

# ENERGY INSECURITY: YOUNG CHILDREN IN MICHIGAN

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# OBJECTIVES

1. Characterize energy insecurity as an issue in young children
2. Explore policy surrounding protection of utilities in homes with young children in Michigan
3. Describe barriers and facilitators to energy restoration
4. Find productive solutions via teamwork among governmental agencies, community organizations and health care providers

# WHAT IS THE IMPACT OF ENERGY INSECURITY?

- ❖ In children <36 months of age with moderate energy insecurity:<sup>1</sup>
  - greater odds of **household and food insecurity**
  - **Increased hospitalizations** since birth
- ❖ Increased **risk of unintentional injury** with energy insecurity<sup>2</sup>
  - exposure to carbon monoxide from space heaters
  - fire risk from the use of a stove for light or heat
- ❖ **Increased risk** of heat- and cold-related **mortality**<sup>3</sup>
  - Infants and children 0 - 4 years old
  - Persons with inadequate home heating or access to air conditioning
- ❖ Mortality rates highest in **large central metro** areas and **lowest median household income**<sup>3</sup>



# NEWBORNS AND ENERGY INSECURITY

- Newborn period is 28 days.
- Before newborns can be discharged from the hospital, they need to be able to maintain body heat and control autoregulation.
- Newborns are especially at risk for:
  - Temperature instability
  - Infection

# NEWBORNS AND ENERGY INSECURITY

## Poor autoregulation of body temperature

- Cold
  - Newborns lose heat easily → hypothermic quickly
    - Surface area-to-body mass ratio, decreased ability to shiver, limited glycogen stores to support heat production<sup>4</sup>
    - Pediatric hypothermia does not require extreme exposure<sup>4</sup>
  - Newborns will use calories to keep warm instead of using them to grow and gain weight
- Heat
  - Newborns have trouble with controlling hyperthermia and can overheat
    - Higher basal metabolic rate, lower rate of sweating<sup>5</sup>
  - Similar to a heated car

# NEWBORNS AND ENERGY INSECURITY

## Lighting in home

- Children begin to sleep through the night at 4 months of age
- Light source is necessary to care for child, especially at night

# POLICY


## Michigan<sup>6</sup>

- Shut off protection
  - Age >65 yo
  - Critical care customer
  - Medical emergency
  - Medicaid, food stamps, DHS cash assistance
  - <150% poverty enrolled in payment plan
  - Winter months (Nov 1 – Mar 31)

## Case Study: Massachusetts<sup>6</sup>

- Shut off protection expanded
  - Age <12 months protected
  - Partnership between physicians, MLP, community and Department of Public Utilities<sup>7</sup>

# WHAT IS HEALTH CARE'S ROLE?

**MEDICAL EMERGENCY HOLD REQUEST** 

**Section 3: To be completed by the physician or Public Health Official**  
Please identify the medical emergency by completing one of the following boxes:

**Critical Care Patient** - A patient that requires home medical equipment or a life support system\* and that an interruption of service would be immediately life-threatening.  
The following medical equipment or life support system(s) is/are used by the patient:  
Device: \_\_\_\_\_  Electricity  Natural Gas  
Device: \_\_\_\_\_  Electricity  Natural Gas  
Device: \_\_\_\_\_  Electricity  Natural Gas  
\*This device must run on electricity or natural gas supplied by DTE Energy. Some of the equipment types that are considered medical equipment or a life support system: Aerosol tent, Apnea monitors, Compressor / Concentrator, Electronic nerve stimulator, Electrostatic retractor, Feeding or infusion pump machine, Heart monitor, Home dialysis treatment, Intermittent positive pressure breathing (IPPB) machine, Iron lung, Motorized wheelchairs, Oxygen concentrators, Pressure breathing treatment, Pressure pads and pumps, Respirator, Suction machine, Ultrasonic nebulizer and Ventilator.  
Note: CPAP & BPAP machines for adult sleep apnea do not normally qualify.

**Medical Emergency Patient** - A patient that has an existing condition that will be aggravated by the lack of utility service.  
The patient has the following medical emergency condition(s) that will be aggravated by the loss of electricity and/or natural gas service:  
Condition: \_\_\_\_\_  Electricity  Natural Gas  
Condition: \_\_\_\_\_  Electricity  Natural Gas

**Check One**  Physician  Public Health Official

Name - Last First Middle

Professional License Number

Licensing State

**By signing below you are certifying the above information is true.**

Physician's/ Public Health Official's Signature	Date
Job Title if Non-Physician	Telephone Number ( )
Physician's/ Public Health Official's Full Address	Type of Medical Practice





## HOW PREVALENT IS THIS ISSUE?

- Research being conducted to quantify:
  - Prevalence in metro-Detroit and Detroit
  - Energy insecurity measure
  - Associated at-risk behaviors in the home to combat the latter
  - Distribution of finances – “heat or eat”



Clinic observation

MLP meetings and resources  
Literature review, Case studies

Research

- Young children in Metro/Detroit
- Demographics
- At-risk behavior
- Heat or eat

Practical  
Advocacy

- MPSC
- Patient Legal Support (I-HELP)
- THAW + Social Work

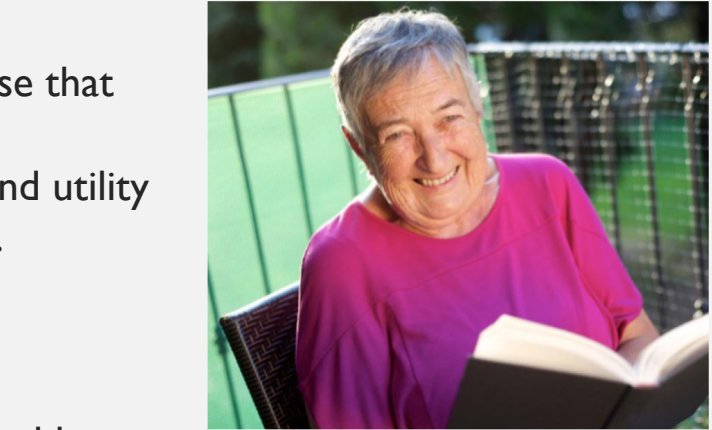
Training

- Pediatric Questionnaire
- Resident training
- Advocacy reminders

# HOW CAN WE COME TOGETHER AS A COMMUNITY?

## 1. Partnership in policy for young children:

- a. Start dialogue w/ MPSC, utility companies and those that influence change for potential policy update.
- b. Educate physicians, health care workers, trainees and utility entities with the goal of being *accurate* and *truthful*.



## 2. Address barriers to restoration:

- a. Provide rapid assistance to our community's vulnerable populations while balancing fraudulent activity.
- b. Bridge gap between interim health and safety concerns in homes while working on energy efficiency.

# LET'S BUILD A HEALTHIER ENVIRONMENT FOR OUR CHILDREN.

## ❖ Additional potential ideas for change:

- Partner in solutions for policy, financial assistance, payment plans and energy efficiency
- Training ideas or topics for residents, physicians and health care workers
- If power cannot be restored, what can we do for vulnerable families in the interim? What can we do for families after utilities are restored?
  - Connect community energy efficiency resources with financial planning and assistance

## REFERENCES

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# Thank you! Questions?

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