UNITED NATIONS EXPERT GROUP MEETING: STRENGTHENING THE DEMOGRAPHIC EVIDENCE BASE FOR THE POST-2015 DEVELOPMENT AGENDA

New York 5-6 October 2015

Health statistics and CRVS

Carla AbouZahr

Health sector uses of demographic data

- Estimating demographic indicators –population, birth and death rates; fertility; life expectancy, mortality.
- Planning health infrastructure to address population health needs.
- Monitoring population health status through mortality levels, trends, differentials, causes.
- Planning, monitoring and evaluating health interventions designed reduce premature mortality.
- Tracking progress towards national and international goals and targets such as the MDGs, SDGs.

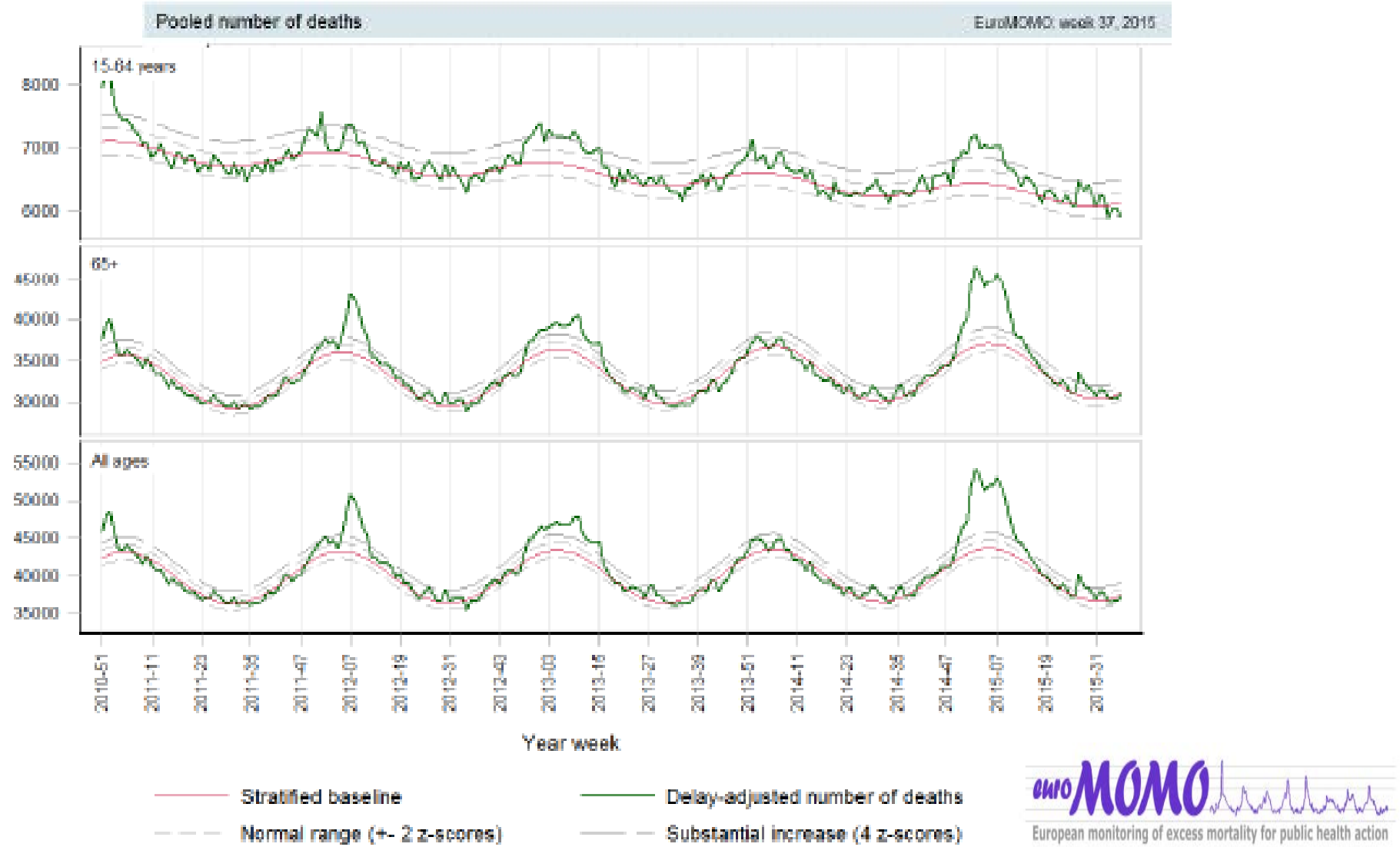
10 leading causes of death by age group, USA 2013

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Congenital Anomalies 4,758	Unintentional Injury 1,316	Unintentional Injury 746	Unintentional Injury 775	Unintentional Injury 11,619	Unintentional Injury 16,209	Unintentional Injury 15,354	Malignant Neoplasms 46,185	Malignant Neoplasms 113,324	Heart Disease 488,156	Heart Disease 611,105
2	Short Gestation 4,202	Congenital Anomalies 476	Malignant Neoplasms 447	Malignant Neoplasms 448	Suicide 4,878	Suicide 6,348	Malignant Neoplasms 11,349	Heart Disease 35,167	Heart Disease 72,568	Malignant Neoplasms 407,558	Malignant Neoplasms 584,881
3	Maternal Pregnancy Comp. 1,595	Homicide 337	Congenital Anomalies 179	Suicide 386	Homicide 4,329	Homicide 4,236	Heart Disease 10,341	Unintentional Injury 20,357	Unintentional Injury 17,857	Chronic Low. Respiratory Disease 127,194	Chronic Low. Respiratory Disease 149,205
4	SIDS 1,563	Malignant Neoplasms 328	Homicide 125	Congenital Anomalies 161	Malignant Neoplasms 1,496	Malignant Neoplasms 3,673	Suicide 6,551	Liver Disease 8,785	Chronic Low. Respiratory Disease 15,942	Cerebro-vascular 109,602	Unintentional Injury 130,557
5	Unintentional Injury 1,156	Heart Disease 169	Chronic Low. Respiratory Disease 75	Homicide 152	Heart Disease 941	Heart Disease 3,258	Homicide 2,581	Suicide 8,621	Diabetes Mellitus 13,061	Alzheimer's Disease 83,786	Cerebro-vascular 128,978
6	Placenta Cord. Membranes 953	Influenza & Pneumonia 102	Heart Disease 73	Heart Disease 100	Congenital Anomalies 362	Diabetes Mellitus 684	Liver Disease 2,491	Diabetes Mellitus 5,899	Liver Disease 11,951	Diabetes Mellitus 53,751	Alzheimer's Disease 84,767
7	Bacterial Sepsis 578	Chronic Low. Respiratory Disease 64	Influenza & Pneumonia 67	Chronic Low Respiratory Disease 80	Influenza & Pneumonia 197	Liver Disease 676	Diabetes Mellitus 1,962	Cerebro-vascular 5,425	Cerebro-vascular 11,364	Influenza & Pneumonia 48,031	Diabetes Mellitus 75,578
8	Respiratory Distress 522	Septicemia 53	Cerebro-vascular 41	Influenza & Pneumonia 61	Diabetes Mellitus 193	HIV 631	Cerebro-vascular 1,687	Chronic Low. Respiratory Disease 4,619	Suicide 7,135	Unintentional Injury 45,942	Influenza & Pneumonia 56,979
9	Circulatory System Disease 458	Benign Neoplasms 47	Septicemia 35	Cerebro-Vascular 48	Complicated Pregnancy 178	Cerebro-vascular 508	HIV 1,246	Septicemia 2,445	Septicemia 5,345	Nephritis 39,080	Nephritis 47,112
10	Neonatal Hemorrhage 389	Perinatal Period 45	Benign Neoplasms 34	Benign Neoplasms 31	Chronic Low. Respiratory Disease 155	Influenza & Pneumonia 449	Influenza & Pneumonia 881	HIV 2,378	Nephritis 4,947	Septicemia 28,815	Suicide 41,149

Data Source: National Vital Statistics System, National Center for Health Statistics, CDC.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.

http://www.cdc.gov/injury/wisqars/leadingcauses.html

Real-time counting of deaths for public health surveillance



Source: http://www.euromomo.eu/bulletin_pdf/2015/2015_37_bulletin.pdf

Lessons learnt from MDG monitoring

Fragmented country health information & statistical systems

- Lack of collaboration across sectors, health/statistics/registration/national ID/academia
- Data quality issues; bias, missing data, timeliness
- Inadequate capacities to manage, analyse, interpret data.
- Collected data not available in public domain
- Lack of data on key disaggregations
- Reliance on houshold surveys, including for causes of death
- Lack of investment in CRVS
- Statistical modelling needed to enhance comparability across countries and over time

Health in the SDGs, Goal 3: Ensure healthy lives and promote wellbeing for all at all ages

- Ideal indicator *healthy life expectancy at different ages* but measurement is challenging.
- *Life expectancy* at different ages more readily measureable; reflects both health interventions and underlying determinants of health such as socioeconomic and environmental conditions.
- Measure of premature mortality with a target of reducing the number of deaths before age 70 by 40% by 2030 globally and in every country.

Disease-specific mortality indicators for monitoring SDG Goal 3

MDG

1. Reduce the global maternal mortality ratio
2. End preventable deaths of newborns, children under 5
3. End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases

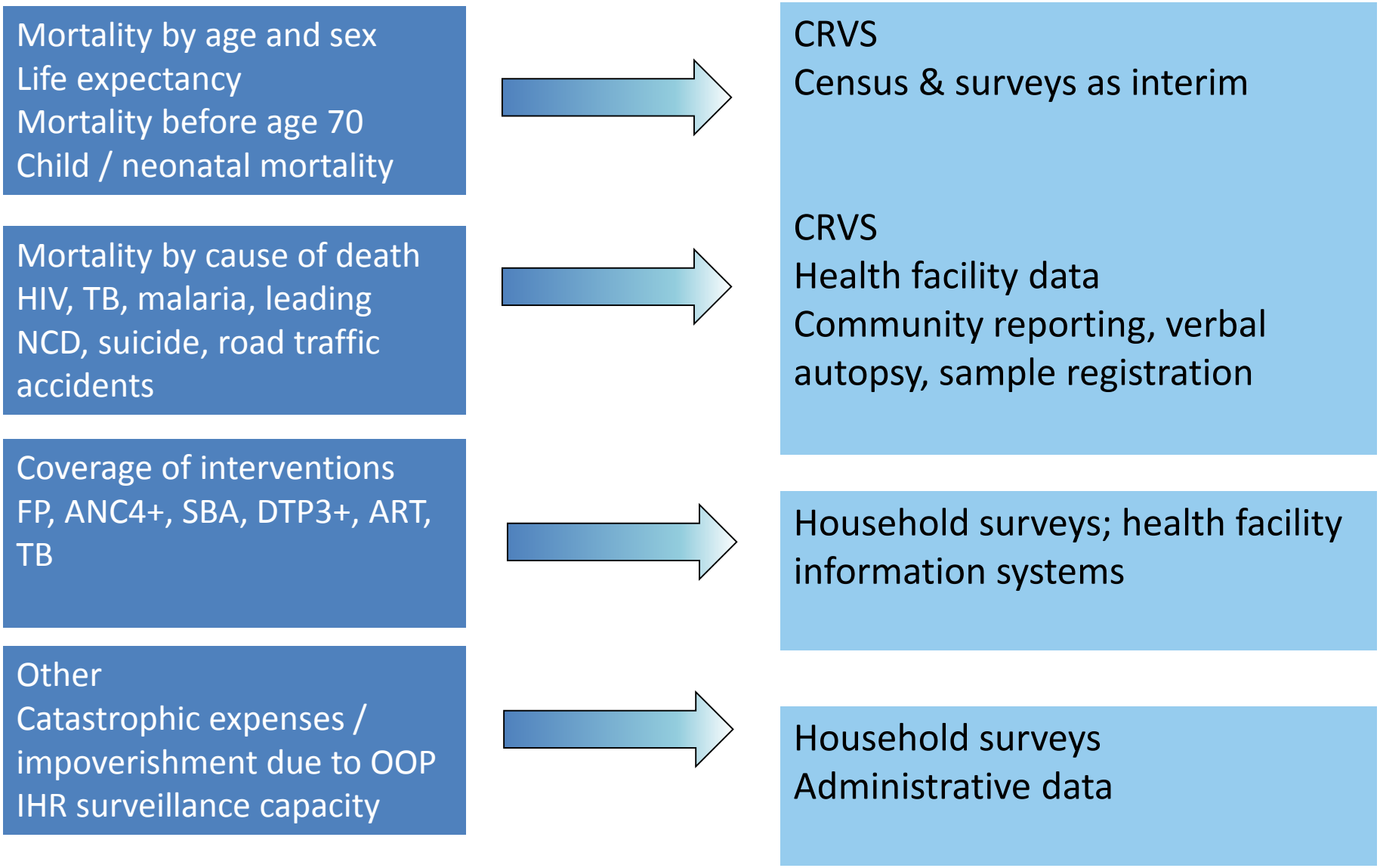
NCD

4. Reduce premature mortality from non-communicable diseases; promote mental health
5. Strengthen the prevention and treatment of substance abuse
6. Halve global deaths from road traffic accidents

Mix

7. Universal access to sexual and reproductive health services
8. Universal health coverage
9. Reduce deaths from hazardous chemicals and air, water and soil pollution and contamination.

From indicators to data sources



Traditional role of health sector in CRVS

- Health workers provide evidence of occurrence of a birth or death that occurs in a health care facility – notification.
- This notification form is used by the family when registering the event.
- For a death, physician is responsible for determining the cause of death according to the ICD; information shared with the CRVS system.
- Detailed data on births, deaths, causes of death, with associated characteristics (sex, age, location, medical history etc.) are collected through the health management information system (HMIS).

A more proactive health sector role

- The health sector directly notifies the civil registration authorities of occurrence of births/deaths.
- Networks of hospitals, health centres, and health posts, and outreach clinics (e.g. for immunization) are used to reach families to encourage registration.
- Health sector surveillance of high profile events such as maternal/perinatal deaths is used to encourage registration.
- Innovation such as mobile phones are introduced to overcome problems of distance and delays in paper-based systems.
- Innovative methods are implemented to ascertain causes of deaths outside health care facilities using verbal autopsy techniques (interviews with family members and carers of the decedent).

The way forward

- The UN has defined principles and standards for CRVS; WHO has ICD standards for death certification and coding. The challenge is to achieve quality & sustained implementation.
- Broad-based national coalitions for coordination and oversight are essential:
  - civil registration office, national ID system, ministry of health, national statistics office, local government, justice and planning authorities, NGOs, local chiefs, burial authorities, faith leaders.
- Linking registration to existing services with which citizens interact – such as health facilities – can greatly increase registration completeness and quality.
- Explore the potential of social media for generating information on vital events.

The potential of innovation

- Innovative implementation solutions:
  - electronic registries,
  - mobile applications for notification of vital events by health workers and community informants,
  - automated coding of causes of death,
  - open source and integrated ICT solutions for data compilation, analysis and dissemination,
  - verbal autopsy for community deaths using hand held devices and automated coding.
- Position CRVS systems as foundational for individual identity systems.

Key messages

- The demand for reliable, timely and disaggregated demographic statistics – especially on mortality – will increase significantly in the post-2015 era.
- CRVS offers the most effective and efficient platform for generating continuous and detailed data on births and deaths. But long history of under-development; will take time to strengthen.
- In the interim, draw upon demographic data from multiple sources, ensuring optimal integration with CRVS systems, and building country capacities to analyse and reconcile data.
- International and regional initiatives for CRVS (Asia, Africa, Middle East and the Latin America) play important roles in mobilising political will and high-level commitment, including domestic resource allocation.