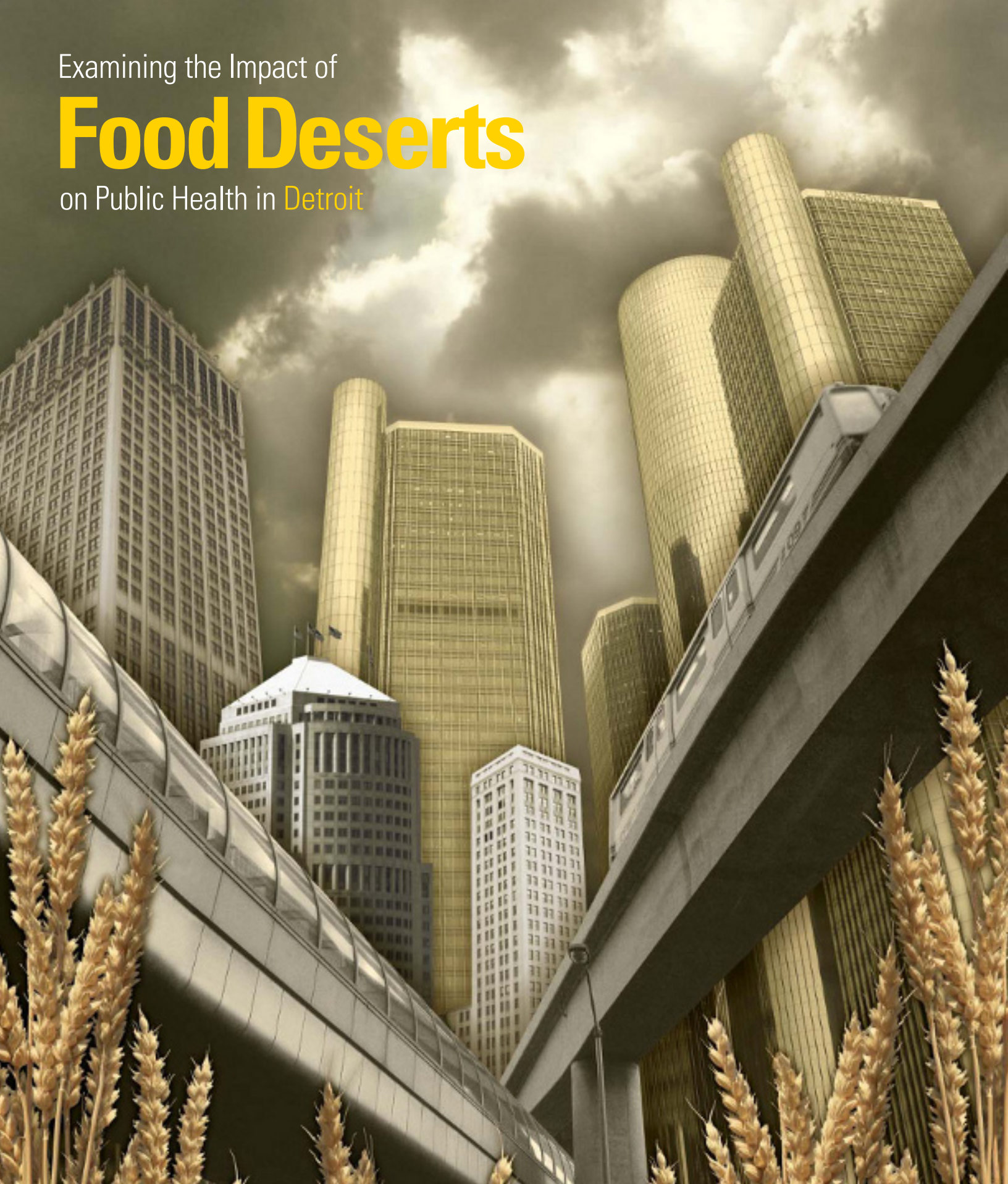


Examining the Impact of

Food Deserts

on Public Health in Detroit



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Full Executive Briefing

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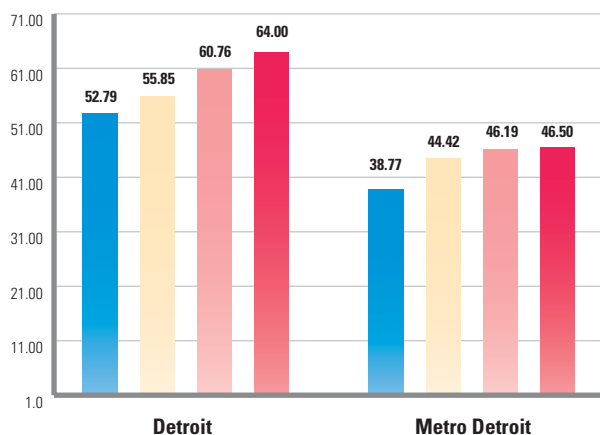
Executive Briefing

Examining the Impact of Food Deserts on Public Health in Detroit

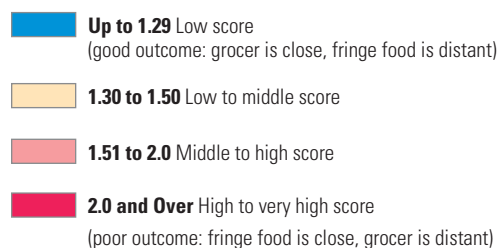
Overview

We know Detroit as the birthplace of Henry Ford's moving assembly line, an invention that put America on wheels. Detroit also installed the first mile of paved concrete, the first traffic light, and the first urban freeway. But today, the Motor City has the distinction of being the most expensive place in the U.S. in which to own and operate an automobile¹; more than a fifth of Detroit households are carless.² Never having been a city known for its public transportation, Detroit is now an even tougher place in which to do simple things, such as make a trip to the grocery store. The increased costs of driving parallel Detroit's new title: world's top potato chip consumer.³ But what are the health costs for residents of any city consuming potato chips, high fat burgers, or soda in greater and greater quantities over more nutritious, fresh foods on a regular basis? Science has repeatedly demonstrated that diet equals health, but to what degree is our health determined by the kinds of foods that are available to us?

Chart 1: Diet-Related Years of Potential Life Lost by Food Balance Scores by Detroit and Metro Detroit Tracts Per 100 Population



Food Balance Scores Chart Legend



This is the focus of *Examining the Impact of Food Deserts on Public Health in Detroit*. Our premise is that the health and vitality of urban communities are block-by-block phenomena. Therefore, we first measure the distance from every block in Detroit and the surrounding metropolitan area to the closest grocery store, fast food establishment, and other food venues. We consider the locations of USDA Food Stamp retailers and conduct an analysis of their distribution by specific retail category.⁴ Then we develop an empirical score to quantify the balance of food choices available to residents. Finally, we compare food access and food balance directly to diet-related health outcomes. Here is what we found:

1. Diet-related health outcomes in both Detroit and Metro Detroit are worse in areas of food imbalance, even after accounting for differences in income, education, and race.

2. Within the Metro Detroit area, the City of Detroit suffers most. Roughly 550,000 Detroit residents – over half of the city's total population – live in areas that are far out-of-balance in terms of day-to-day food availability.⁵ This means that they must travel twice as far or further to reach the closest mainstream grocer as they do to reach the closest fringe food location, such as a fast food restaurant or a convenience store.

3. Considerable life is lost as a result. To measure this effect, we correlated Food Balance Scores (the distance to the closest grocer divided by the distance to the closest fringe food location) with diet-related Years of Potential Life Lost (YPLL) calculations. YPLL measures the impact of premature death from a certain cause, in this case, food imbalance. In our charts and maps throughout this report, red tones signify a poor outcome, blue tones signify a good outcome, and neutral tones signify an average outcome. Chart 1 shows us that, as Census tracts in Detroit and Metro Detroit become more out-of-balance (moving toward the red zone), premature death increases, most strikingly in Detroit. The pattern repeats itself each time. How many additional years of collective life are lost in the most out-of-balance areas? For Detroit, diet-related YPLL for the average tract in the in-balance blue zone is roughly 53 years per 100 people, and for the average tract in the most out-of-balance red zone, diet-related YPLL is 64 years per 100 people. This means that there is an additional 11 years of collective life lost per every 100 people on average in those most out-of-balance Detroit tracts. In Metro Detroit, there is an additional 7 years of collective life lost in the most out-of-balance tracts per every 100 people compare to the in-balance zone. We are careful not to suggest cause and effect or to generalize our findings to the individual. However, we again find evidence that communities with food imbalance are more likely to experience worse diet-related health outcomes than other communities, even when those communities have similar socio-economic characteristics. The types of food options we live closest to – along with many other factors – are related to our health.

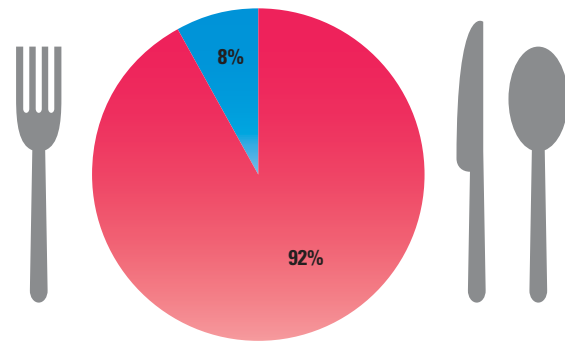
Over half a million Detroit residents live in areas that have an imbalance of healthy food options. They are **statistically more likely to suffer or die** prematurely from a diet-related disease, holding other key factors constant.

4. Why is there such a stark food imbalance in Detroit? The problem is not that there are no or few retailers that sell food. Many stores and restaurants sell food throughout Detroit. In fact, the average family would only need to travel a few blocks to reach some type of food option. The problem from a public health perspective is that there are relatively few food venues that appear to sell quality food or a good selection of healthy food. This is what creates the high degree of food imbalance that steals life and vitality from Detroit residents and from others throughout the region that live very close to many fringe food options, but far from a mainstream grocer.

5. The greatest contributor to the heavy concentration of fringe food options and to the negative diet-related health effects of food imbalance is not fast food, as we originally suspected, but USDA Food Stamp retailers. In Detroit, USDA Food Stamp retailers are primarily fringe food locations, such as gas stations, liquor stores, party stores, dollar stores, bakeries, pharmacies, and convenience stores. Only 8% of all Detroit Food Stamp retailers are small, medium, or large grocery stores or supermarkets by our definition. These fringe locations appear not to specialize in healthy foods but, instead, in the sale of 1) alcohol, 2) tobacco, 3) lottery tickets, and/or 4) a comparatively small selection of prepackaged and canned food products high in salt, fat, and sugar.

6. Because there is such wide-spread concentration of fringe Food Stamp retailers throughout Detroit, we suspect that the negative health effects associated with food imbalance impact not only the poor, but also thousands of additional moderate

Chart 2: Recoded Mainstream and Fringe Food Stamp Retailers in Detroit



Pie Chart Legend

Fringe Retailers: 92% Gas stations, liquor stores, party stores, dollar stores, bakeries, pharmacies, convenience stores, and other venues

Mainstream Retailers: 8% Small, medium, and large grocery stores and supermarkets

and upper income residents who also have difficulty reaching mainstream grocers on a regular basis or who have grown accustomed to the pervasive fringe food environment. Whether you are a diabetic, an elderly person, a young professional, or a mother trying to raise a healthy child, following a doctor's dietary recommendation is likely difficult if you live in one of these far out-of-balance areas.

longer and more enjoyable life – to the residents of Detroit and the surrounding region.

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7. Looking ahead, food imbalance will likely have a compounding public health effect on communities as residents age in place, and on future generations that grow up and remain in food imbalanced areas. Unless access to healthy food greatly improves, we predict that, over time, those residents will continue to have greater rates of premature illness and death from diabetes, cardiovascular diseases, cancer, hypertension, obesity, kidney failure, and other diet-related complications. Food imbalance will likely leave its mark directly on the quality, productivity, and length of life, and indirectly on health care costs, school test scores, and the economic vitality of the city and the region.

Over the course of this study, we drove up and down just about every major Detroit corridor and visited the interiors of over 200 different types of retailers that sell groceries. Certainly there are examples of quality supermarkets, grocers, and farmers markets in Detroit. There are also very capable and energetic community, market, and government leaders committed to recruiting and supporting purveyors of healthy food. Yet the preponderance of fringe food is stark. That any major city located in a state with a rich tradition of agriculture can have such a high degree of food imbalance is troubling.

So what can be done? Identifying both market and needs-based strategies that promote access to nutritious food will require input from the food desert residents themselves, as well as from grocers, bankers, brokers, developers, planners, health advocates, philanthropists, government officials – ultimately everyone – to achieve even a modest level of success. Such a coalition would have a unique opportunity, not only to recruit new grocers, but to support product and infrastructure improvements to existing convenience and corner stores. Given that these store owners have already made a local investment and are continuing to serve the market, they might be our best hope yet for bringing fresh and healthy food – and