

Fuel Poverty in Lawrence, MA

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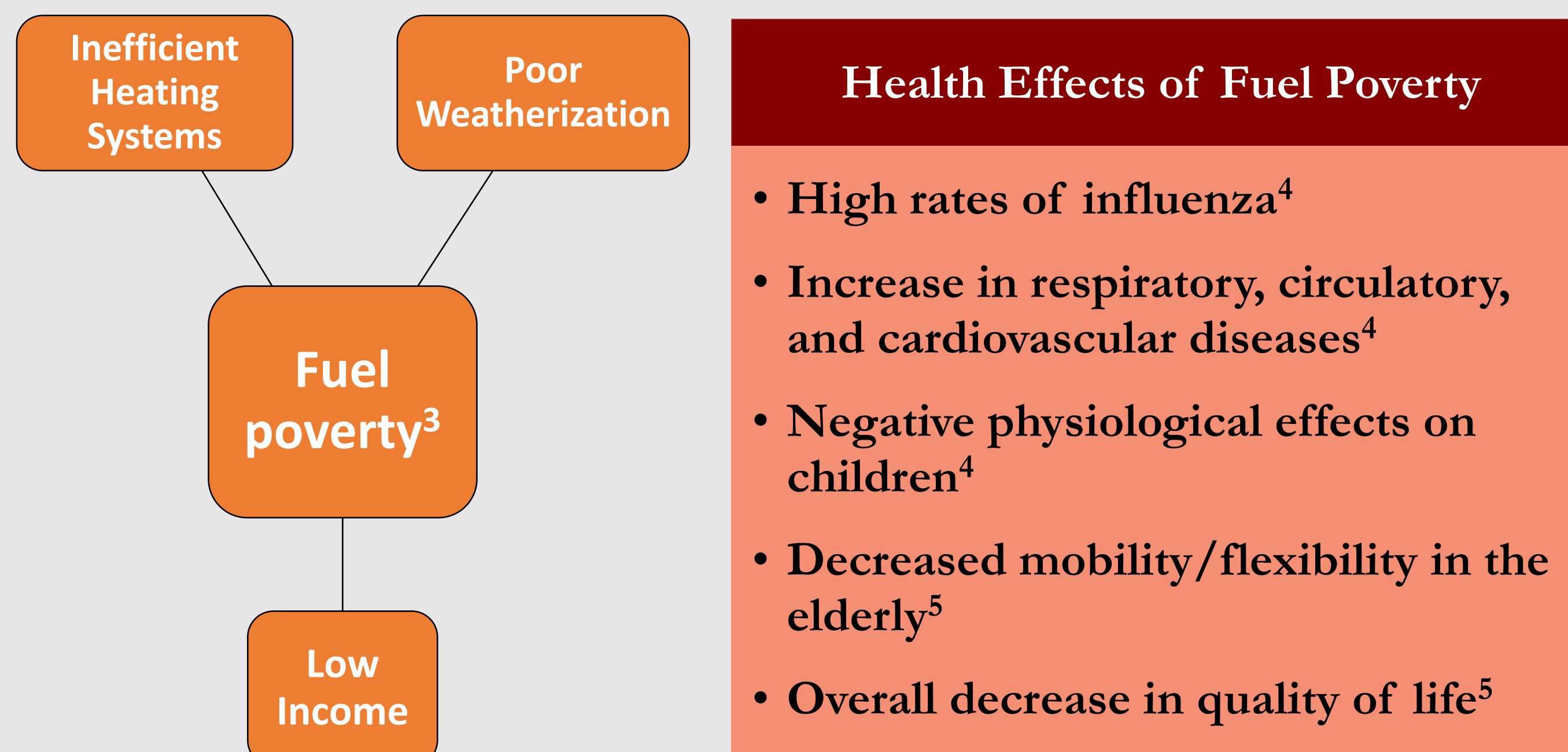


Abstract

Low income communities in Lawrence, MA face the hardship of fuel poverty. This dilemma does not have a one-size-fits-all solution. We strive to contribute to the community by designing a low cost weatherization kit that households can easily utilize.

Background

In the US, ~15.9 million households live in fuel poverty.¹ A household is in fuel poverty if they spend over 10% of their net income to safely heat their home.²



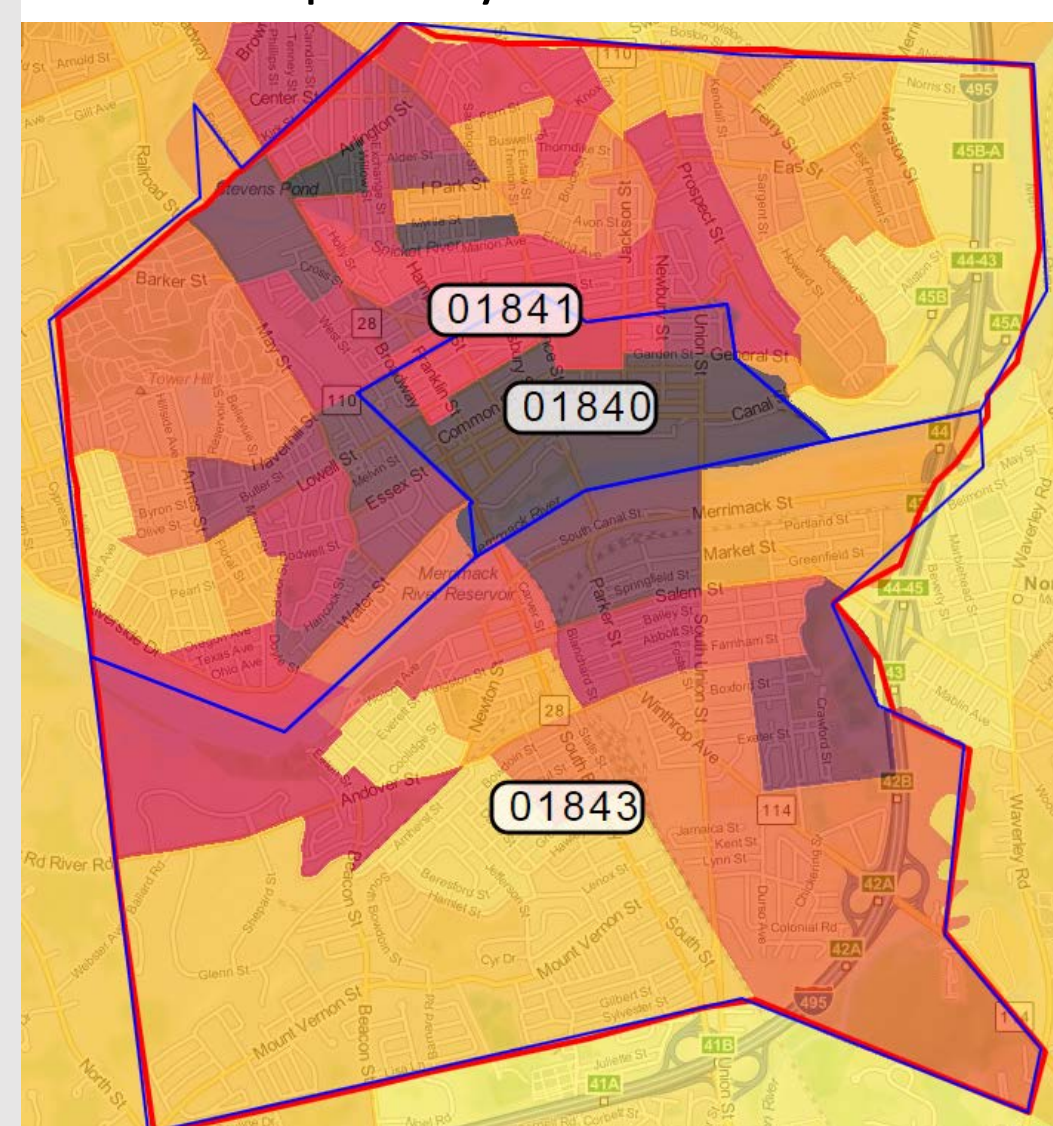
South Lawrence

- Average income \$80,000/year⁶
- Race Distribution:⁷
- 52.5% White
- 26% Hispanic

North Lawrence

- Average income \$21,000/year⁶
- Race Distribution:⁷
- 16.2% White
- 77.5% Hispanic

Residents with income below the poverty level 2015⁶

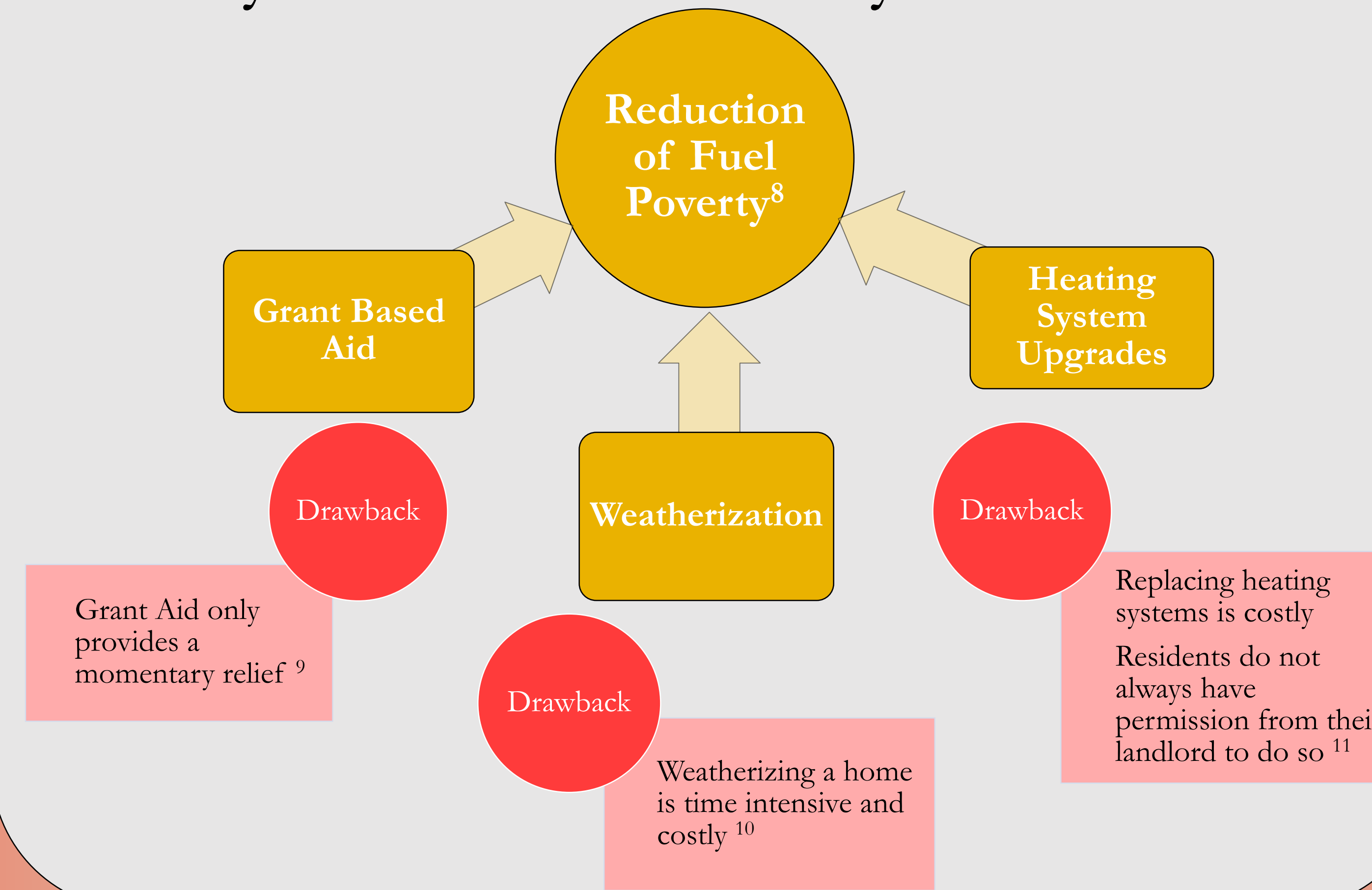


LIHEAP Aid Applicants by Zip Code 2015⁷



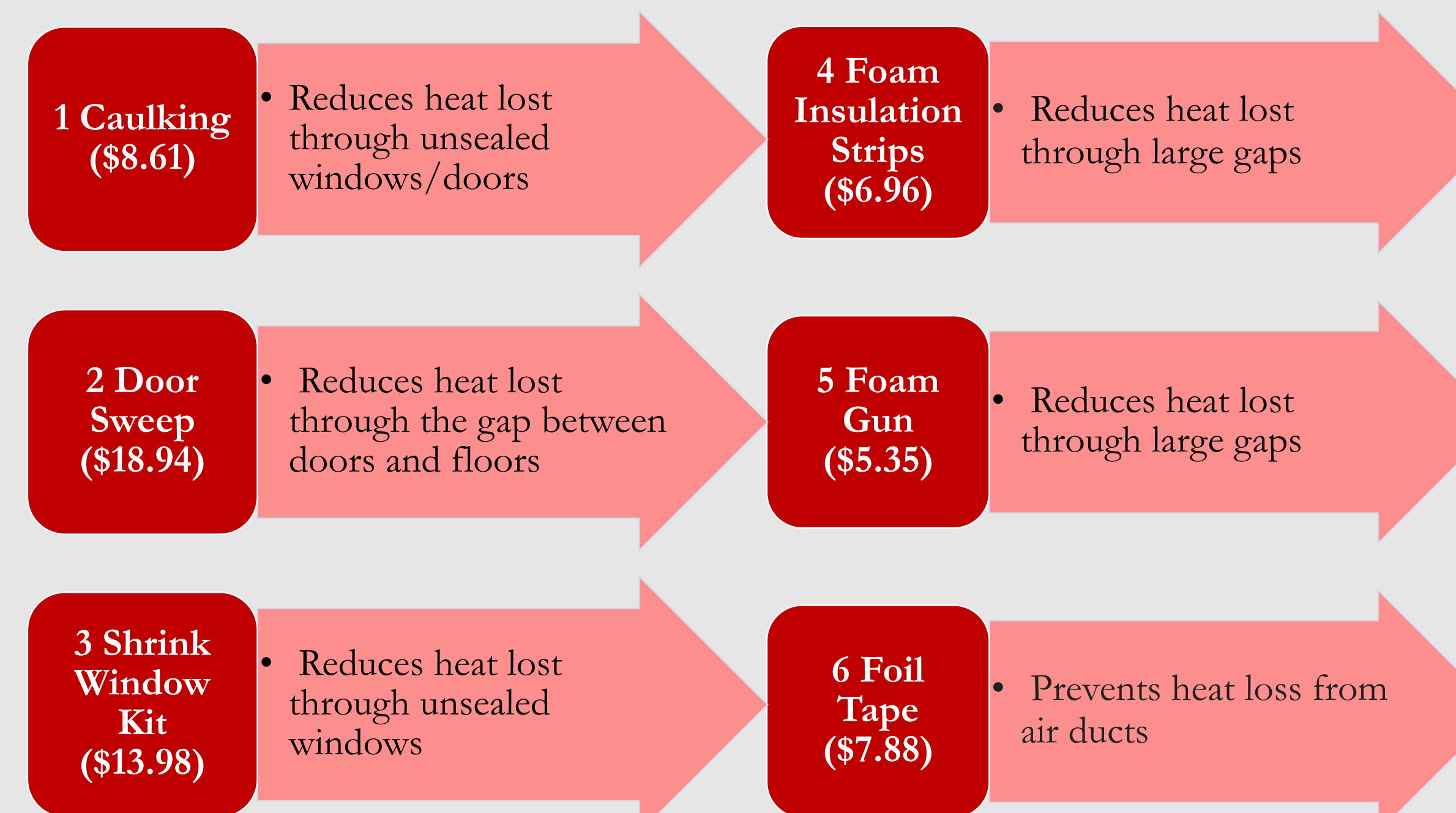
North Lawrence 01840 (6%) North Lawrence 01841 (67%)
 South Lawrence 01843 (27%)

Ways that Fuel Poverty is Handled



Weatherization Kit

Description of kit contents and benefits



Note: The numbers above do not match our total cost of the kit as some basic tools are not listed.



Matthew Dick (Creator). (2016). Weatherization Kit [Photograph]

Waffles for Warmth

In order to raise money for the weatherization kit, we sold waffles to the general public of WPI. We also held a raffle contest with gift cards from various restaurants around the Worcester, MA area.



Money Raised: \$380.00



Matthew Dick (Creator). (2016). Waffles for Warmth [Photograph]



Matthew Dick (Creator). (2016). Waffles for Warmth [Photograph]

Conclusion

While not the most effective solution, the weatherization approach is the most realistic solution in terms of cost for this area. We successfully raised enough money to put together an affordable weatherization kit for \$106.00. Because of its low cost, this kit could potentially be implemented in low income households to help combat fuel poverty.

Acknowledgements

We would like to thank:

Professor Brian Savilonis and Professor Geoff Pfiefer
 Rebecca Ziino: Research Librarian
 Sam Ervin and Hary Teklegiorgis (PLAs)
 Linda Soucy: LIHEAP Director in Lawrence, MA
 Larry Bever: Director of Weatherization at The Community Teamwork Ink in Lowell, MA

Mr. Frezza & Mr. Martin: Landlords in RI
 Panera Bread in Worcester, MA
 The Boynton in Worcester, MA
 Matt Dick: Photographer for Waffles for Warmth
 Waffles for Warmth Volunteers
 Jess Norman for buying so many waffles

References

¹Power, M. (2006). Fuel poverty in the USA: The overview and the outlook. *Energy Action*, (98)
²Marmot Review Team (2011). The Health Impacts of Cold Homes and Fuel Poverty. *Friends of the Earth*.
³Boardman, B. (2012). Fuel poverty synthesis: Lessons learnt, actions needed. *Energy Policy*, 49, 143-148. <https://doi.org/10.1016/j.enpol.2012.02.035>
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⁵Teller-Elsberg, J., Sovacool, B., Smith, T., Lane, E. (2016). Fuel poverty, excess winter deaths, and energy costs in Vermont: Burdensome for whom? *Energy Policy*, 90, 81-91. <http://dx.doi.org/10.1016/j.enpol.2015.12.009>
⁶Lawrence, Massachusetts Demographics. (2013). Interactive Map representing various demographic data sets in Lawrence, MA. Advamag, Inc. Retrieved from <http://www.city-data.com/city/Lawrence-Massachusetts.html>
⁷Phillips, S. (2001). *Weatherize your home—caulk and weather strip: Energy efficiency and renewable energy clearinghouse (EREC) brochure*. National Renewable Energy Lab, Golden, CO (United States).
⁸Walker, R., Laddell, C., McKenzie, P., Morris, C., & Lagdon, S. (2014). Fuel poverty in northern Ireland: Humanizing the plight of vulnerable households. *Energy Research & Social Science*, 4, 89-99. [doi://dx.doi.org/10.1016/j.erss.2014.10.001](https://doi.org/10.1016/j.erss.2014.10.001)