

OIL & GAS DEVELOPMENT & HEALTH IN GHANA



24 April 2012

Dr Frank Nyonator & Dr Edith Clarke

GHS

Overview

1. What are the specific health concerns when considering the oil and gas industry?
2. Why can't we deal with these?
3. How can stronger health systems mitigate effects?
4. Planned Health Impact Assessment (HIA) of Oil & gas development

Oil & Gas Development & Health In Ghana

- Jubilee Field discovery -2007
- Reported discoveries in other fields
- Offshore and onshore activities eventually
- Concerns are re: wider P.H. & H systems issues likely to be impacted by developments.



Oil and Health

- Oil exploration and extraction activities generate impacts relevant for the long term wellbeing of Ghanaian citizens.
- But can lead to accidents and negative health consequences.
- Most affected are the vulnerable: children, women, poor, informal sector workers

Who is affected? Example: Luanda, ANGOLA (2007)

- Outbreak of mass poisoning from sodium bromide - 458 cases reported
- Sodium bromide - used widely in oil and gas industry
- Entered the local market and was mistaken for table salt



Children in semi-coma

Health Consequences- Direct impacts

- **Operation of equipment and machinery**
 - Road traffic accidents
 - Construction
 - Fire accidents & explosions – **burns**
- **Exposure to hazardous substances**
 - Chemicals used in surveys, drillings, and extraction
 - heavy metals
- **Heat stress, exposure to UV radiation**
- **Ergonomic injuries**

Oil and gas extraction: Impacts on health (II)

- **Pollution:**

- Air emissions - NO_x, SO_x, PM, dust
- Soil and ground water contamination from spills & other chemicals
- Vibration and noise pollution - Anxiety & stress

- **Degradation:**

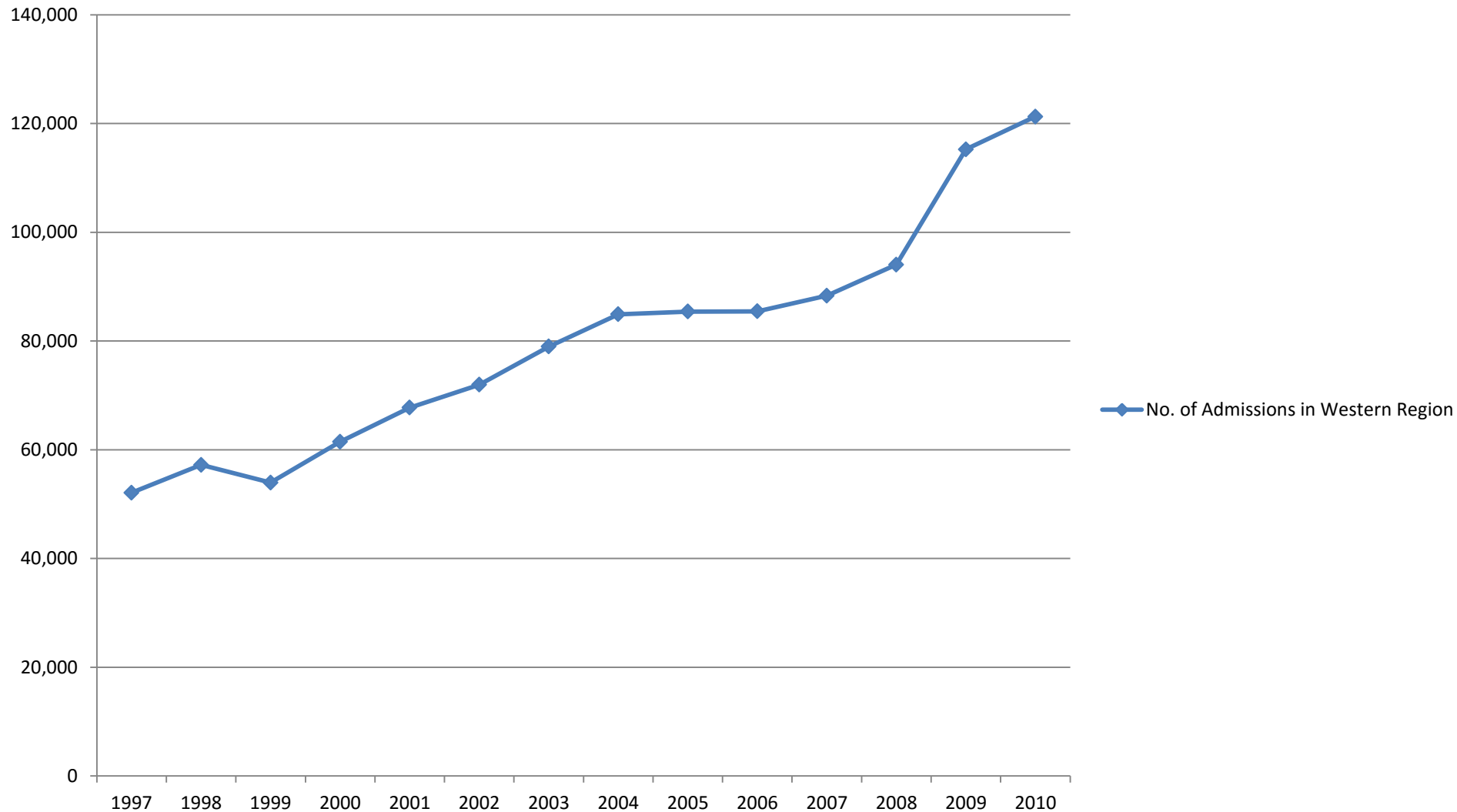
- Change in soil quality
- land use changes, damage to ecosystems, loss of biodiversity

Indirect impacts on health

- **Changing patterns of Communicable diseases**
 - In –migration - increased risk of STIs (including HIV) transmission ;
 - Local services/infrastructure being overwhelmed leading to:
 - increased transmission of infectious eg Respiratory diseases eg Tuberculosis, Malaria
 - Food and waterborne illness
- **Increase in Non communicable diseases**
 - “Boom town” effect: more money, more food of poorer quality, less exercise, more obesity, more heart disease
 - Violence, alcohol abuse, mental health problems
 - Stress, anxiety and social tension
- **Worsening Inequalities : an issue of special concern**

Western Region In-patient Admissions- 1997 -2010

No. of Admissions in Western Region



Example: Alberta, CANADA (2010)

- "boom town"— virtual doubling of population in less than a decade
- Community health status lower in oil sands areas than in other regions - inequity
- Individual and family pressures
 - Inflation (rent, food prices)
 - Housing and labour shortages
- Infrastructure pressures
 - Investment in health infrastructure not as fast as population growth

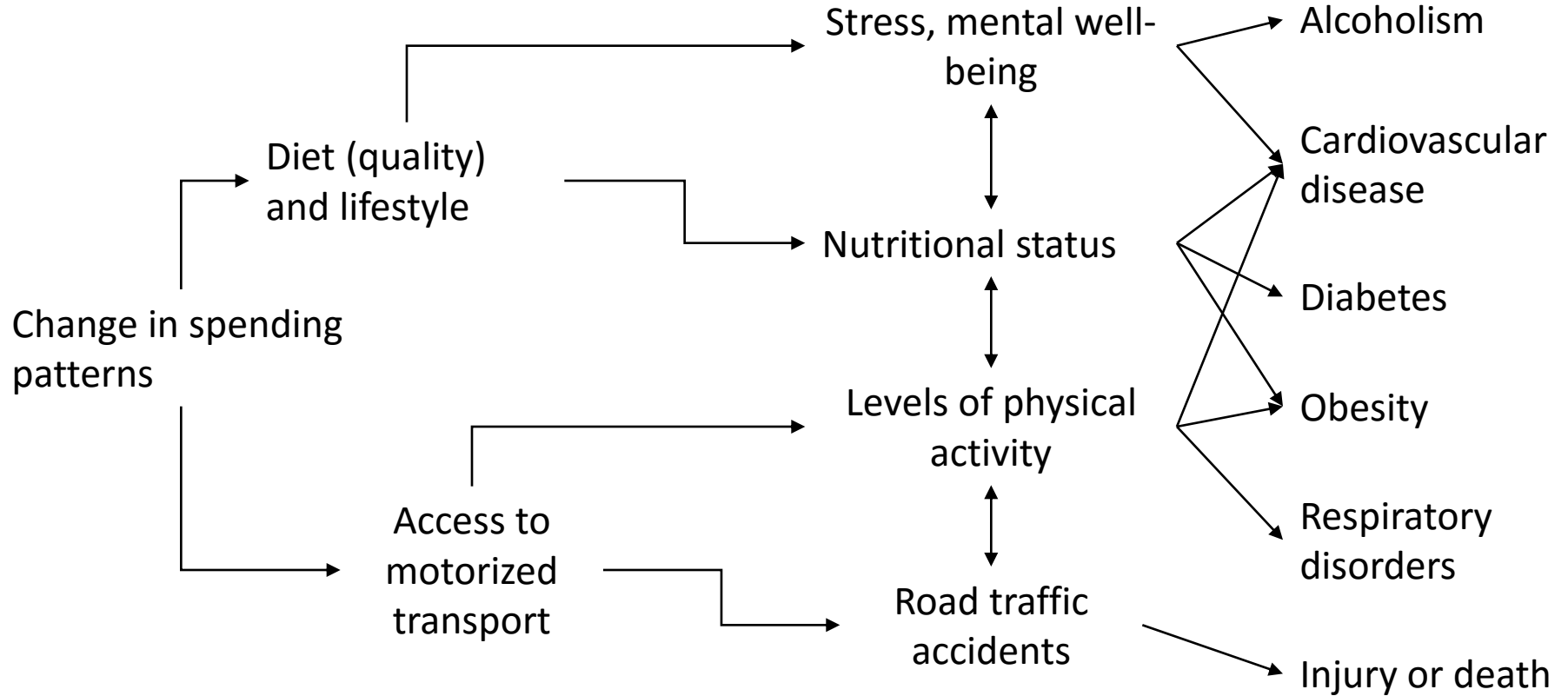


Fort McMurray and the Oil Sands, Photo: Gord Mckenna

- Increased crime, alcohol and drug use, family stress

Rapid development

- example of pathways to health outcomes



Why can't we deal with these?

- Underestimation of health impacts by governments
 - Inadequate consideration of all implications, lack of awareness
- Institutional barriers dividing sector functions
- Weak national/local health systems not equipped to identify or manage impacts
 - Strain on access to limited services
 - Procurement and supply of commodities
 - Inadequate quantity/quality of human resources for health
 - Poor surveillance, information management

How good Health Systems can mitigate impact

- **Identification of health risks (and benefits) and interventions to address them using:**
 - Simple, low cost public health interventions
 - More sophisticated interventions – requiring substantial investments eg through other sectors/ public – private partnership
- **Monitoring, reporting and evaluation**
 - Epidemiological and health indicators from baseline
 - Early warning and monitoring of unintended impacts
 - Measuring net "social" benefits or losses generated as a result of growth of the petroleum industry

How good health systems can mitigate impact (II)

- **Responding to community concerns and perceptions of risk**
 - Health sector experienced in risk communication and can engage in dialogue on community concerns about health risks
- **Emergency preparedness and response**
 - Public health response to chemical incidents
 - Recognition and accurate diagnosis of chemical exposure
- **Responding to health issues**
 - Delivery of medical services to workers and to communities
 - **If appropriate infrastructure & HR in place**

Health impact assessment (HIA)

- Health impact assessment
 - is **a key tool/process/platform** to facilitate the integration of health considerations into development policies, plans, and projects
- The use of HIA can **enable the upstream assessment/identification** of
 - potential health impacts associated with a particular policy, plan
 - opportunities to address those impacts.
 - Helps to ensure that the legacy is positive

How does HIA work?

- Analysis of activities (within planned development) to determine potential health impacts
- Determination of baseline of health status and assessment/estimation of potential health impacts
- Generates recommendations on intervention options
- Framework for monitoring and evaluation
- Process and platform for systematically engaging all stakeholders in decision-making process

The Context?

- i. Libreville Declaration (2008) on Health and Environment in Africa :called for Strategic Alliance between health & environment: 11 Priority Actions
 - Action #9 of the Libreville Declaration:
 - calls on Member States to institute...”the practice of systematic assessment of health and environment risks, in particular through the development of procedures to assess impacts on health... .ie HIAs

Context ? (ii)

- ii. Opportunity for Building on existing initiatives:
 - Health system strengthening;
 - Disease control programmes eg Malaria , TB, HIV /AIDS
 - Water and sanitation interventions
 - Nutrition
 - Control of NCDs
 - Risk of reversal of gains made in controlling these diseases?
- International Health Regulations etc

Context?

- iii. GHS engaging with EPA to review the environmental permitting conditions and EIA guidelines for Oil & Gas development in order to expand the scope of the EIA to better cover community health issues. T

Context? (iv)

- iv. Strategic Environmental Assessment (SEA):
 - EPA currently carrying out a SEA of the oil and gas developments.
 - 15 out of 20 priority issues identified were health related; 5 **directly concerned with health and health system**; others likely to have impact on the health status by altering the determinants of health.
- v. MoH/GHS thus plans to conduct **strategic level Health Impact Assessment (SHIA) of the oil and gas development plans – involve stakeholders**

Context: HIA and SEA (II)

- Health sector involved in the SEA, but TOR of SEA does not allow for in-depth coverage of health aspects.
- GHS therefore planning to conduct a HIA to run in parallel with the SEA and will feed information and data into the SEA process;
- build capacity within the health sector
- recommendations of HIA will be coordinated with the health sector plans – for sustainability;
- generate baseline of key development indicators (health determinants) which can be used for monitoring purposes,

Strategies for the planned sHIA

1. Stakeholder engagement activities, including community engagement,
 - including a detailed mapping of actors with an interest and role to play in addressing public health concerns
2. Baseline of current community health status
3. Analysis of potential impacts of oil and gas activities on health and on health determinants -including cumulative impacts
4. Assessment of emergency preparedness and response capacity, in particular to respond to chemical incidents
5. Assessment of capacity to regulate, monitor, and respond to occupational health and safety issues associated with the growth of a new industry

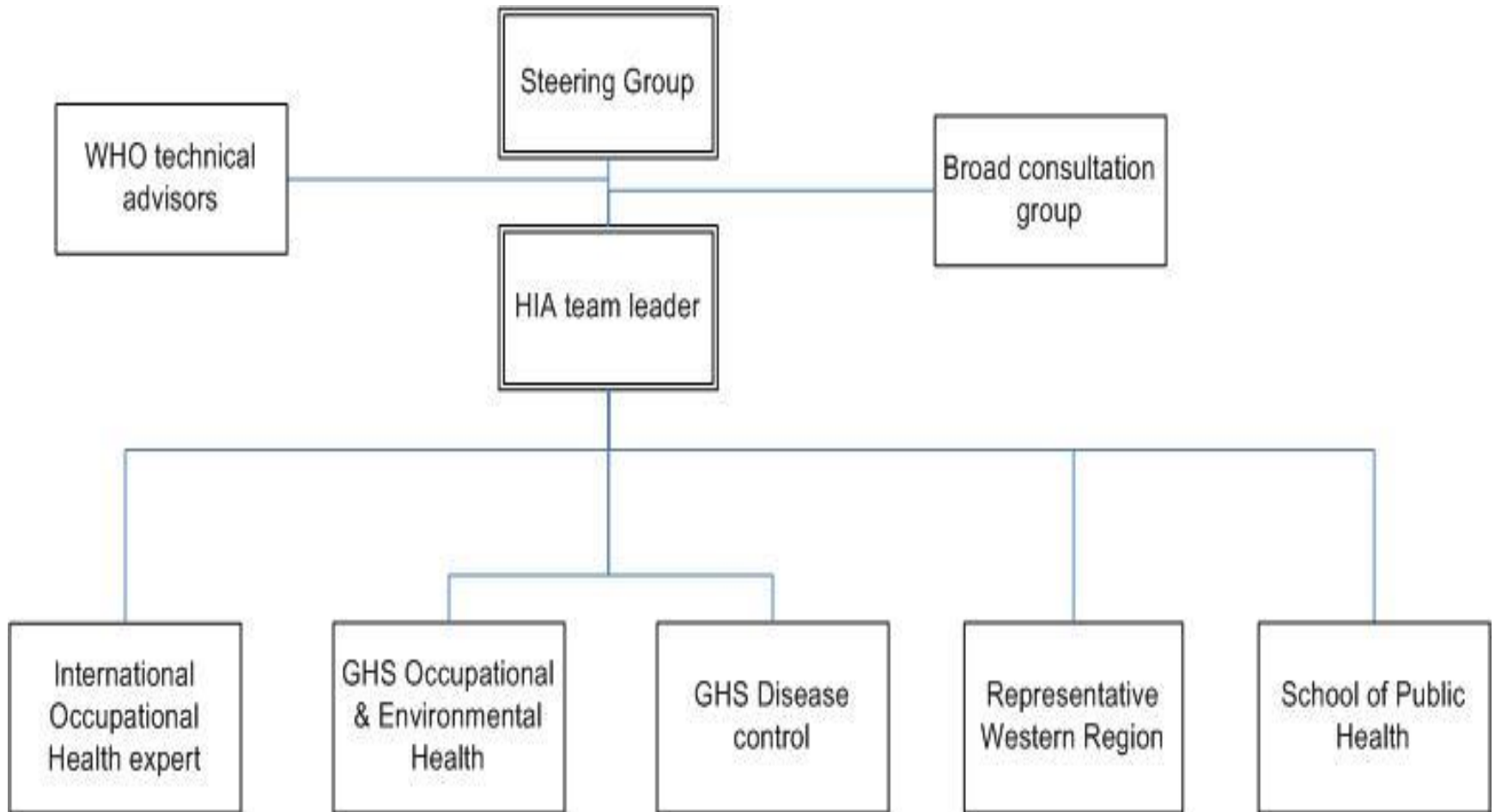
Expected Outputs of HIA

- i. High level / master (sector level) health management plan :
 - Inform investment activities eg to fill gaps identified /build core capacities
 - Help Identify opportunities to foster alignment between existing health programs & activities & others to be planned
 - Baseline will be reference point for project operatives conducting EIAs & thus help to influence project level health management plans
- ii. Monitoring system associated with the health management plan : include use of indicators that can be measured in relation to the community health baseline
- iii. Develop institutional capacity for HIA through training and applied learning

Sources of Anticipated Funding

- Ministry of Health /GHS
- Private sector - Industry
- Development Partners

HIA team



Next steps

- Terms of Reference for strategic Health Impact Assessment have been drafted
- Partners and Resources needed to support the Strategic HIA

Key messages

- Health is vital for successful growth of oil and gas sector and for development of region
- Opportunity through health, to anticipate health challenges, - providing potential for development of Governance Framework ensure that this oil is good for development
- An opportunity for strengthening Health systems
- SHIA provides opportunity for public – private partnerships
- Good Tools available to facilitate process, particularly from WHO

THANK YOU



Dr Edith Clarke

Programme Manager

Occupational and Environmental Health, GHS

Email: edith.clarke@ghsmai.org

Western Region-In-patient Admissions

1997 – 2010

- Increase in admission by average of 6-7% p.a (Range :0.6 – 14%)
- 2008 -2009 – Increase of 22.5%
- ?Ability of H services to cope that year & future with increased population influx
- Implications for emergency services

No. of Admissions in Western Region

