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E-waste and Women's Health

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E-waste and health



- ... contains various hazardous substances
- Unsafe recycling techniques and landfilling are common in many countries.
- Informal e-recycling is a frequent source of income.

Occupational and ecological exposures may pose significant health risks

E-waste workers suffer high incidences of birth defects and infant mortality.

Hazardous Emissions from Informal Recycling Practices

- Leachates from dumping activities
- Particulate matter from dismantling activities
- Ashes from burning activities
- Fumes from “cooking”, desoldering, and other burning activities
- Wastewater from dismantling and shredding facilities
- Effluents from leaching activities
- Evaporation of substances
- Revolatilization of chemicals from soil



Multiple Toxic Effects on Health

- Neurodevelopmental deficits
- Damage to the blood and cardiovascular systems
- Respiratory diseases
- Skin problems
- Gastric diseases



WHO

Women and men may be exposed to the same environmental chemicals, however the type of exposure and consequences may differ...



Why and when may women particularly vulnerable ?

DIFFERENT, UNIQUE EXPOSURES

Diet
Multiple exposures (cleaning, smoking)
During pregnancy and lactation
Occupation – at home and outside

PHYSIOLOGY

Different metabolism, chemical storage
Hormonal cycles
Increased needs & changes in pregnancy
Particular susceptibility of reproductive, immune and skeletal systems

SOCIAL FACTORS

Powerlessness, education, poverty,....
Roles within family and community

Women's Exposures to E-Waste

- Women and their children engaged in e-recycling
- Secondary exposures
 - Home-based family workshops
 - Take-home exposures
 - Homes, play areas near dump sites (that include e-waste)
 - Breastfeeding and transplacental exposures
 - Contaminated water and foods



In Uruguay: 24 % of children with blood lead levels higher to 5 mcg/dl – burning of cables in neighboring area

E-waste and health: pregnant women

- A systematic review led by WHO and WHO collaborating centres looking at health outcomes related to e-waste exposure, showed that increases in spontaneous abortions, stillbirths, and premature births, and reduced birth weights and birth lengths are associated with exposure to e-waste



- **Environment – a myriad of risk factors in e-waste - is a key determinant in women's health and disease over their whole life span.**
- **New knowledge available, advances in genetic and molecular biology, and "omics" allow to study effects linked to the environment**
- **Joint programmes -environment, health and gender - will provide the best prevention – addressing the cause of disease rather than the cure**
- ***Involving women in key roles and decision-making will bring in a new vision to our environments, to health and wellbeing – for women, their children, families and communities***



Health Care Providers Play a Key Role

- Identifying the problem
- Diagnose exposure and treat health effects
- Defining its local determinants and characteristics
- Educating colleagues and other professionals
- Informing the community – and the children
- Raising the awareness of policy-makers
- Promoting the implementation of the appropriate measures
- Helping to evaluate the efficacy of preventive measures
- Surveillance of exposure and effects.

DATOS SOBRE SITUACION AMBIENTAL INFANTIL - HOJA VERDE (Revisar Mapa 56)			
Nombre del paciente:		Fecha: _____	
Sexo:		Profesional evaluador:	
Fecha de nacimiento:		Número de historia clínica:	
Con qué trabaja?:		Ambito de vida:	
Se encuentra en situación de trabajo?:		- Rural	
		- Urbana	
		- Peri-Urbana	
OTROS DATOS:			
CONSTRUCCION:			
- Vivienda			
- Escuela o Guardería			
- Área de recreación			
- Comunidad			
ZONA GEOGRAFICA			
ALIMENTOS			
CALIDAD DE AIRE			
CALIDAD DE AGUA			
TIPO Y CALIDAD DE SUELO			
DISPOSICION DE EXCRETAS			
DISPOSICION DE BASURA			
RUIDO			
QUIMICOS			
TRANSITO			
Expresa la mayor preocupación por un factor ambiental? Cítenlo? ¿Porque?			
Existen problemas ambientales reconocidos en el área? Cítenlos?			
En que trabajan la madre y/o el padre? Describe			
Existe exposición a animales/pedregales/vehículos? Cítenlo?			
Hay presencia de animales domésticos? Cítenlo?			
Hay presencia de vectores de enfermedades? Cítenlo?			
Hay exposición a temperaturas extremas? Describe			
Por el número de accidentes de tránsito? Describe			
Ha sufrido quemaduras, u otras lesiones? Cítenlo?			
Ha habido exposición a algún incidente químico? Cítenlo?			
Hay salvedades de intoxicación química y/o alimentaria? Describe?			
Observaciones (otros datos)			

ORGANIZACIÓN MUNDIAL DE LA SALUD 1

WHO & partners e-waste and health initiative



- WHO and partners have identified through an initial consultation (2013) urgent gaps
 - communicating the problem to health actors
 - developing training methods and tools for health professionals
 - identifying needs at local level
 - encouraging specific research about e-waste
 - gathering interested stakeholders to move this issue forward around interventions that can improve the health of those affected

Upcoming WHO/NIEHS e-waste and health workshop on next steps (August, Depok, Indonesia) Prevention Strategies to Reduce E-waste Exposure in Children and vulnerable populations