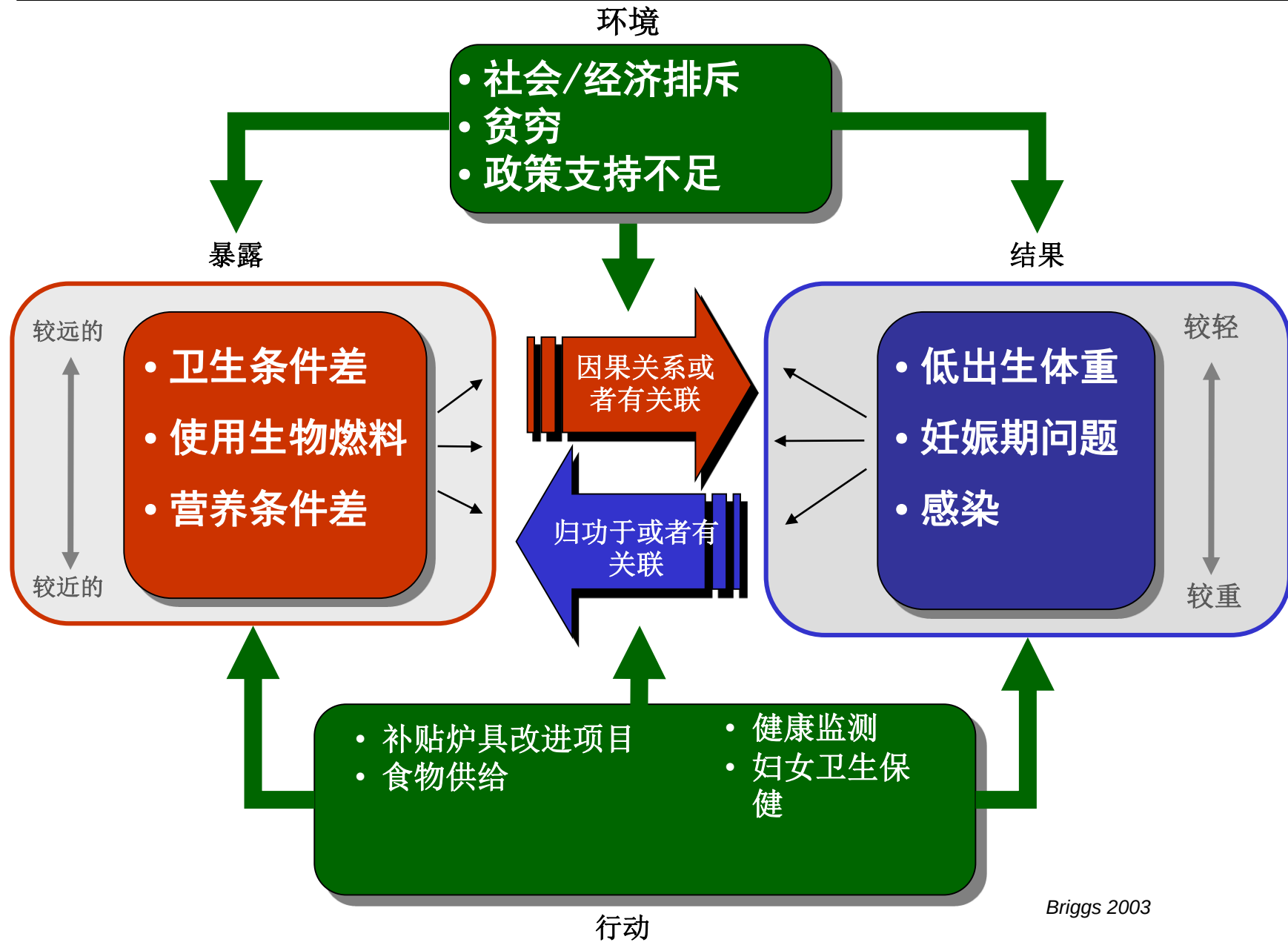
全球疾病负担

5种主要疾病：

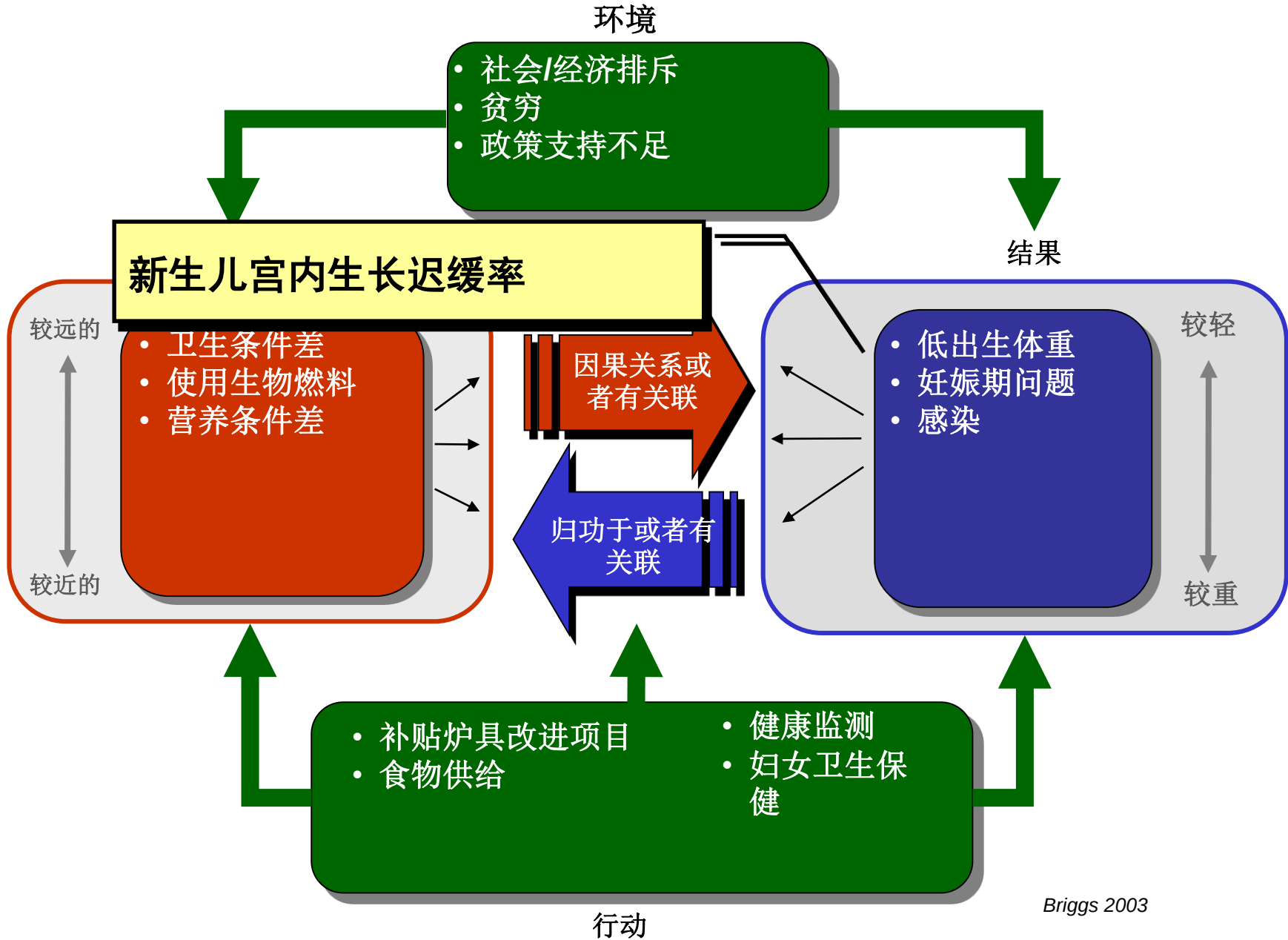
1. 围产期疾病
2. 呼吸系统疾病
3. 腹泻
4. 虫媒病
5. 身体伤害



低出生体重MEME 模型

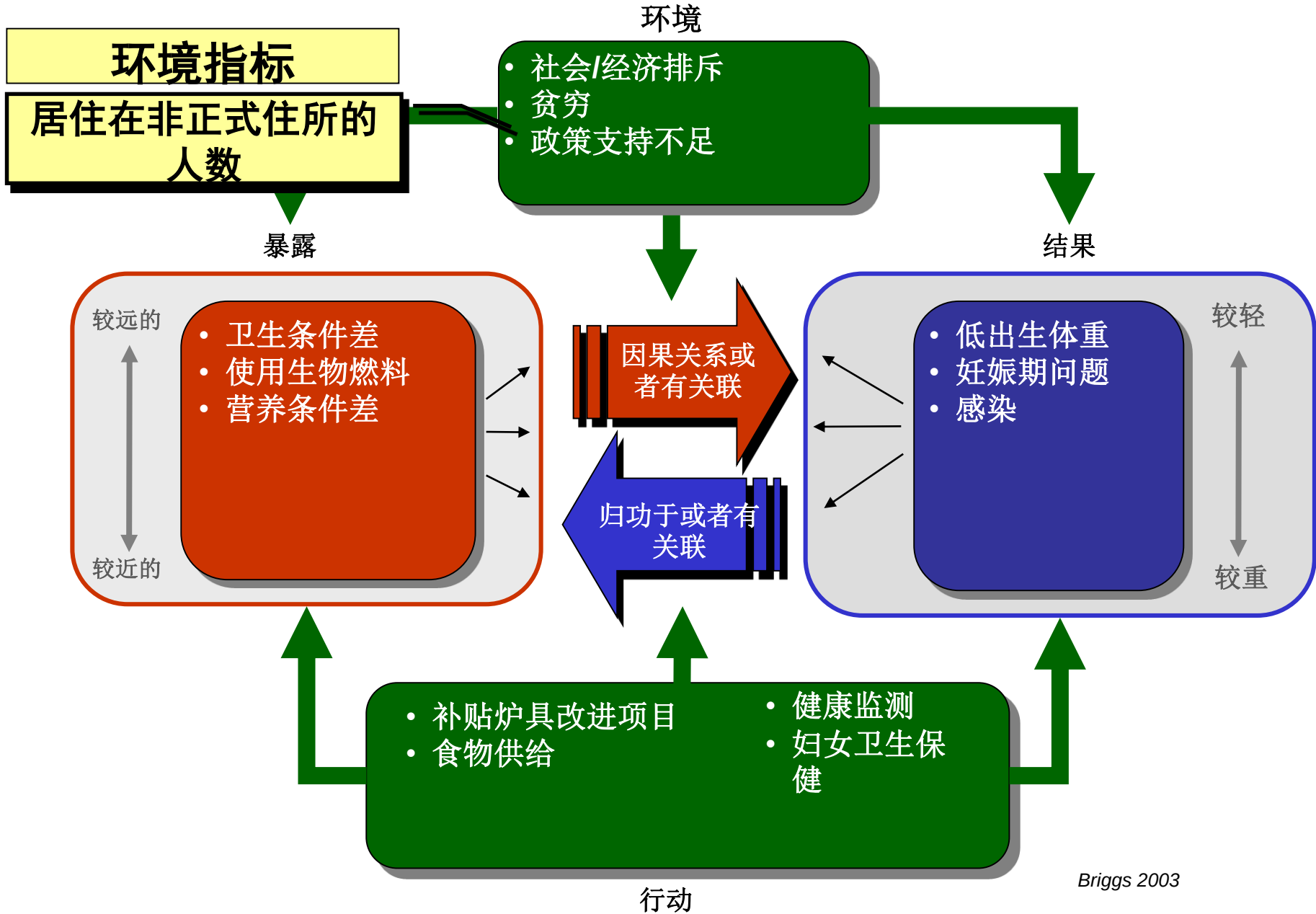


低出生体重MEME 模型



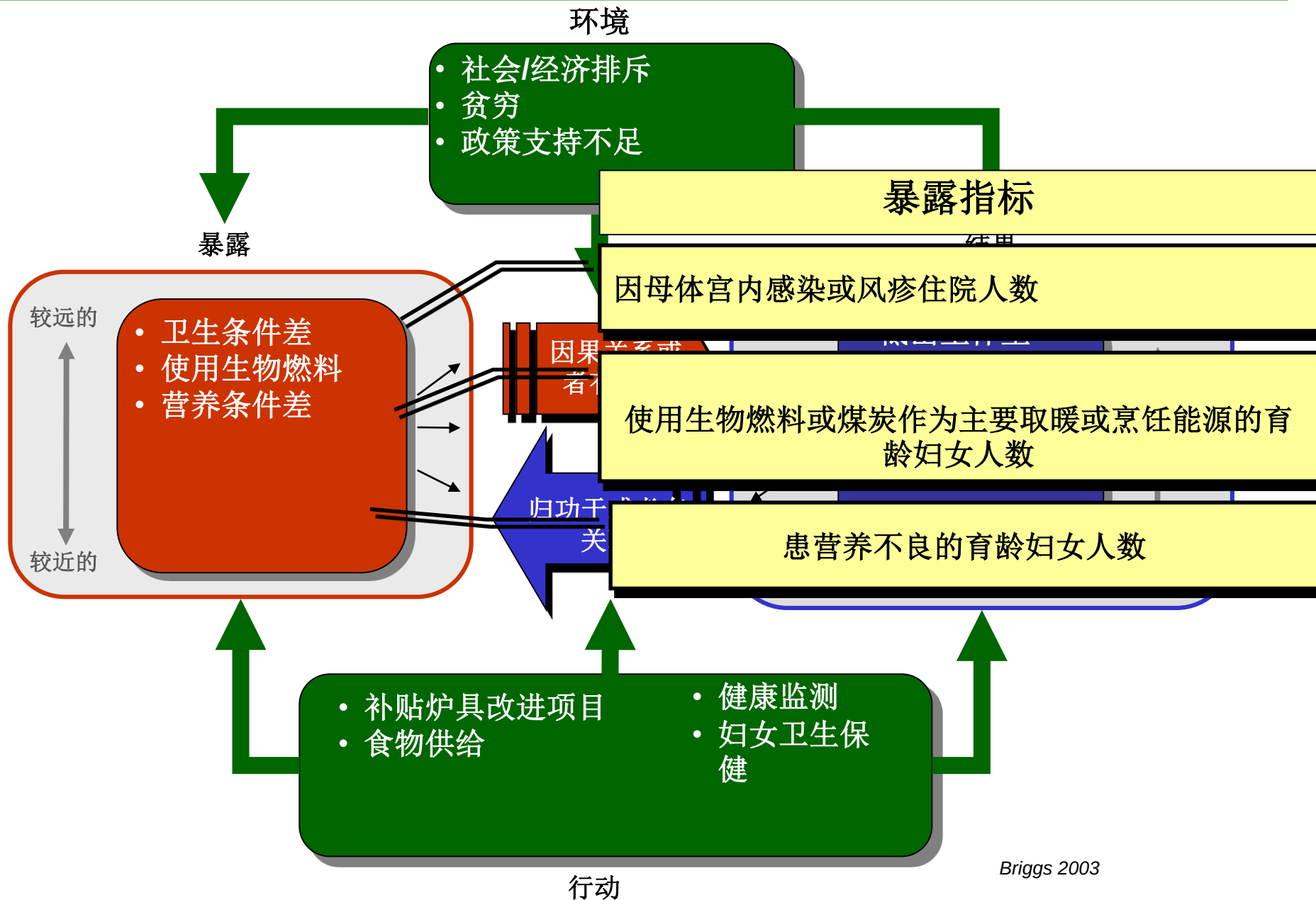
Briggs 2003

低出生体重MEME 模型

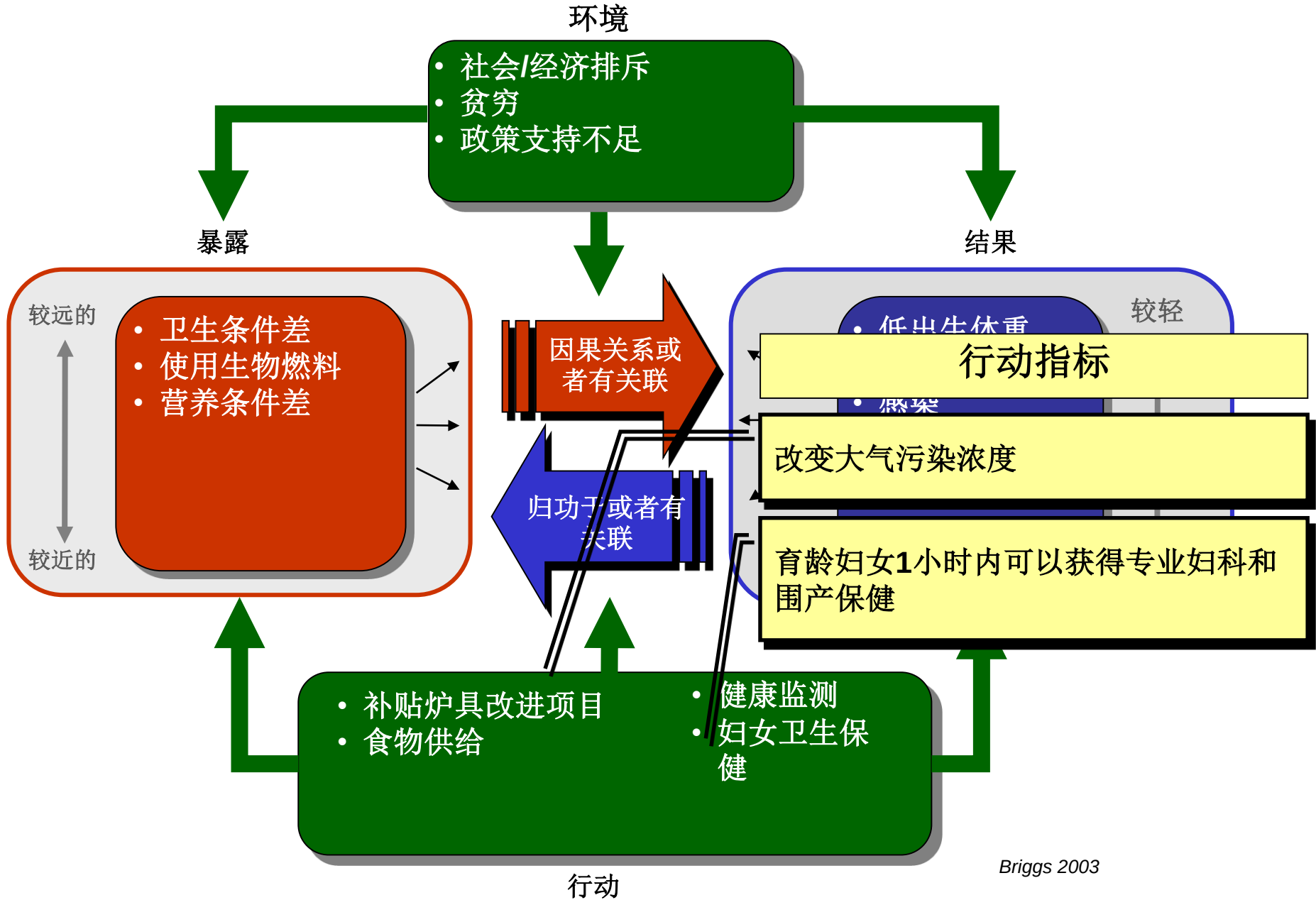


Briggs 2003

低出生体重MEME 模型



低出生体重MEME 模型



Briggs 2003

Children's Environmental Health Indicators

指标	政策使用	实际应用
结果: ❖ 围产期死亡率 ❖ 宫内生长迟缓	❖ 明白问题等级和缓急程度 ❖ 明白出现的问题怎么影响不同的人群 ❖ 确定优先考虑的问题	❖ 为最主要的健康问题提供倡导信息 ❖ 提供资源规划信息
环境: ❖ 生活在贫困中的0-14岁儿童	❖ 确立需要最多援助的家庭 ❖ 确立处于危险中的群体 ❖ 确立随着时间的变化趋势 ❖ 高效配置资源	❖ 确定有低出生体重危险的母亲，并提供预防措施 ❖ 更快地确定原因

Children's Environmental Health Indicators

指标	政策使用	实际应用
暴露： ❖ 饥荒 ❖ 居住在非正式房屋内 ❖ 育龄妇女营养不良 ❖ 育龄妇女在不正规的地方工作 ❖ 生育母亲居住在不安全或者充满危险的房子里	❖ 确定最有效的预防低出生体重的干预目标 ❖ 确定暴露最大的人群 ❖ 确定依时间的变化趋势 ❖ 评估在干预结果能够被直接测量出来之前，干预是否起到了作用	❖ 确定导致低出生体重的最可能的根本原因 ❖ 确定预防低出生体重的健康教育和行动要点 ❖ 提供有关最重要健康问题的倡导信息

Children's Environmental Health Indicators

指标	政策使用	实际应用
行动: ❖ 育龄妇女1小时内可以获得专业妇科和围产保健 ❖ 改变缺乏基础设施的房屋数量 ❖ 0-4岁儿童生长迟缓率	❖ 评估干预措施是否起到了作用	❖ 评估更好的专业健康教育和行动的环境改善作用 ❖ 提供有关最重要健康问题的倡导信息

可获得的数据

- ❖ WHO 低出生体重数据（国家）：
http://www.who.int/reproductive-health/publications/low_birthweight/index.html
- ❖ 国家或地区卫生部门信息

例 2

急性呼吸道感染

实际应用指标： 急性呼吸道感染

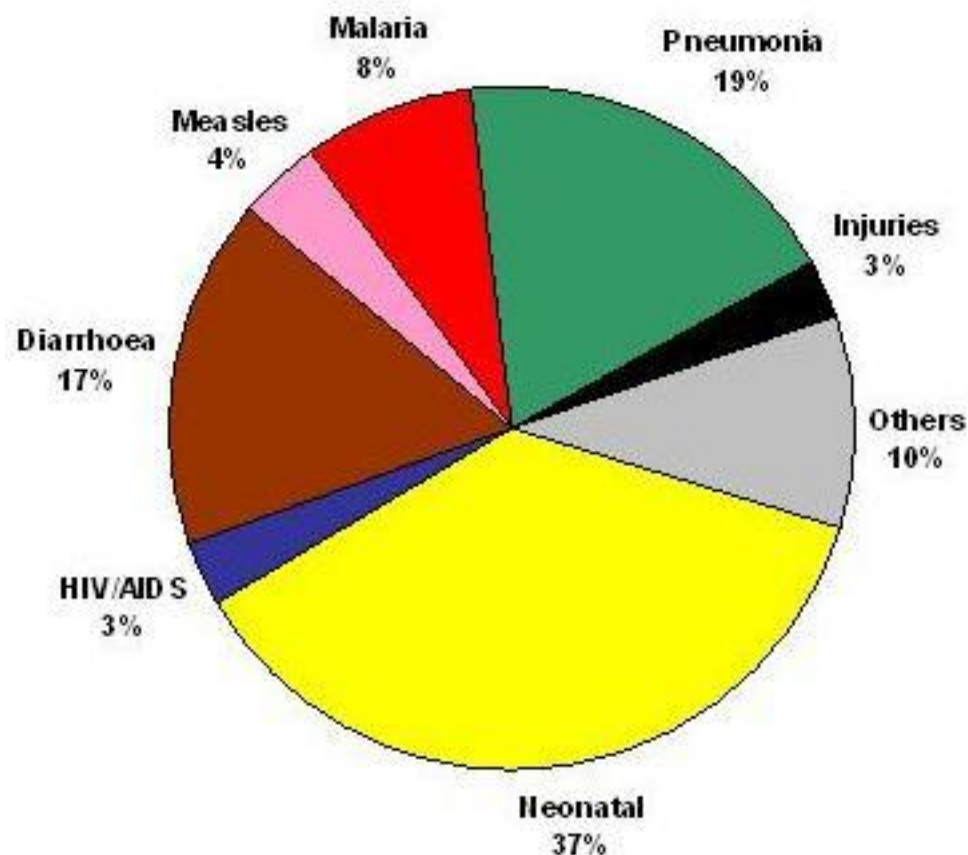


WHO

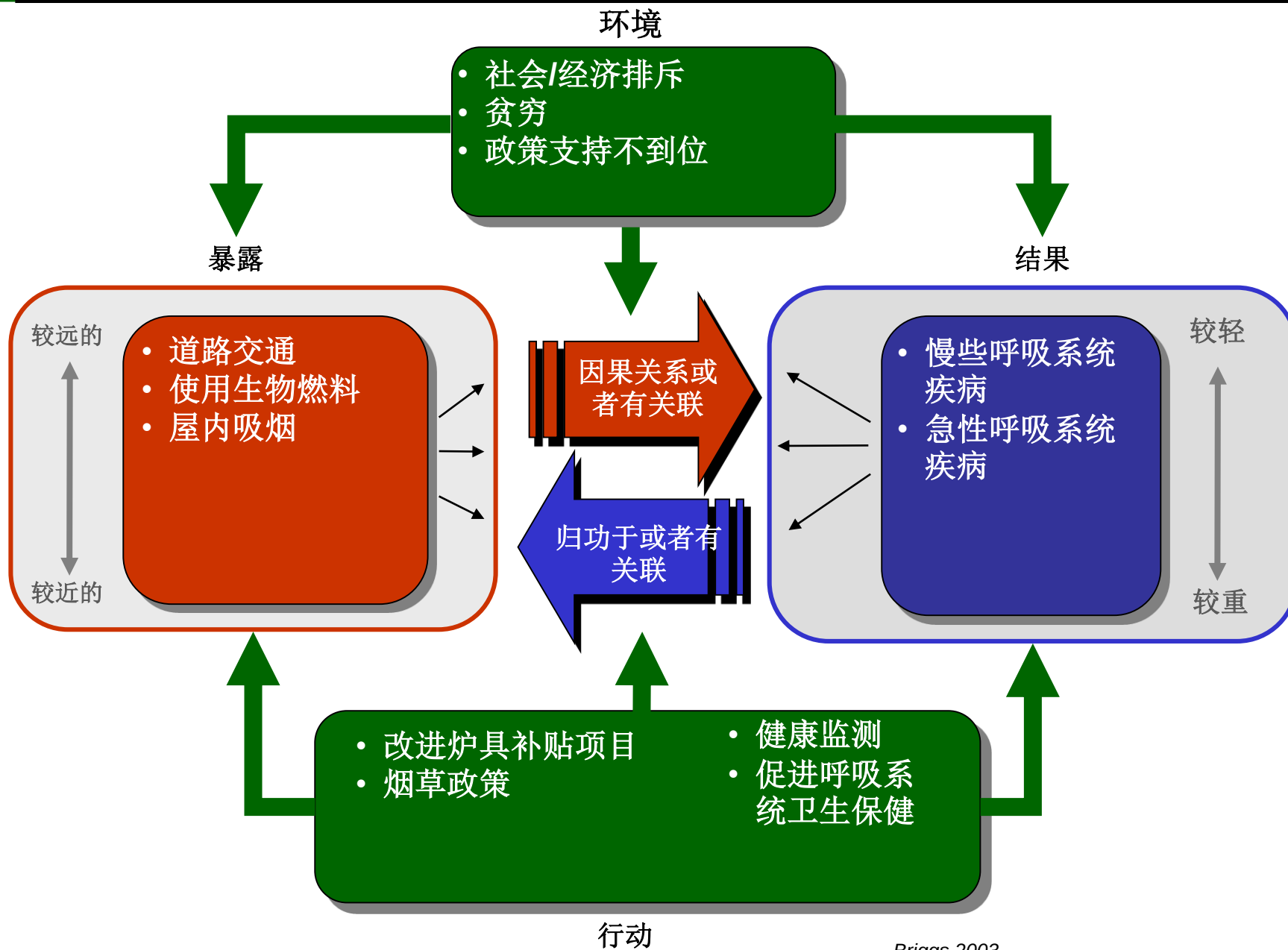
全球疾病负担

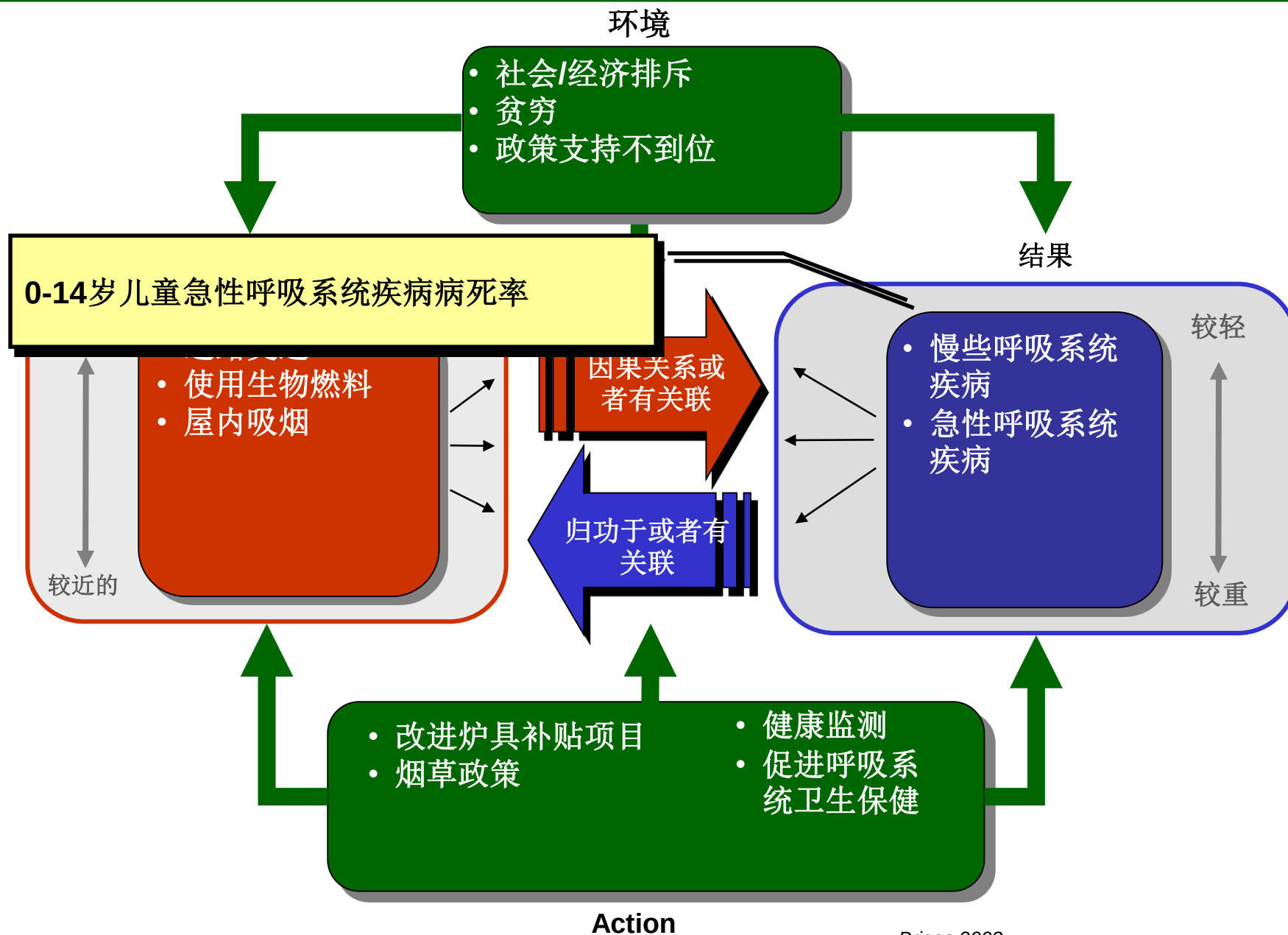
5种主要疾病：

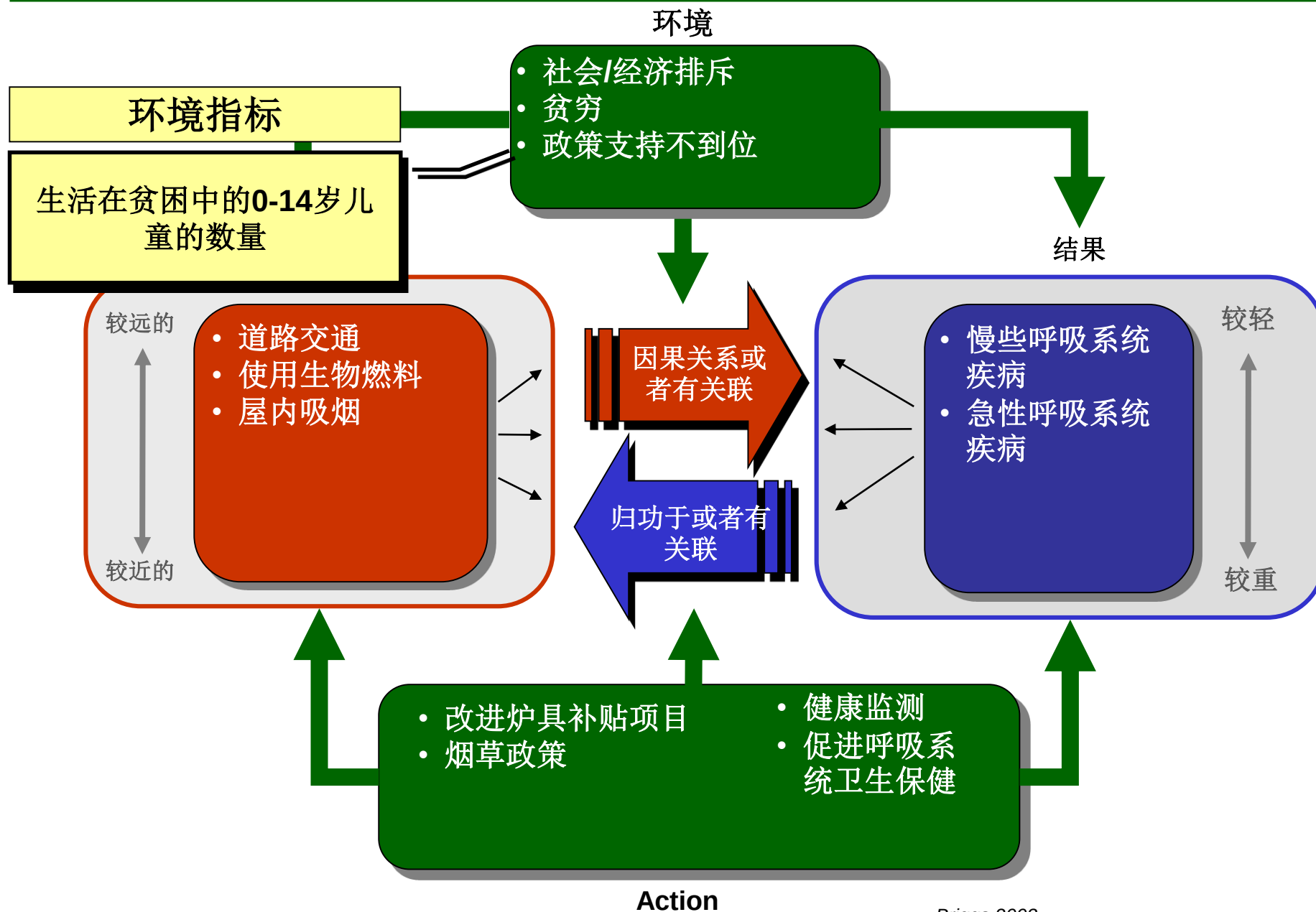
1. 围产期疾病
2. 呼吸系统疾病
3. 腹泻
4. 虫媒病
5. 身体伤害

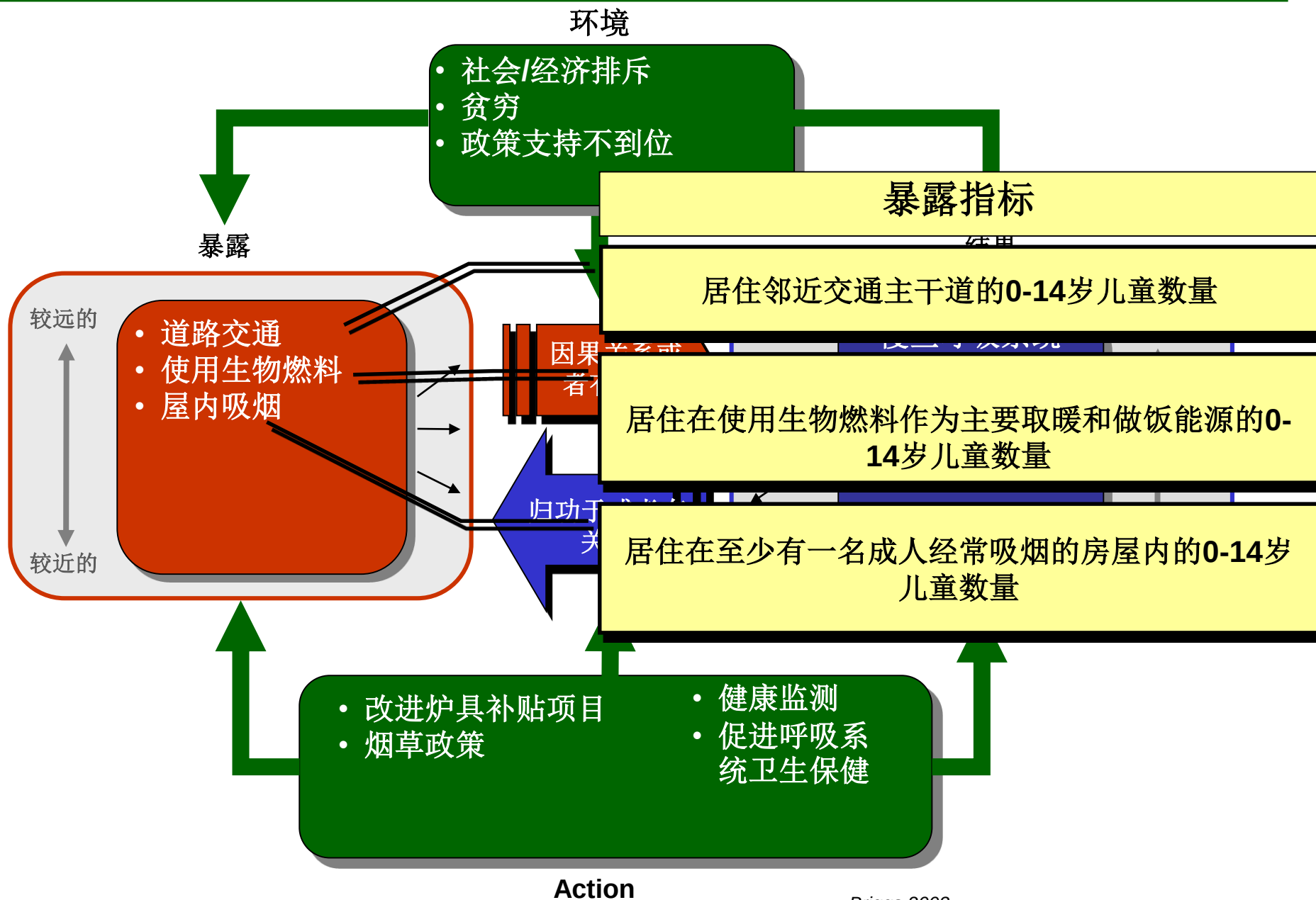


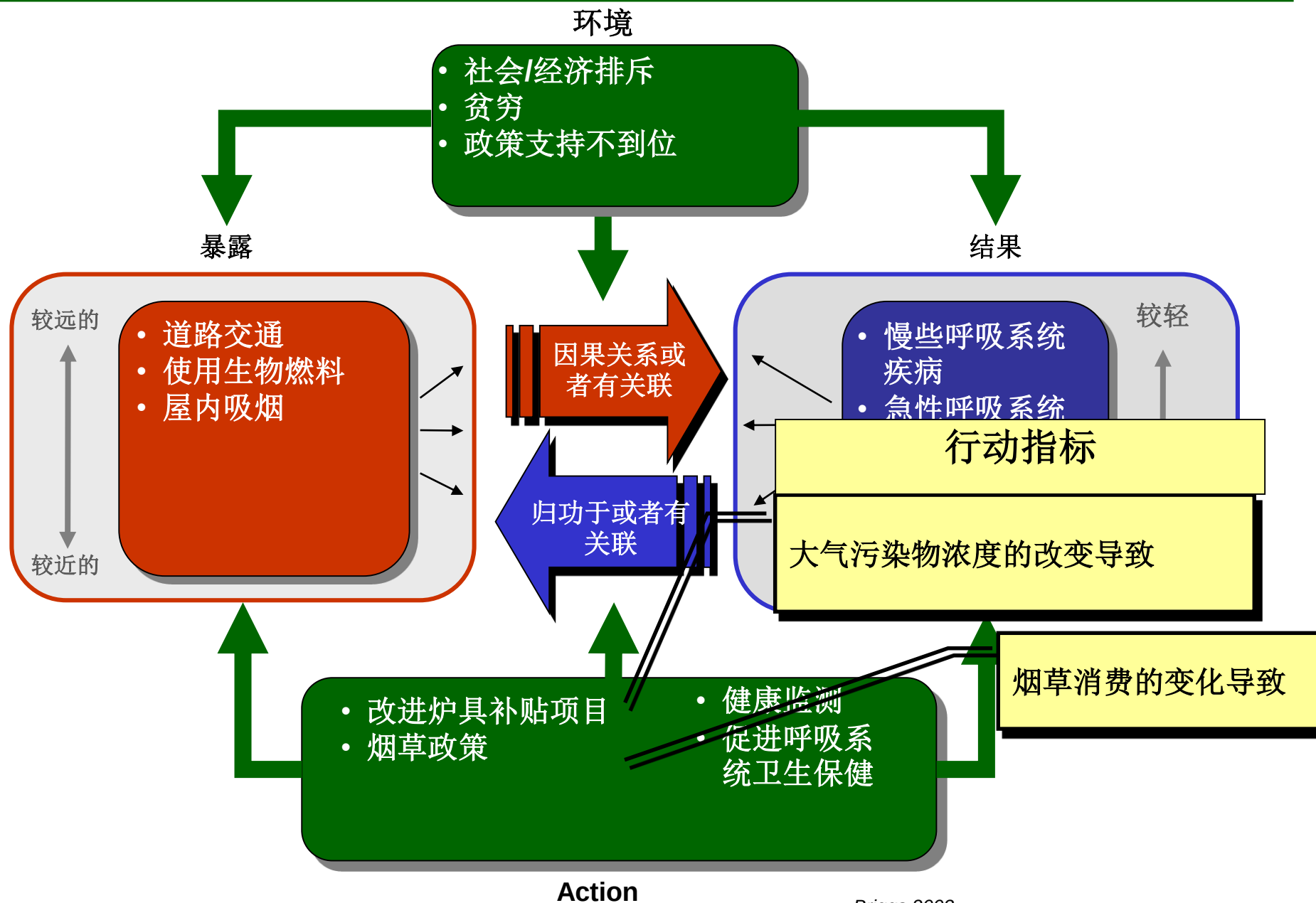
儿童呼吸系统疾病MEME模型











Children's Environmental Health Indicators

指标	政策使用	实际应用
结果： 0-14岁儿童急性呼吸系统疾病病死率.	❖ 明白问题等级和缓急程度 ❖ 明白出现的问题怎么影响不同的人群 ❖ 确定优先考虑的问题	❖ 为最主要的健康问题提供倡导信息 ❖ 提供资源规划信息
环境： 生活在贫困中的0-14岁儿童	❖ 确立需要最多援助的家庭 ❖ 确立处于危险中的群体 ❖ 确立随着时间的变化趋势 ❖ 高效配置资源	❖ 确定儿童急性呼吸道感染危险因素 ❖ 为较危险的儿童确定预防措施 ❖ 更快地确定原因

Children's Environmental Health Indicators

指标	政策使用	实际应用
暴露： ❖ 生活在邻近交通主干道的地方0-14岁儿童 ❖ 生活在使用生物燃料或者煤炭作为主要取暖和烹饪能源的房屋中的0-4岁儿童 ❖ 生活在至少有1名成人经常在室内吸烟的房屋中的0-14岁儿童	❖ 确定最有效的预防急性呼吸道感染的干预目标 ❖ 确定暴露最大的人群 ❖ 确定依时间的变化趋势 ❖ 评估在干预结果能够被直接测量出来之前，干预是否起到了作用	❖ 确定导致急性呼吸道感染的最可能的根本原因 ❖ 确定预防急性呼吸道感染的健康教育和行动要点 ❖ 提供有关最重要健康问题的倡导信息

Children's Environmental Health Indicators

指标	政策使用	实际应用
行动: ❖ 改变大气污染浓度 ❖ 改变烟草消费	❖ 评估干预措施是否起作用	❖ 评估更好的专业健康教育和行动的环境改善作用 ❖ 提供有关最重要健康问题的倡导信息

Briggs 2003

可获得的数据

- ❖ WHO 急性呼吸道感染（国家）：
<http://www.who.int/whosis/en/>
- ❖ WHO 室内空气污染导致的疾病负担：
http://www.who.int/indoorair/health_impacts/burden_national/en/index.html
- ❖ 国家或地方卫生部门信息

例 3

霍乱

实际应用指标：

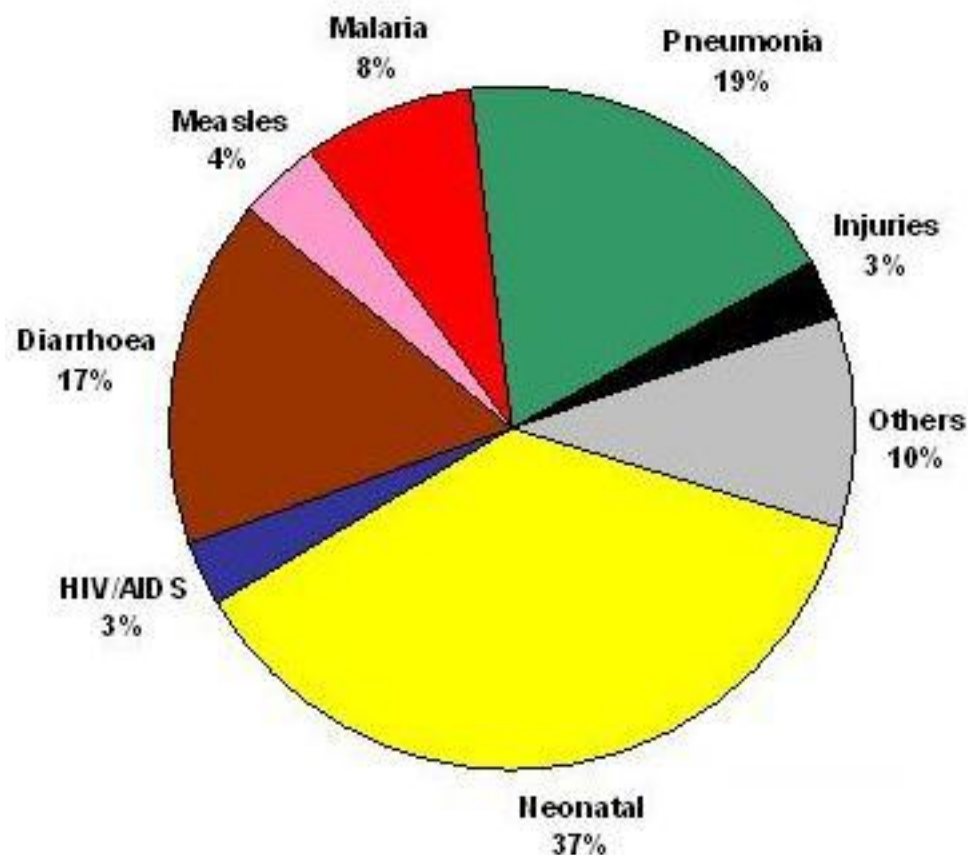
霍乱感染



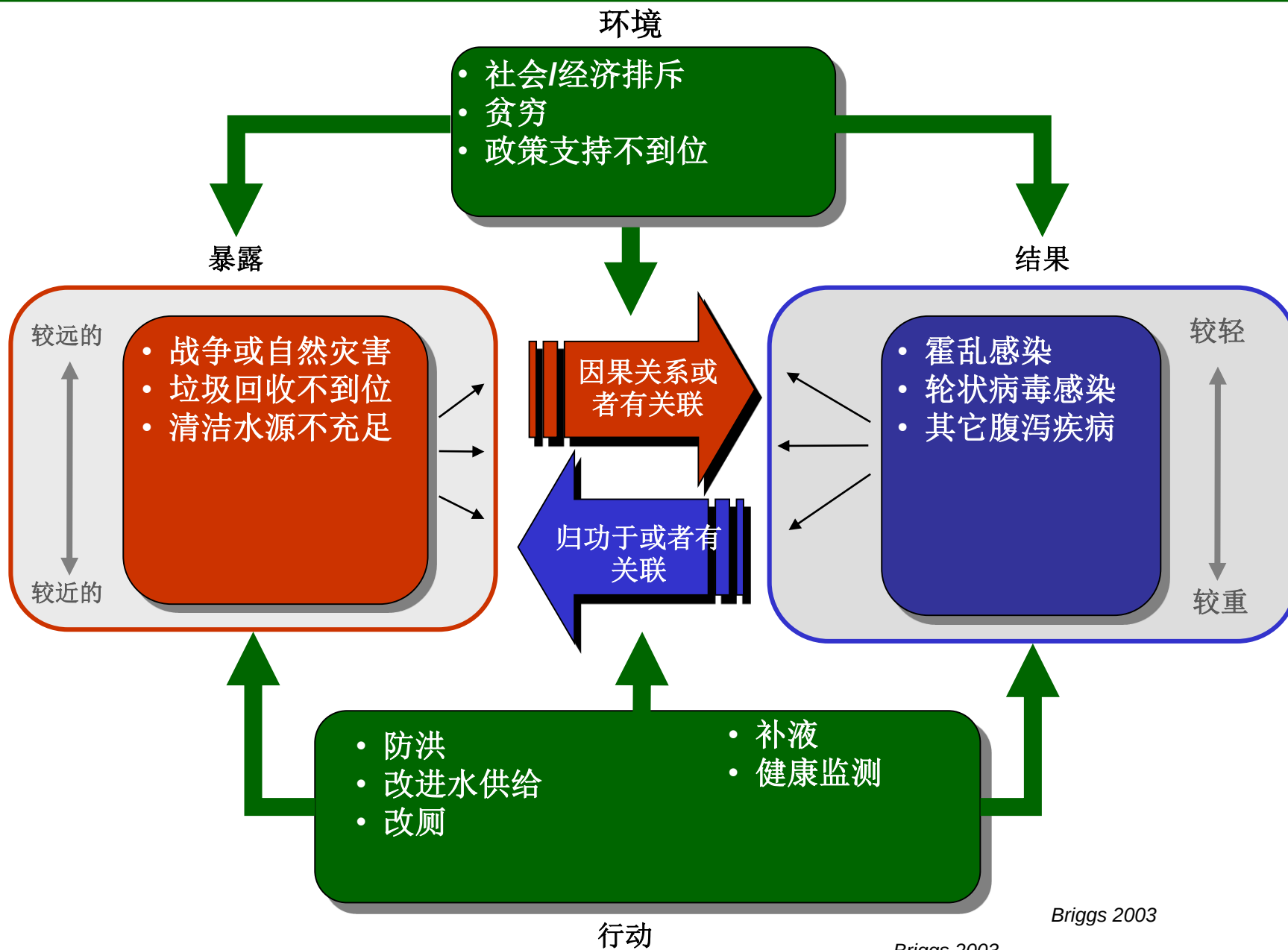
全球疾病负担

5种主要疾病:

1. 围产期疾病
2. 呼吸系统疾病
3. 腹泻
4. 虫媒病
5. 身体伤害

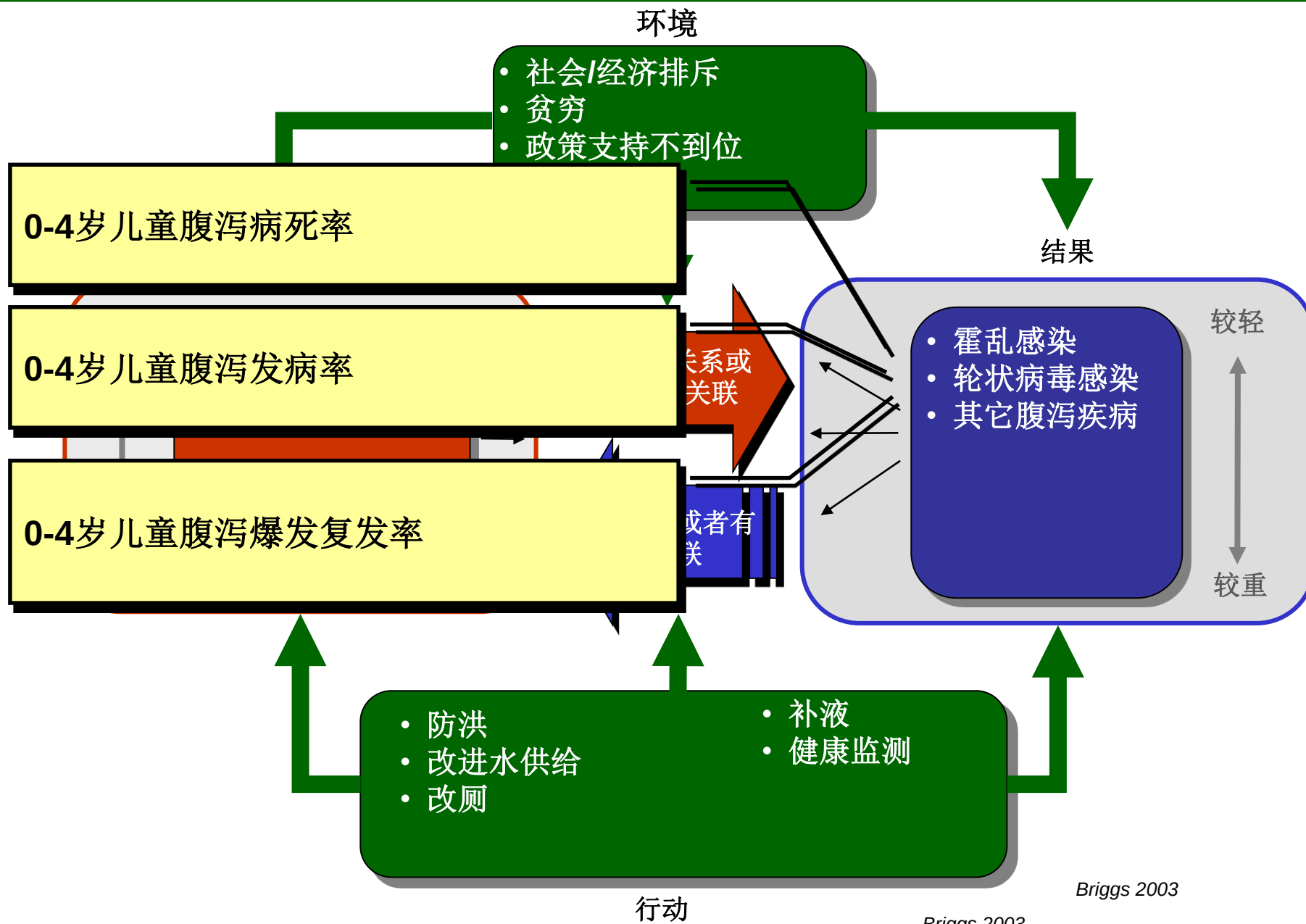


儿童霍乱感染MEME 模型

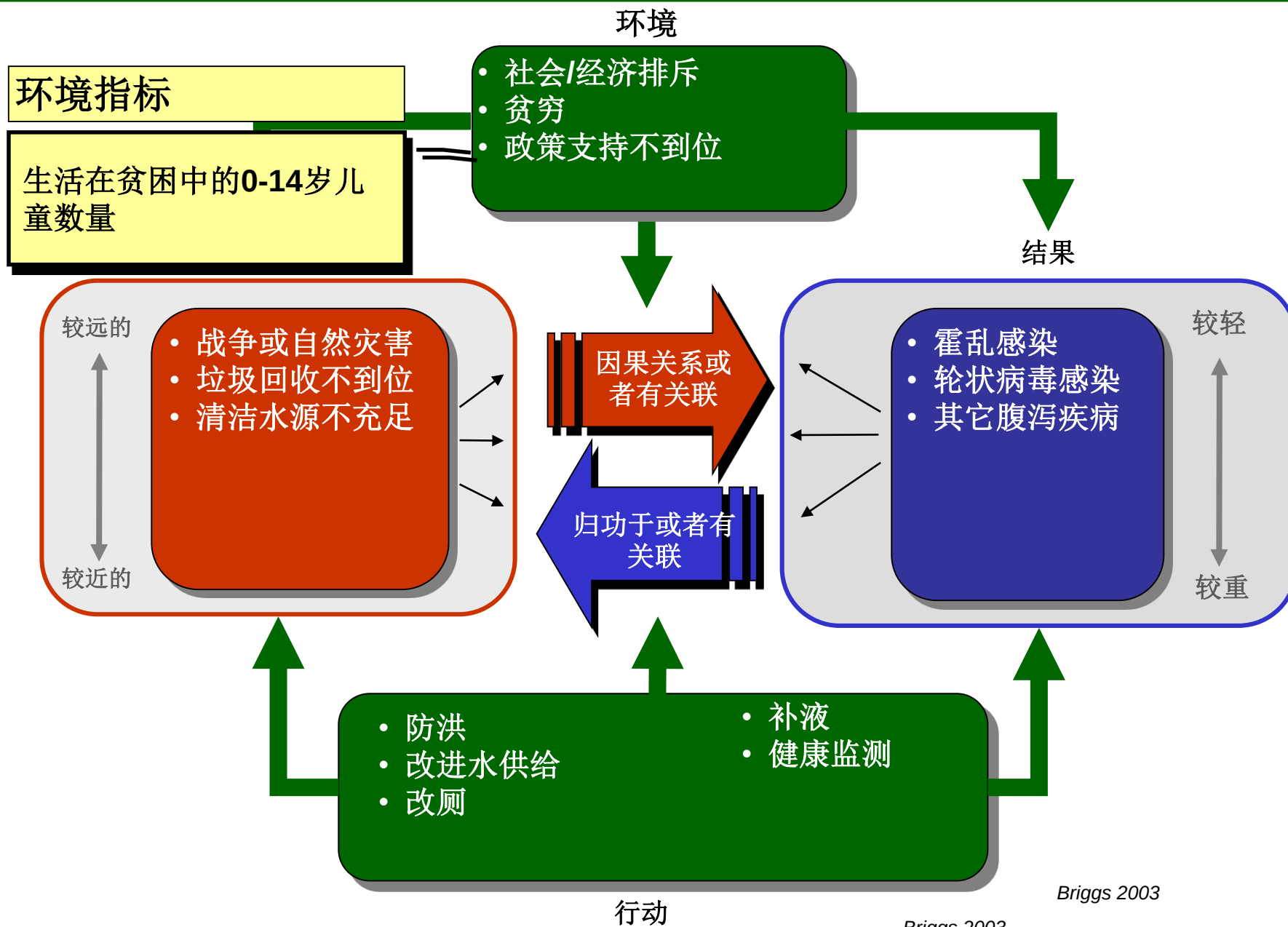


Briggs 2003

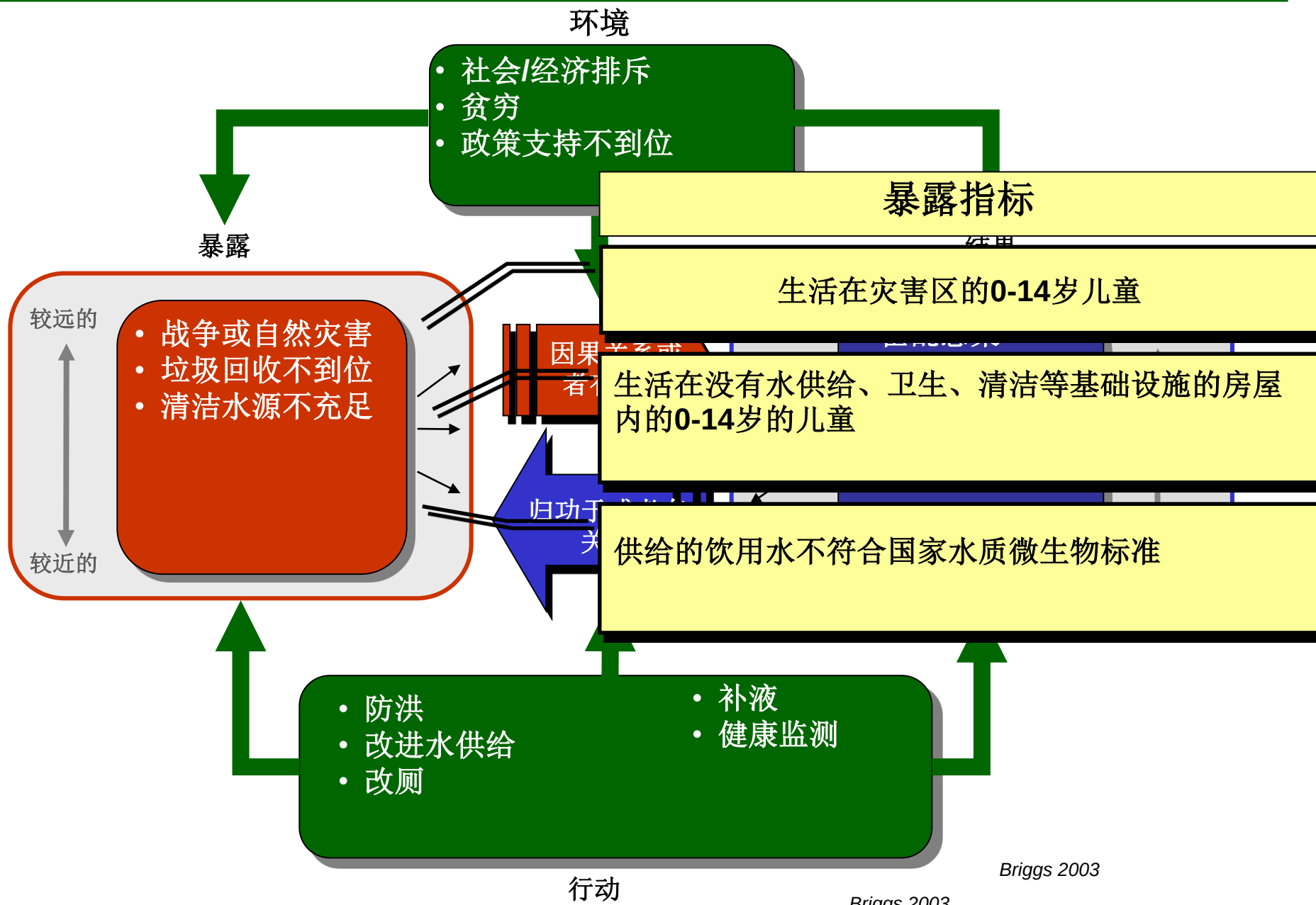
儿童霍乱感染MEME 模型



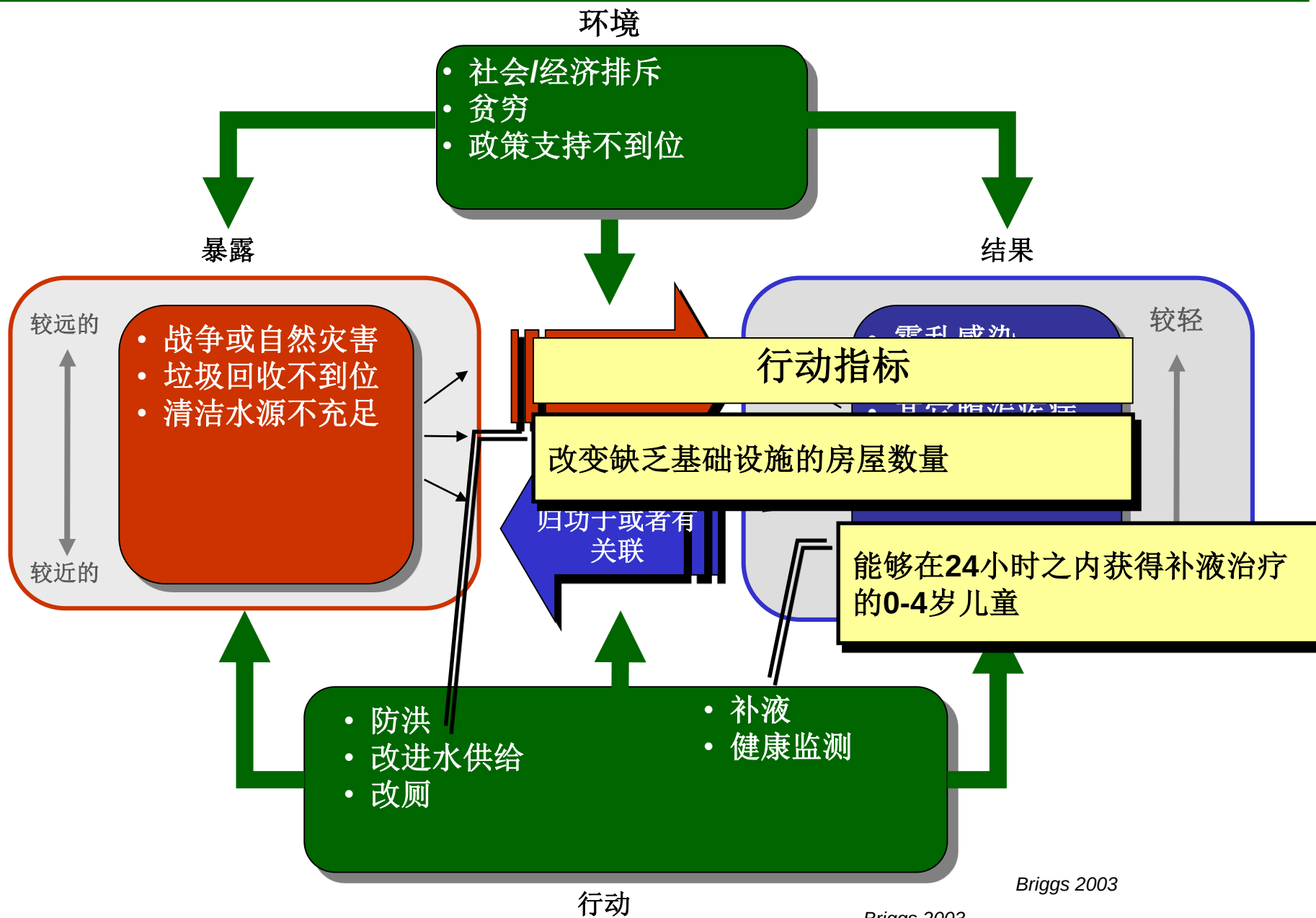
儿童霍乱感染MEME 模型



儿童霍乱感染MEME 模型



儿童霍乱感染MEME 模型



Children's Environmental Health Indicators

指标	政策使用	实际应用
结果: ❖ 0-4岁儿童腹泻死亡率 ❖ 0-4岁儿童腹泻发病率 ❖ 0-4岁儿童腹泻爆发复发率	❖ 明白问题等级和缓急程度 ❖ 明白出现的问题怎么影响不同的人群 ❖ 确定优先考虑的问题	❖ 为最主要的健康问题提供倡导信息 ❖ 提供资源规划信息
环境: ❖ 0-14岁生活在贫困中的儿童	❖ 确立需要最多援助的家庭 ❖ 确立随着时间的变化趋势 ❖ 高效配置资源	❖ 确定有霍乱感染危险的儿童，并提供预防措施 ❖ 更快地确定原因

Children's Environmental Health Indicators

指标	政策使用	实际应用
暴露： ❖ 供给的饮用水不符合国家水质微生物标准 ❖ 人们生活在不正规的住所 ❖ 生活受到灾难影响的0-14岁儿童 ❖ 生活在没有水供给、卫生、清洁等基础设施的房屋内的0-14岁的儿童	❖ 确定最有效的预防霍乱感染的干预目标 ❖ 确定暴露最大的人群 ❖ 确定依时间的变化趋势 ❖ 评估在干预结果能够被直接测量出来之前，干预是否起到了作用	❖ 确定导致霍乱感染的最可能的根本原因 ❖ 确定预防霍乱感染的健康教育和行动要点 ❖ 提供有关最重要健康问题的倡导信息

Children's Environmental Health Indicators

指标	政策使用	实际应用
行动: ❖ 改变缺乏基础设施的房屋数量 ❖ 改变供应不符合食物卫生标准的食品店 ❖ 能够在24小时之内获得补液治疗的0-4岁儿童	评估干预措施是否起作用	❖ 评估更好的专业健康教育和行动的环境改善作用 ❖ 提供有关最重要健康问题的倡导信息

Briggs 2003

可获得的数据

- ❖ WHO 霍乱数据（国家）：
<http://www.who.int/cholera/countries/en/index.html>
- ❖ 国家或地方卫生部门信息

例 4

疟疾

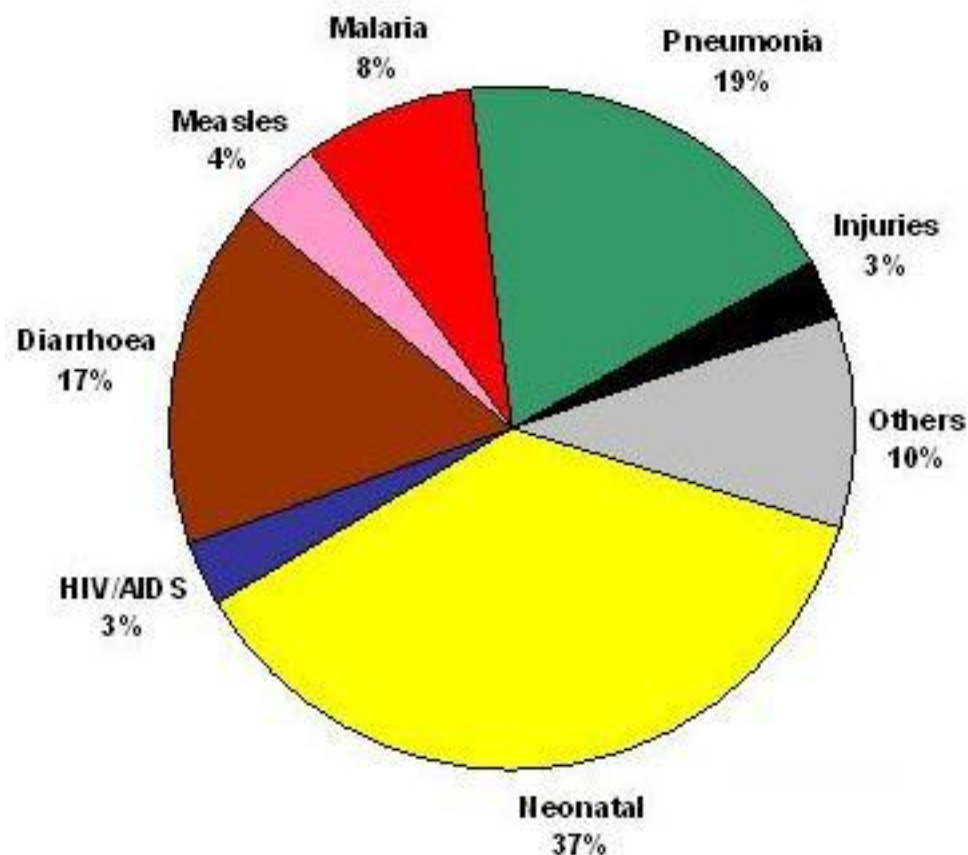
实际应用指标： 疟疾



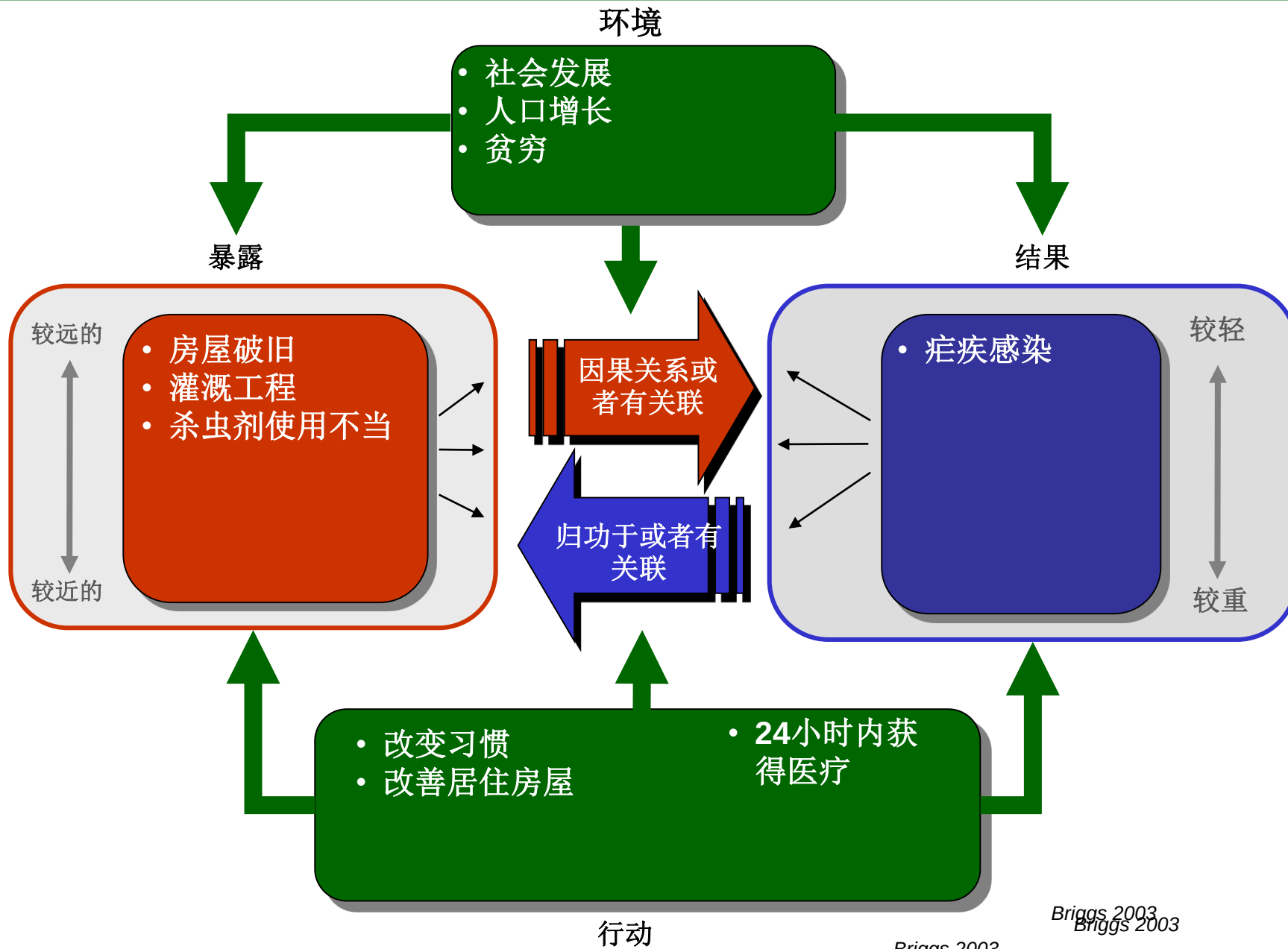
全球疾病负担

5种主要疾病：

1. 围产期疾病
2. 呼吸系统疾病
3. 腹泻
4. 虫媒病
5. 身体伤害

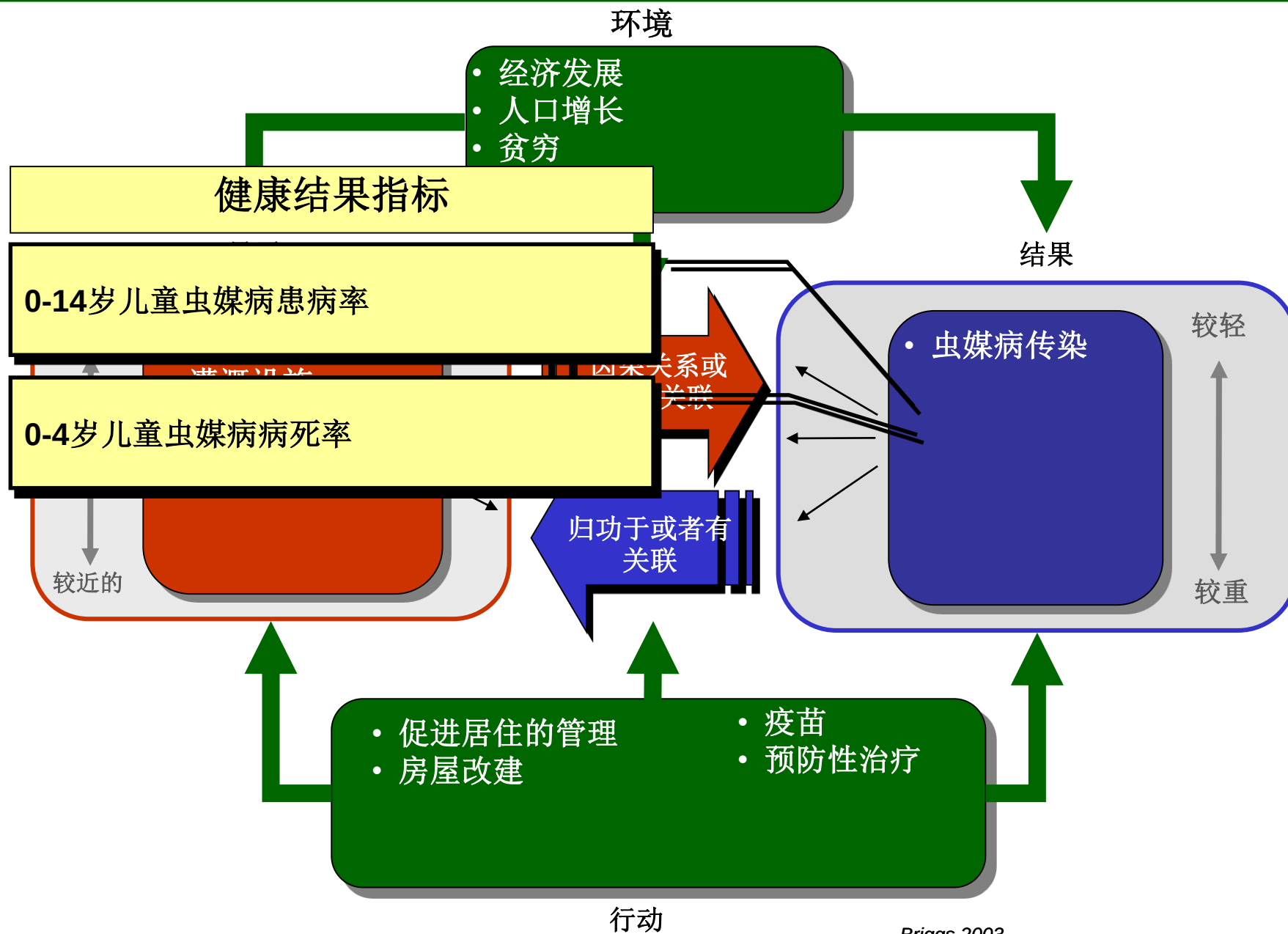


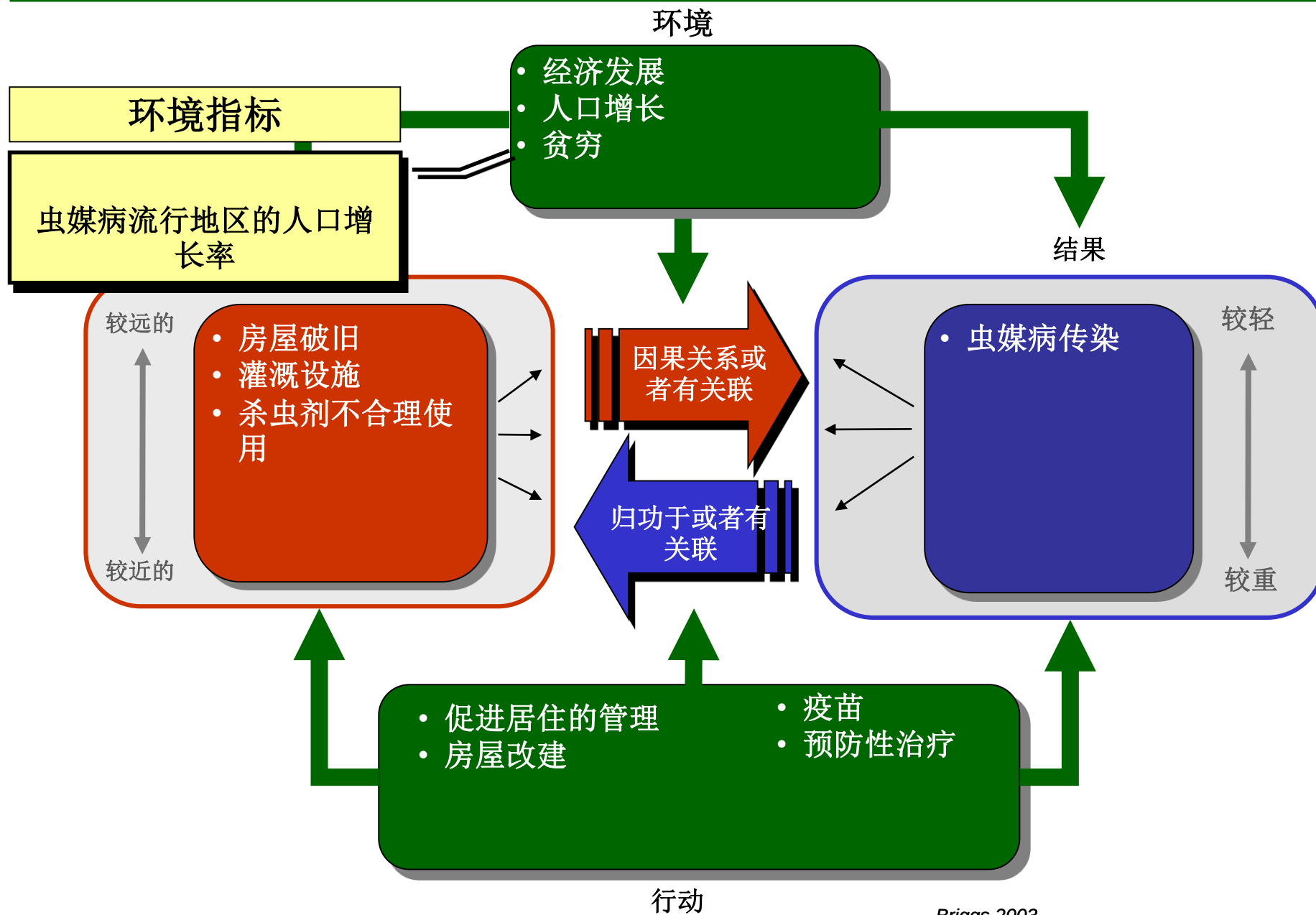
儿童疟疾MEME模型

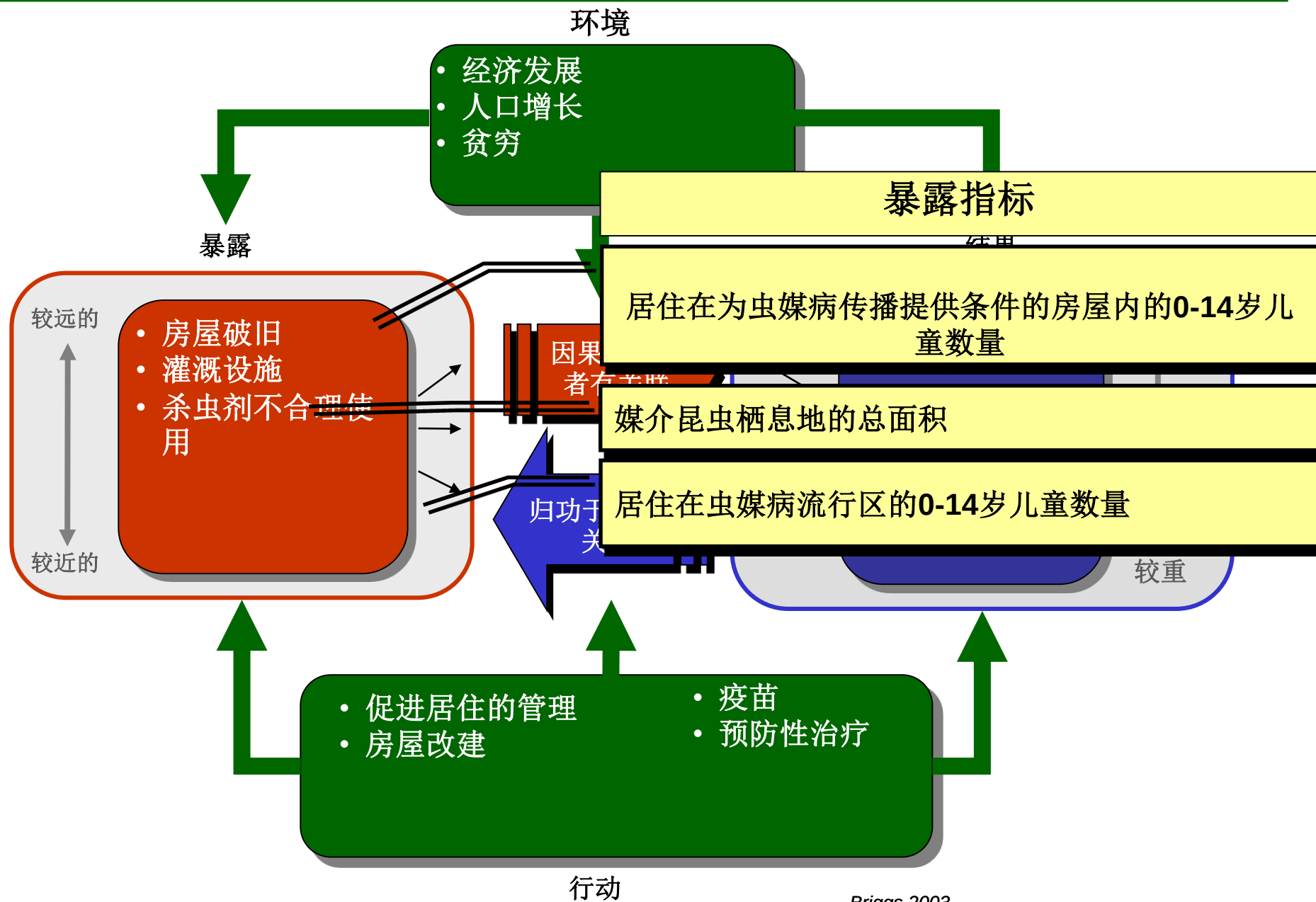


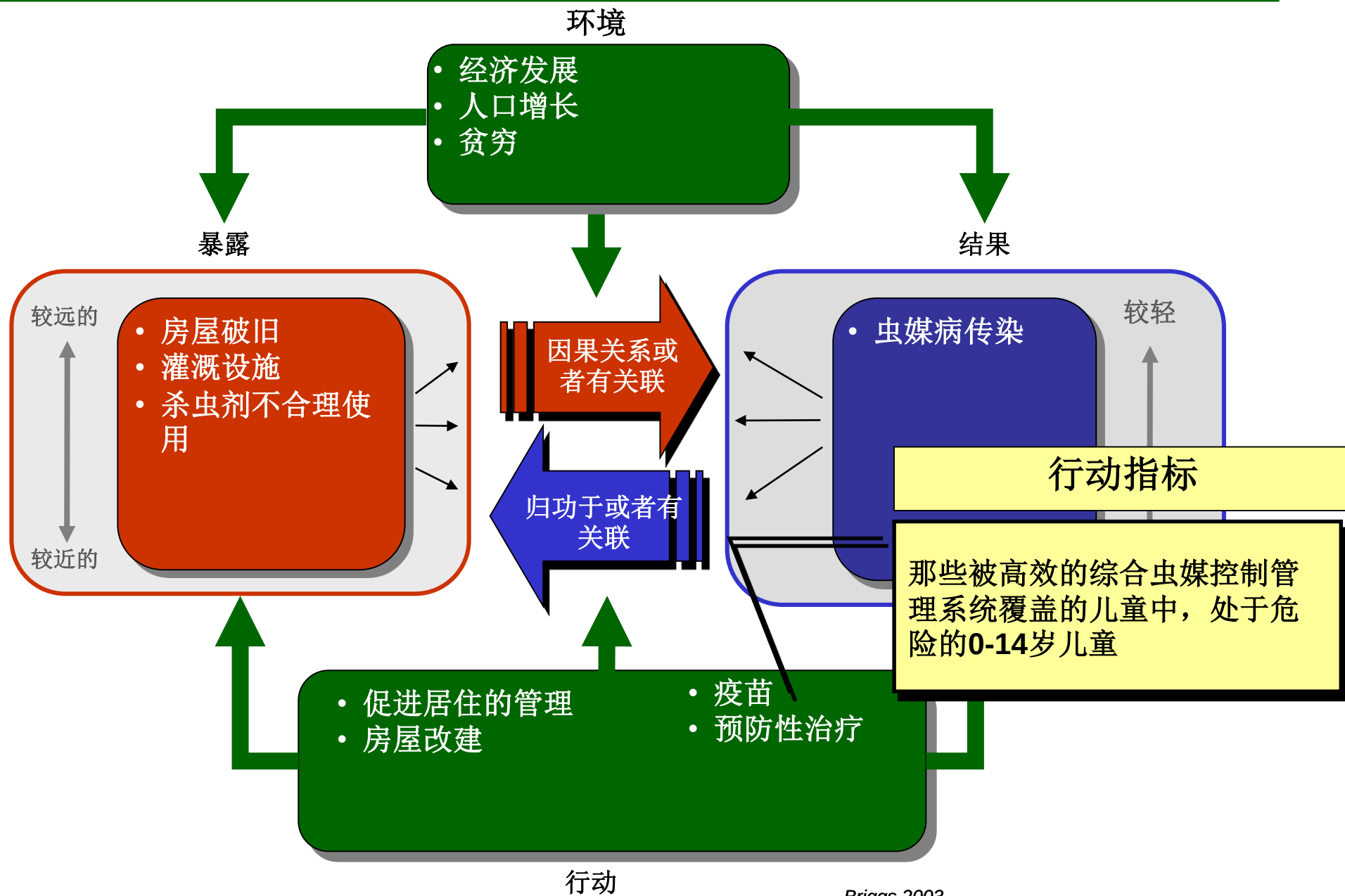
Briggs 2003
Briggs 2003

Briggs 2003









Children's Environmental Health Indicators

指标	政策使用	实际应用
结果: ❖ 0-4岁儿童虫媒病病死率 ❖ 0-14岁儿童虫媒病患率	❖ 明白问题等级和缓急程度 ❖ 明白出现的问题怎么影响不同的人群 ❖ 确定优先考虑的问题	❖ 为最主要的健康问题提供倡导信息 ❖ 提供资源规划信息
环境: ❖ 虫媒病流行地区人口增长率	❖ 确立需要最多援助的家庭 ❖ 确立随着时间的变化趋势 ❖ 高效配置资源	❖ 确定有虫媒病感染危险的儿童，并提供预防措施 ❖ 更快地确定原因

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Children's Environmental Health Indicators

指标	政策使用	实际应用
暴露： ❖ 媒介昆虫栖息地的总面积 ❖ 居住在为虫媒病传播提供条件的房屋内的0-14岁儿童数量 ❖ 0-14岁同居住在虫媒病流行区	❖ 确定最有效的预防虫媒病的干预目标 ❖ 确定暴露最大的人群 ❖ 确定依时间的变化趋势 ❖ 评估在干预结果能够被直接测量出来之前，干预是否起到了作用	❖ 确定导致虫媒病的最可能的原因 ❖ 确定预防虫媒病的健康教育 and 行动要点 ❖ 提供有关最重要健康问题的倡导信息

Children's Environmental Health Indicators

指标	政策使用	实际应用
行动: ❖ 那些被高效的综合虫媒控制管理系统覆盖的儿童中，处于危险的儿童	评估干预措施是否起作用	 ❖ 评估更好的专业健康教育和行动的环境改善作用 ❖ 提供有关最重要健康问题的倡导信息

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可获得的数据

- ❖ WHO 疟疾数据（国家）：

<http://rbm.who.int/wmr2005/index.html> or
<http://www.who.int/whosis/en/>

- ❖ 国家或地方卫生部门信息

例 5

道路交通伤害



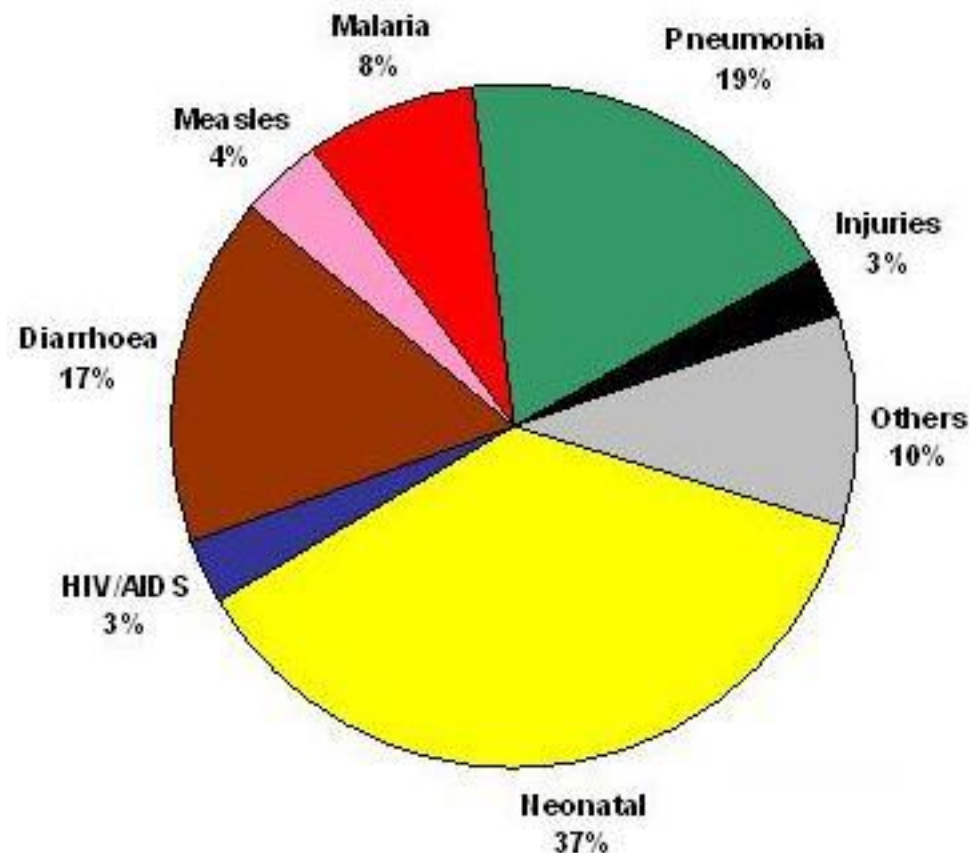
WHO

实际应用指标：
道路交通伤害

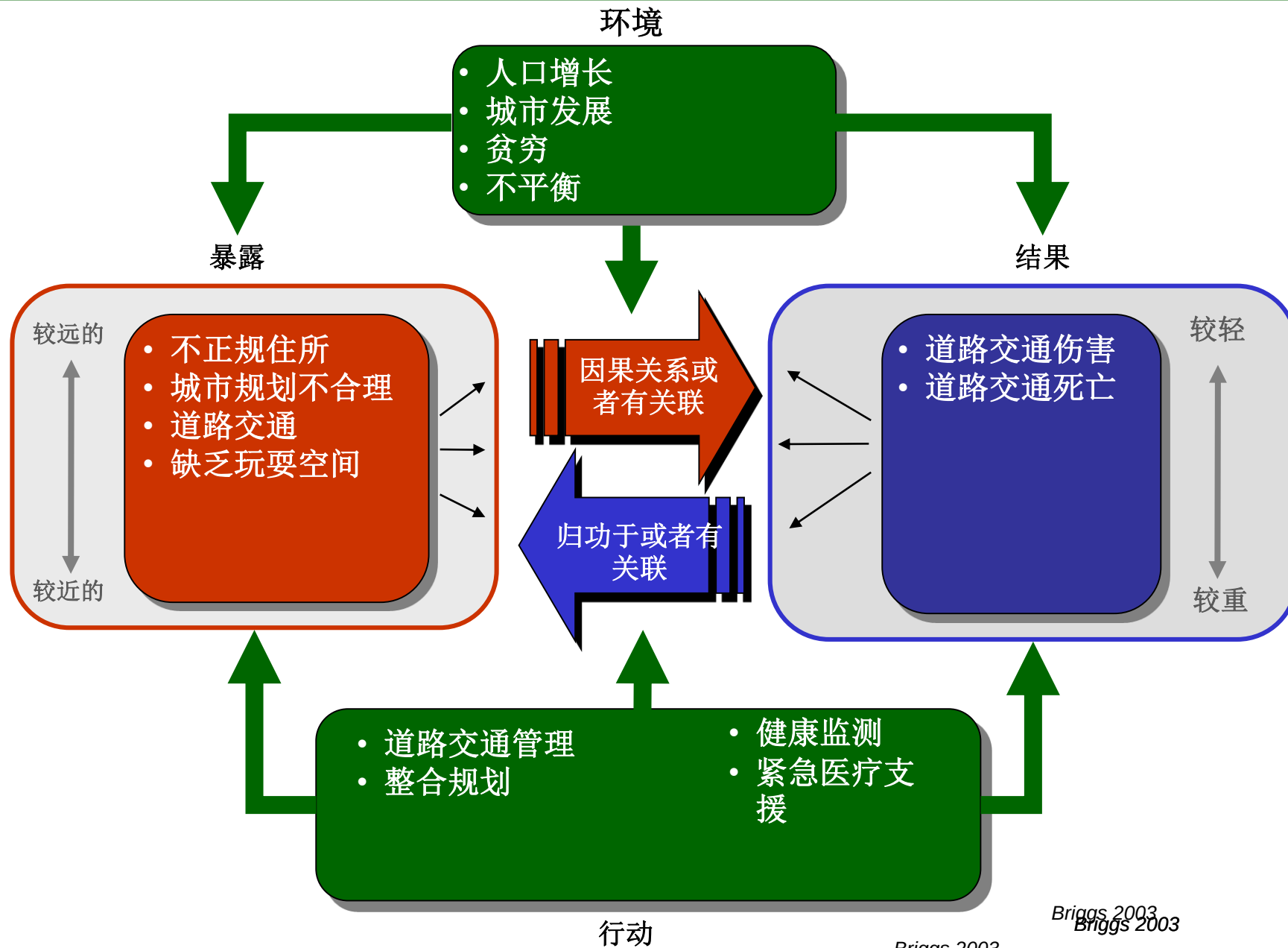
全球疾病负担

5种主要疾病：

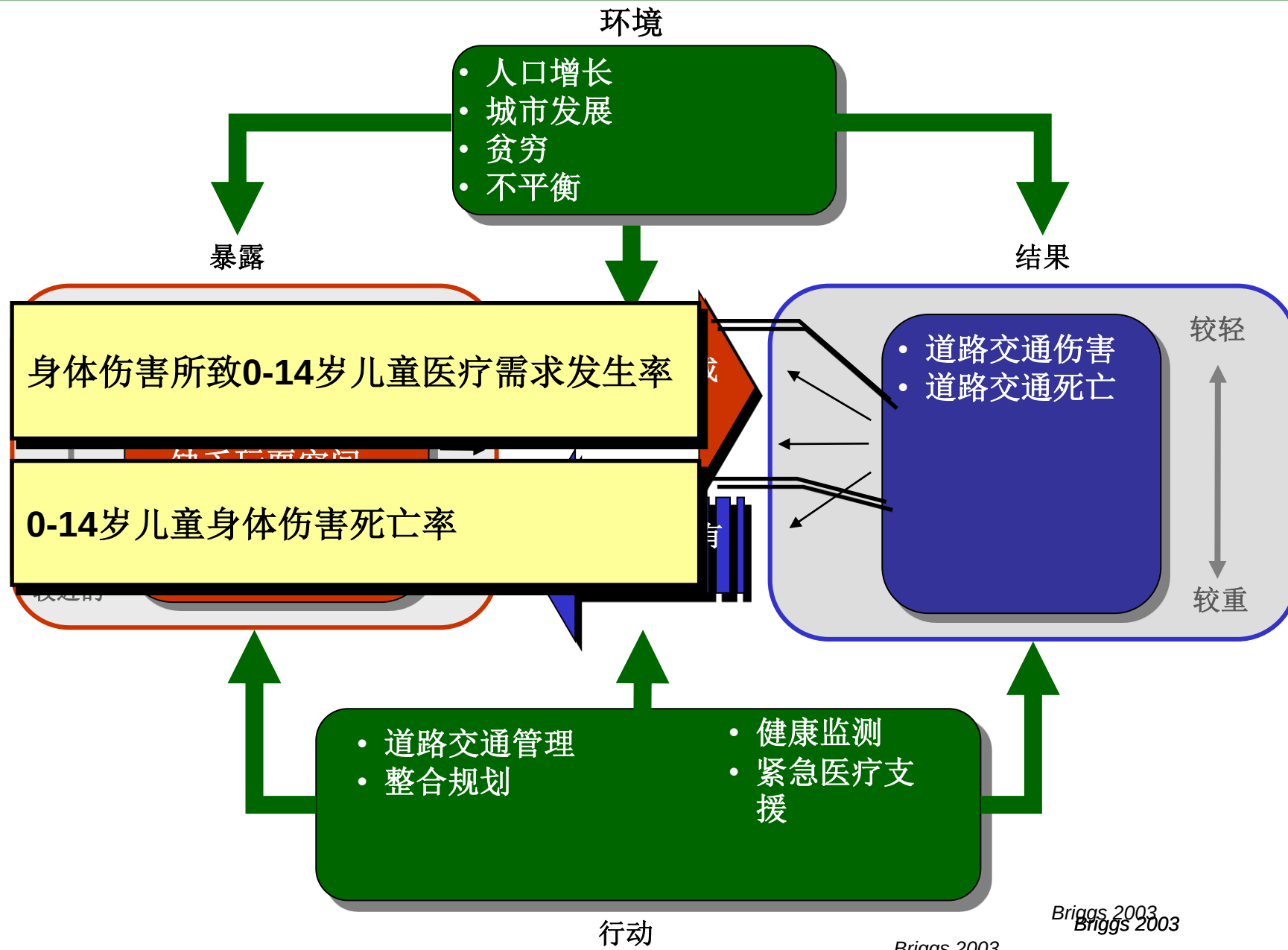
1. 围产期疾病
2. 呼吸系统疾病
3. 腹泻
4. 虫媒病
5. 身体伤害



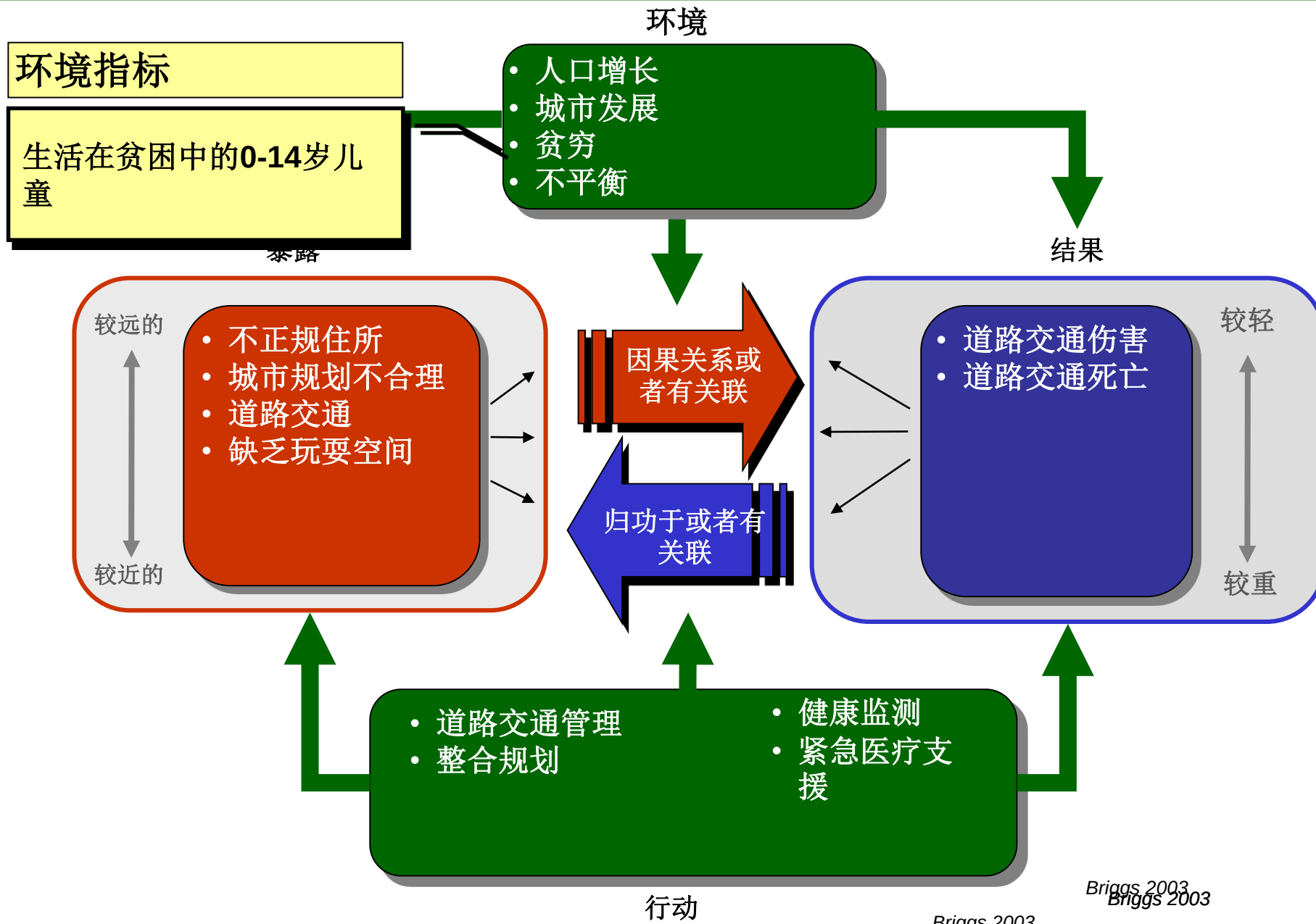
儿童道路交通伤害MEME 模型



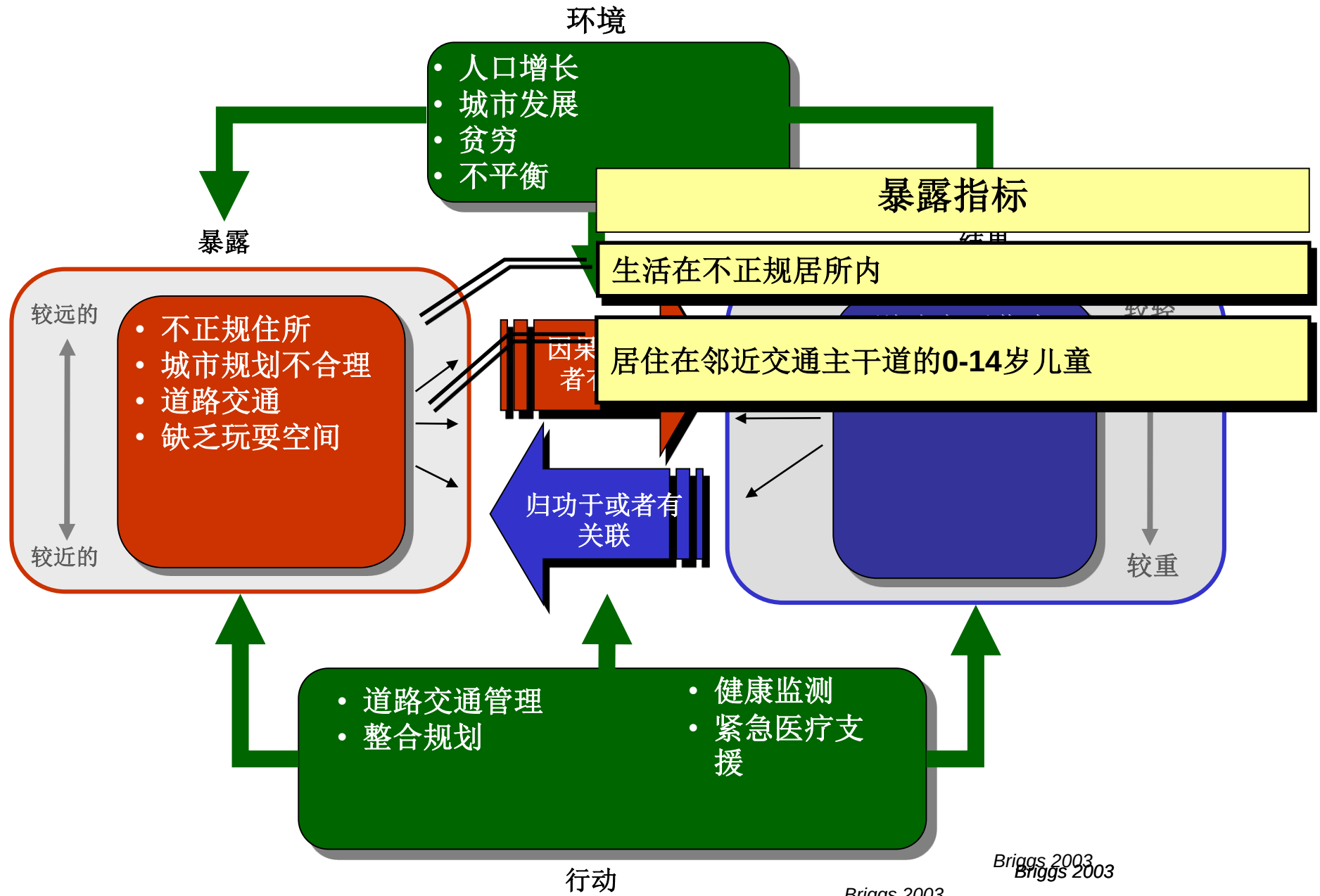
儿童道路交通伤害MEME 模型



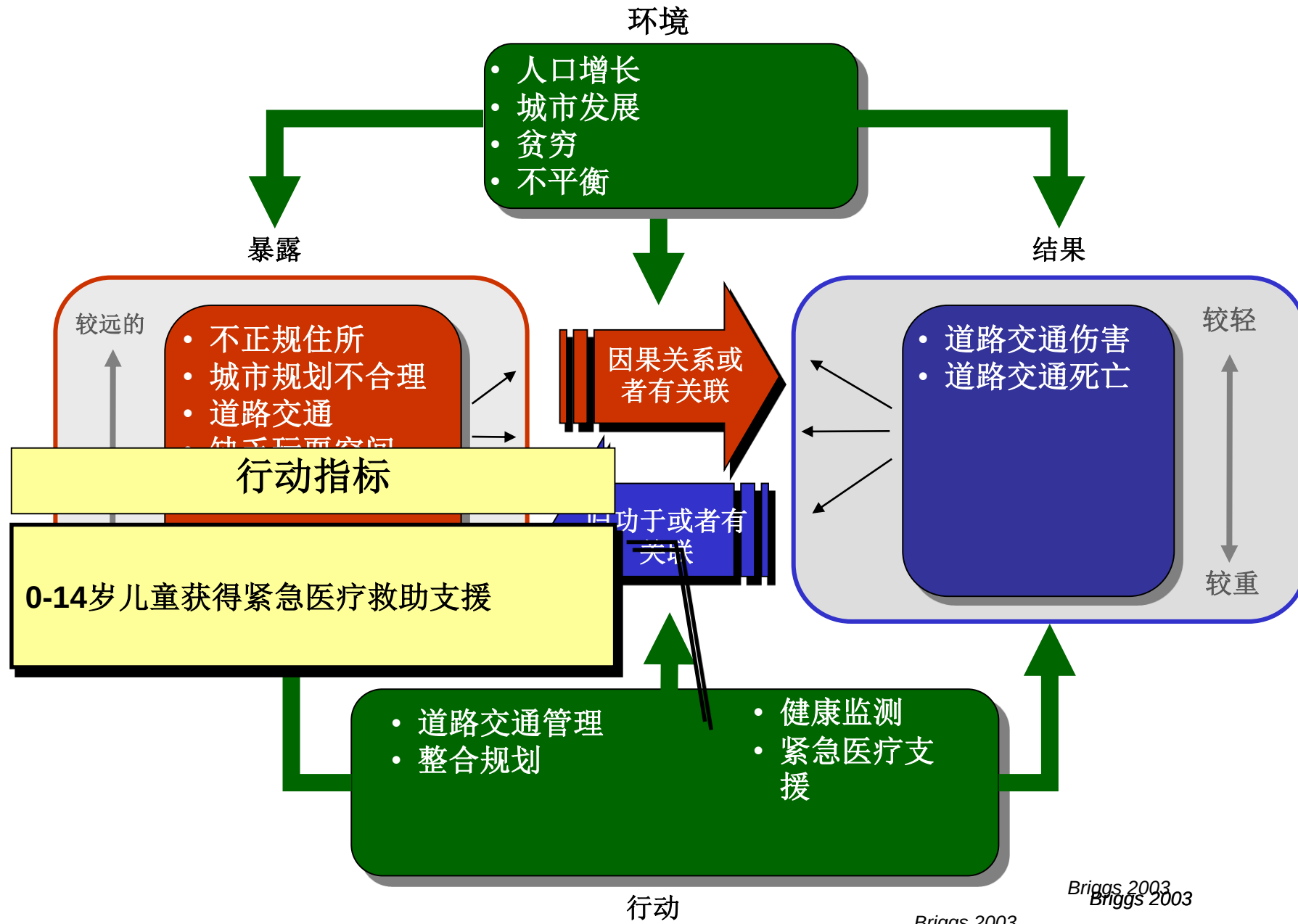
儿童道路交通伤害MEME 模型



儿童道路交通伤害MEME 模型



儿童道路交通伤害MEME 模型



Children's Environmental Health Indicators

指标	政策使用	实际应用
结果: ❖ 身体伤害所致0-14岁儿童医疗需求发生率 ❖ 0-14岁儿童身体伤害死亡率	❖ 明白问题等级和缓急程度 ❖ 明白出现的问题怎么影响不同的人群 ❖ 确定优先考虑的问题	❖ 为最主要的健康问题提供倡导信息 ❖ 提供资源规划信息
环境: ❖ 生活在贫困中的0-14岁儿童	❖ 确立需要最多援助的家庭 ❖ 确立随着时间的变化趋势 ❖ 高效配置资源	❖ 确定道路交通伤害危险因素的儿童，并提供预防措施

Children's Environmental Health Indicators

指标	政策使用	实际应用
暴露： ❖ 居住在邻近交通主干道的0-14岁儿童 ❖ 生活在不正规居所内	❖ 确定最有效的预防虫媒病的干预目标 ❖ 确定暴露最大的人群 ❖ 确定依时间的变化趋势 ❖ 评估在干预结果能够被直接测量出来之前，干预是否起到了作用	❖ 确定导致虫媒病的最可能的原因 ❖ 确定预防虫媒病的健康教育 and 行动要点 ❖ 提供有关最重要健康问题的倡导信息

Briggs 2003

Children's Environmental Health Indicators

指标	政策使用	实际应用
行动: ❖ 0-14岁儿童获得紧急医疗救助支援 ❖ 改变由于伤害需要医疗救治的0-14岁儿童	评估干预措施是否起作用	❖ 评估更好的专业健康教育和行动的环境改善作用 ❖ 提供有关最重要健康问题的倡导信息

Briggs 2003

可获得的数据

- ❖ WHO 道路交通伤害负担数据：
http://www.who.int/healthinfo/global_burden_disease/en/index.html
- ❖ 国家或地方卫生部门信息

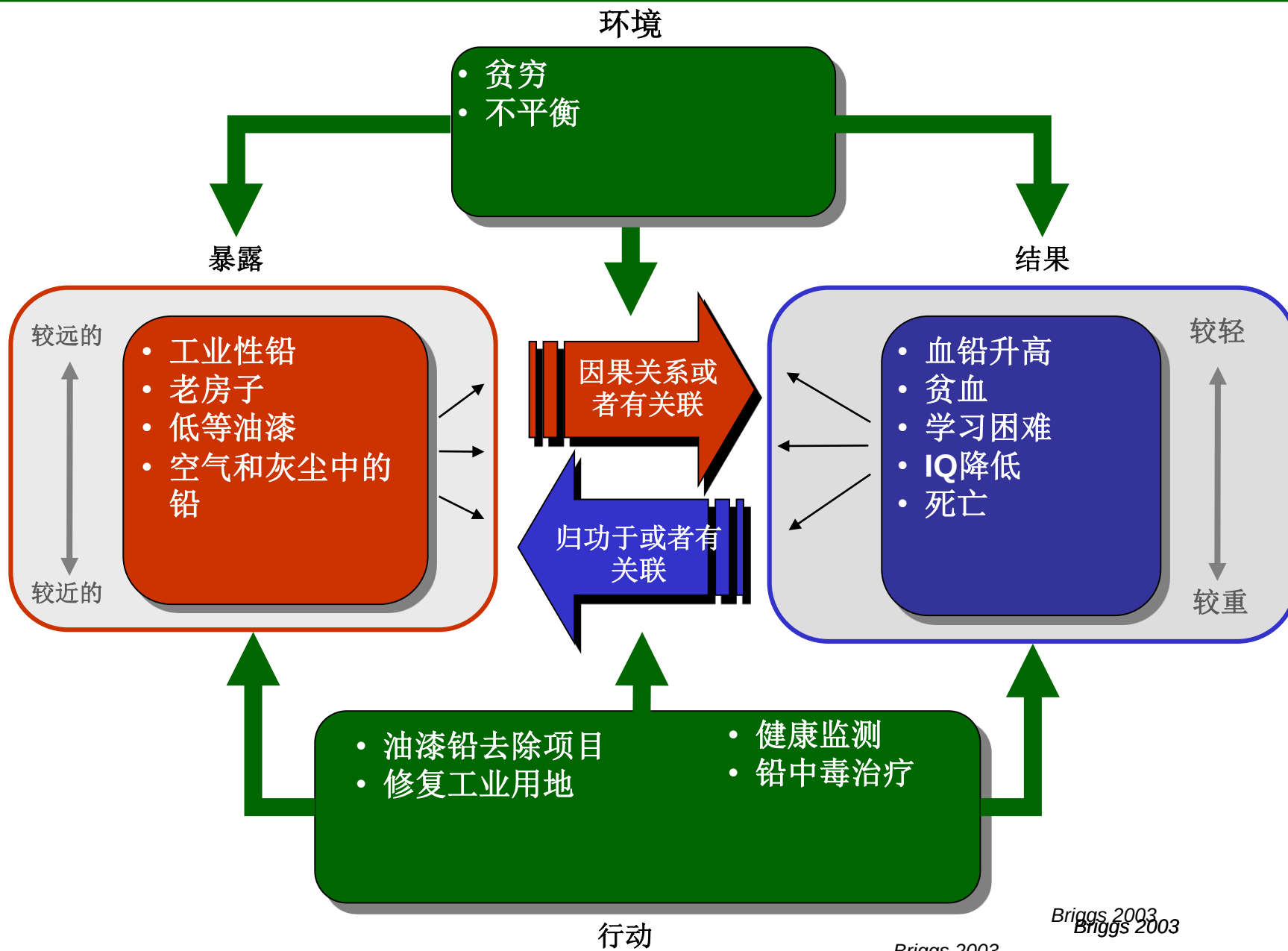
例 6

儿童血铅

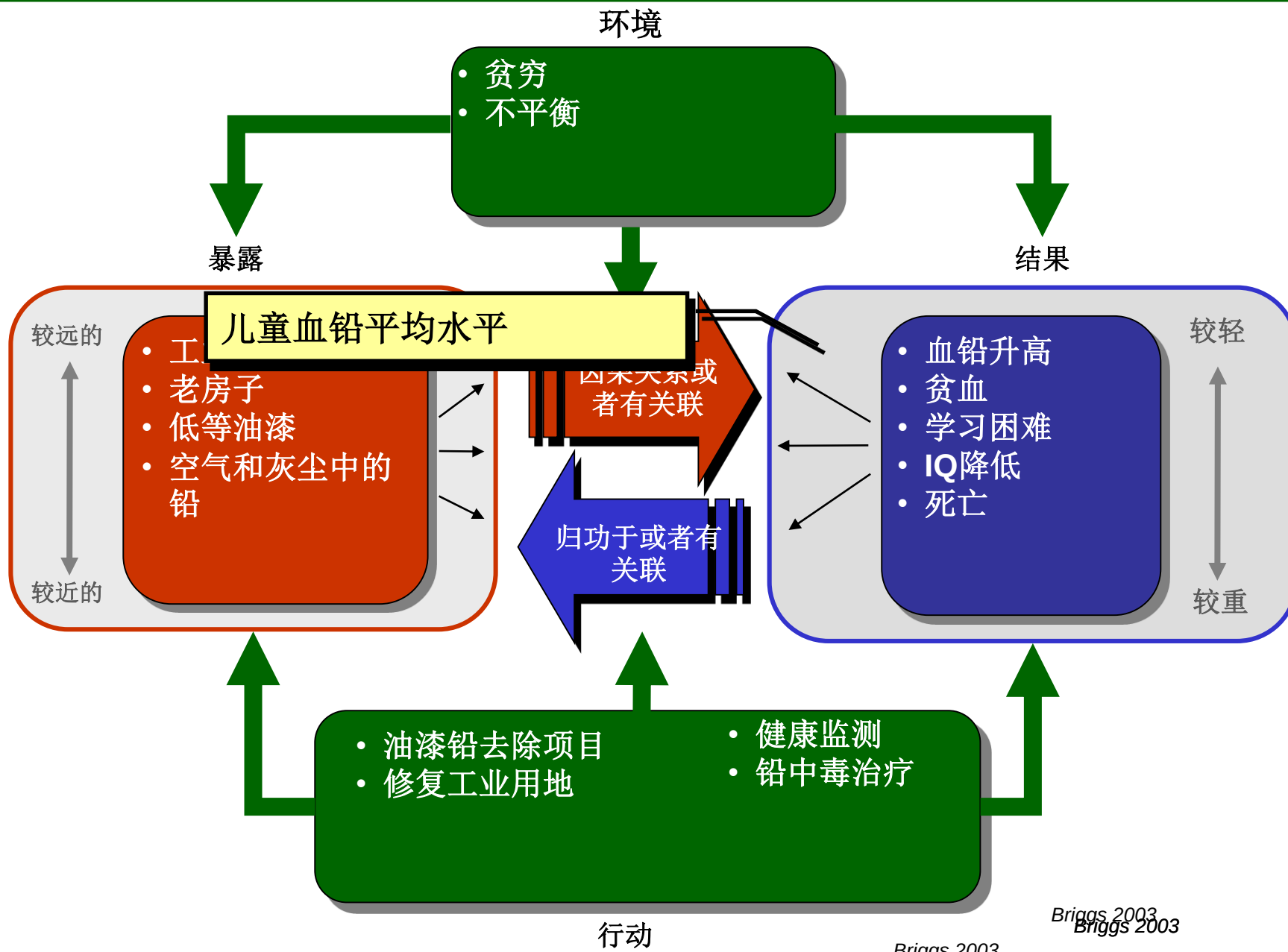
实际应用指标： 儿童血铅



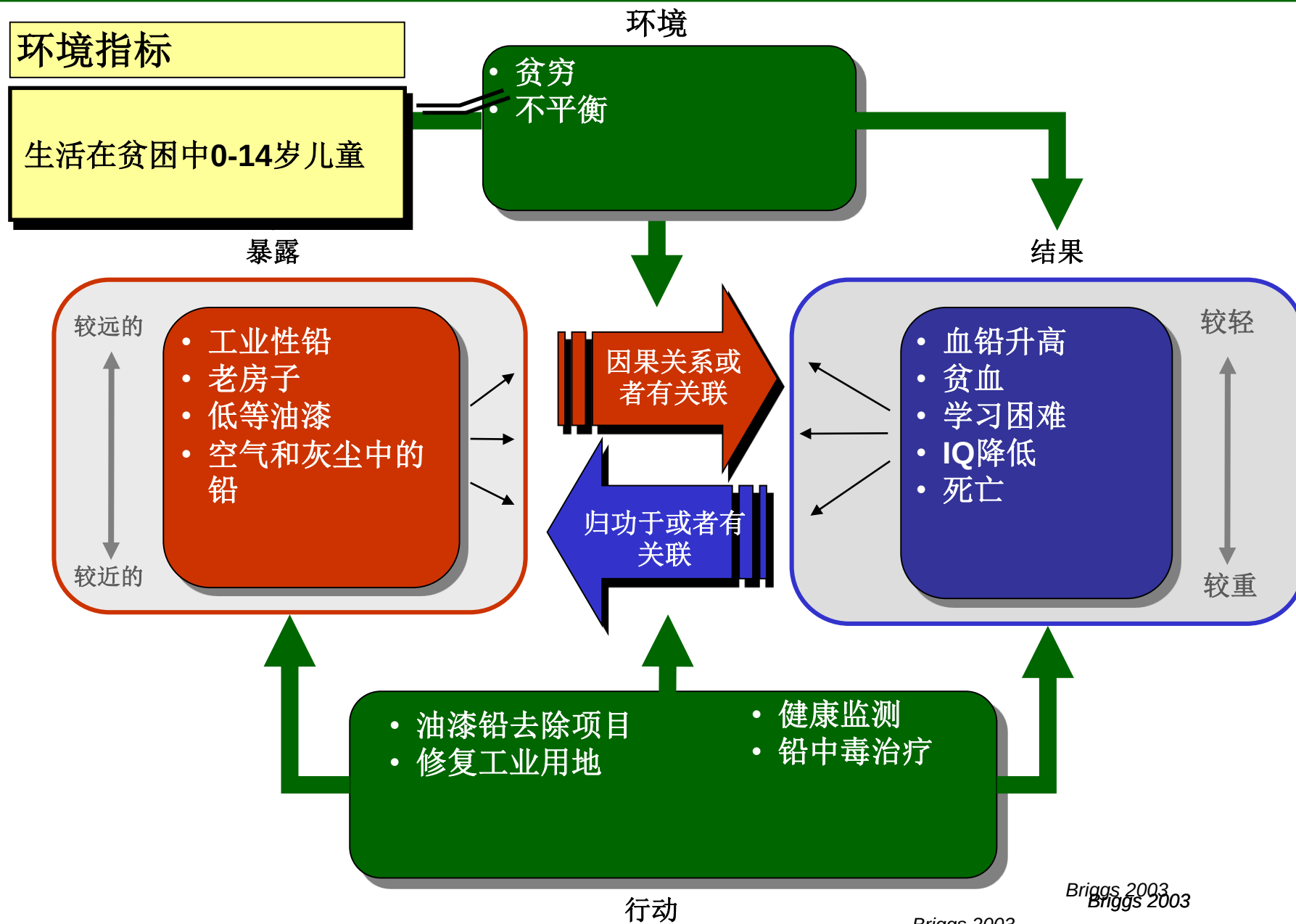
儿童血铅MEME 模型



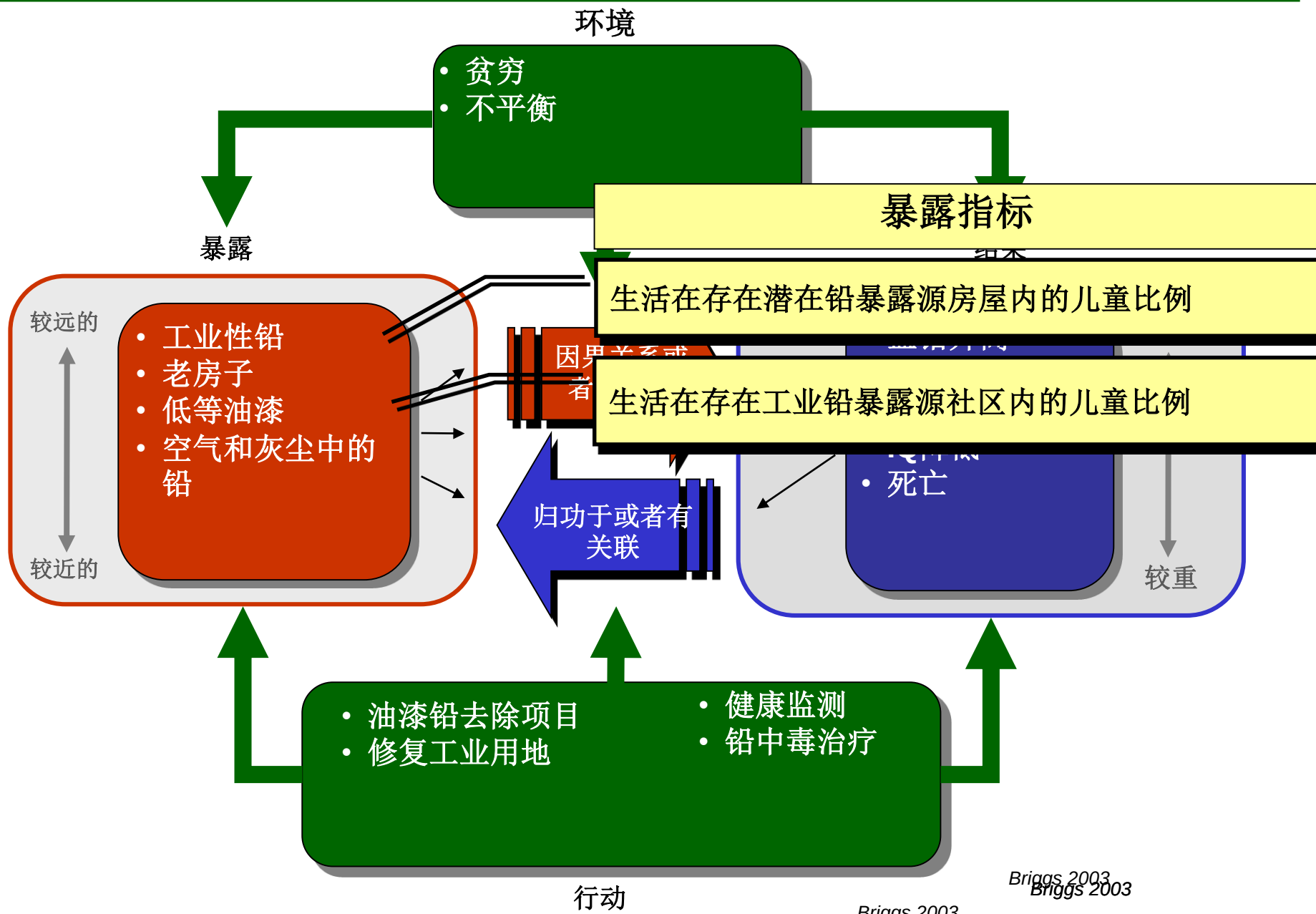
儿童血铅MEME 模型



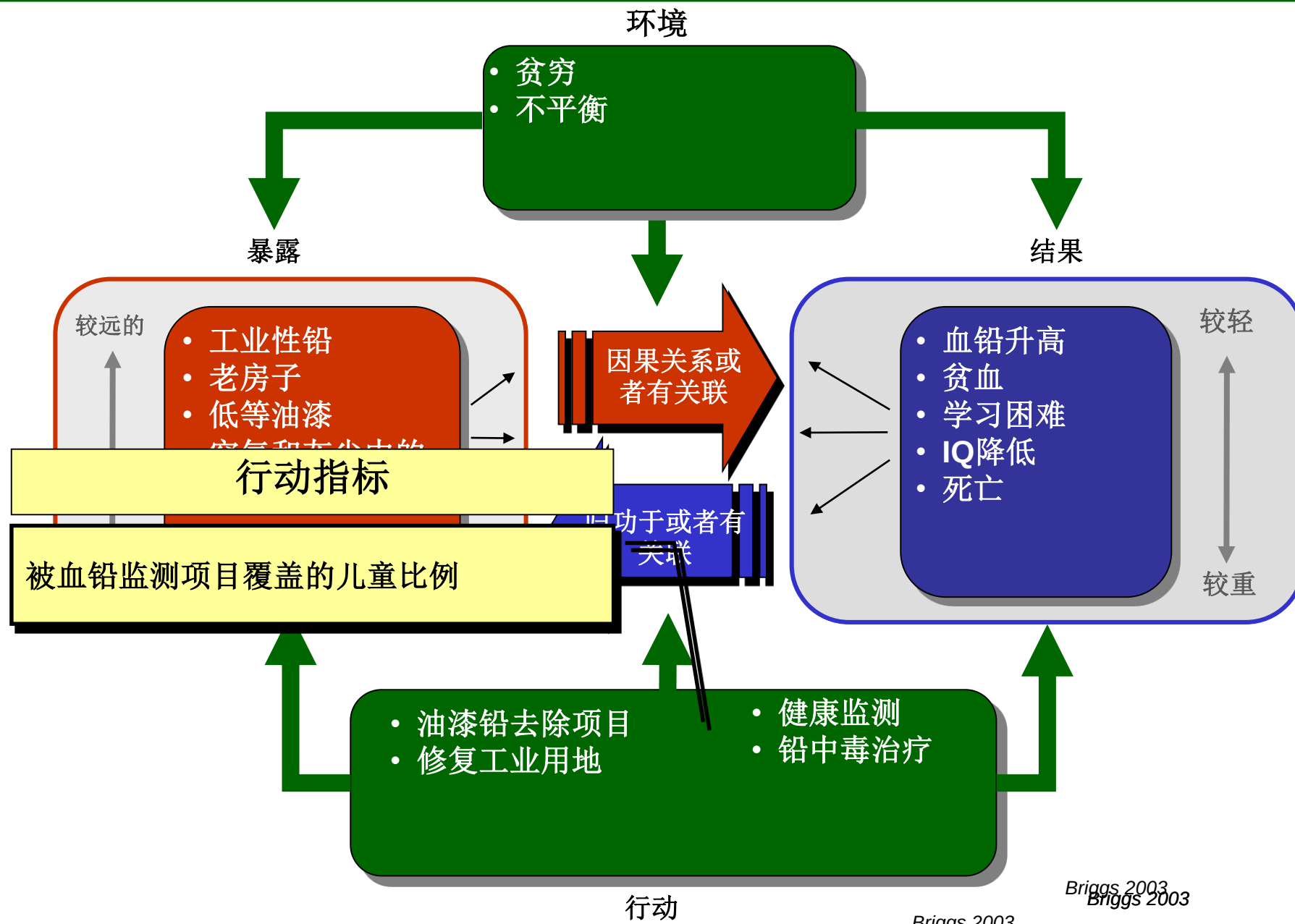
儿童血铅MEME 模型



儿童血铅MEME 模型



儿童血铅MEME 模型



Children's Environmental Health Indicators

指标	政策使用	实际应用
结果: ❖ 儿童血铅平均水平	❖ 明白问题等级和缓急程度 ❖ 明白出现的问题怎么影响不同的人群 ❖ 确定优先考虑的问题	❖ 为最主要的健康问题提供倡导信息 ❖ 提供资源规划信息
环境: ❖ 生活在贫困中0-14岁儿童	❖ 确立需要最多援助的家庭 ❖ 确立随着时间的变化趋势 ❖ 高效配置资源	❖ 确定有血铅升高危险因素的儿童，并提供预防措施

Briggs 2003

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指标	政策使用	实际应用
暴露： ❖ 生活在存在潜在铅暴露源房屋内的儿童比例 ❖ 生活在存在工业铅暴露源社区内的儿童比例	❖ 确定最有效的预防虫媒病的干预目标 ❖ 确定暴露最大的人群 ❖ 确定依时间的变化趋势 ❖ 评估在干预结果能够被直接测量出来之前，干预是否起到了作用	❖ 确定导致血铅升高的最可能的原因 ❖ 确定预防血铅升高的健康教育和行动要点 ❖ 提供有关最重要健康问题的倡导信息

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指标	政策使用	实际应用
行动: ❖ 被血铅监测项目覆盖的儿童比例	❖ 评估干预措施是否起作用	 ❖ 评估更好的专业健康教育和行动的环境改善作用 ❖ 提供有关最重要健康问题的倡导信息

Briggs 2003

可获得的数据

- ❖ 国家或地方卫生部门信息

举例结束

展望未来

儿童环境健康指标是工具：

- ❖ 确定优先考虑的问题
- ❖ 理解环境与健康之间的联系
- ❖ 高效配置资源
- ❖ 监测变化趋势
- ❖ 将信息纳入到国家、区域和国际规范监测和决策机制中来（比如，卫生计量网络）



WHO

- ❖ 最重要的是，它们为世界儿童环境健康促进行动提供了一次机会。

RESOURCES AVAILABLE ON INDICATORS

- ❖ The Global Initiative on Children's Environmental Health Indicators: www.who.int/ceh/indicators/
- ❖ USEPA-Office of Children's Health Protection
yosemite.epa.gov/ochp/ochpweb.nsf/content/homepage.htm
- ❖ UNEP www.unep.org/ceh/about-unep.html
- ❖ UNICEF-Statistical data access by indicator or country:
www.unicef.org/statis/index.html
- ❖ UN MDG indicators mdgs.un.org/unsd/mdg/Default.aspx

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ACKNOWLEDGEMENTS

WHO is grateful to the US EPA Office of Children's Health Protection for their continued support to the Global Initiative on Children's Environmental Health Indicators (CEHI), the financial support that made this project possible and for some of the data, graphics and text used in preparing these materials for a broad audience.

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Latest update: December 2009

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儿童健康专业委员会以及中华医学会儿科学分会委托

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2014年8月