

**Chemung County Poverty Alleviation Literature Review**

Nia Myfanwy Clements

Prepared for the Cornell Cooperative Extension of Chemung County & Chemung County Poverty  
Reduction Coalition

January 2023

### ***I. Purpose of literature review***

Compared to New York State, Chemung County has a slightly elevated poverty rate. To address this elevated poverty rate, the Cornell Cooperative Extension of Chemung County has spent the past decade investigating different poverty reduction strategies by engaging with community members. Part of this community engagement includes the administration of the Chemung County Poverty Reduction Coalition, which aims to identify the needs of Chemung County community members who are experiencing poverty. The purpose of this literature review is to inform the Chemung County Poverty Reduction Coalition of community-based poverty alleviation initiatives that may apply to Chemung County.

### ***II. Acknowledgements***

I would like to thank Jackie Spencer at the Cornell Cooperative Extension of Chemung County for her advisement of this project, Lauren Mabry at the Cornell University Flower-Sprecher Veterinary Library for assistance in database searching, and Dr. Tom Hirschl at the Cornell University Department of Global Development for providing relevant information about Chemung County.

### ***III. Sociodemographic information***

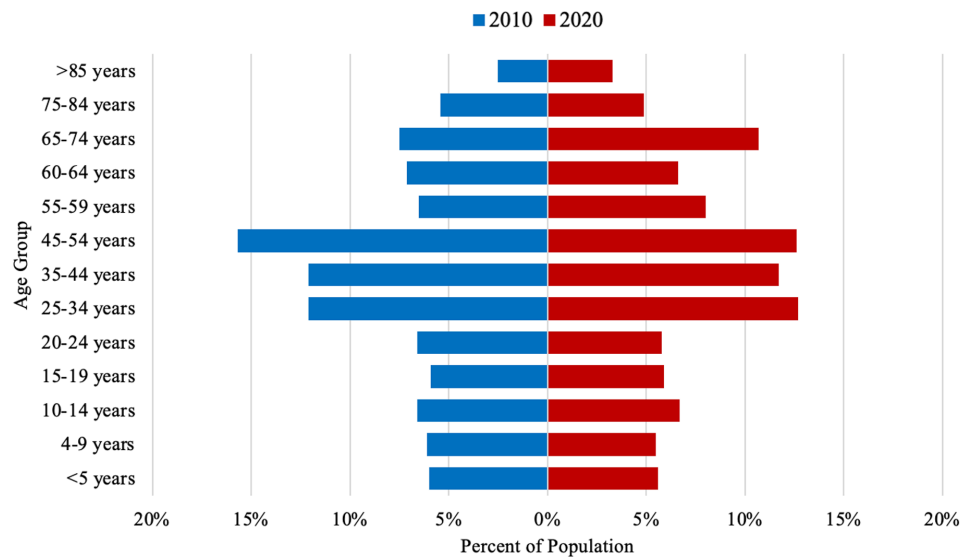
#### ***a. General sociodemographic information for Chemung County***

Located on the border between New York and Pennsylvania, Chemung County is considered the “Gateway to the Finger Lakes” due to its proximity to the Finger Lake Region just north of the county (Chemung County Health Department, 2016). The population size of Chemung County as determined by the 2020 Decennial Census was 88,148, which corresponds to a much larger population per square mile than its bordering counties such as Tioga, Schuyler, and Steuben (Chemung County: 206.6 population per mi<sup>2</sup>; Tioga County: 93.4 population per mi<sup>2</sup>; Schuyler County 54.4 population per mi<sup>2</sup>; Steuben County 67.3 population per mi<sup>2</sup>) (United States Census Bureau, n.d-a). Since the 2010 Decennial Census, the County’s population decreased by 0.8% (88,830 in 2010; 88,148 in 2020) (United States Census Bureau, n.d-a). The largest metropolitan area of Chemung County is Elmira, with a population of 26,523 according to the 2020 Decennial Census (United States Census Bureau, n.d-a).

Most people in Chemung County identify themselves as White. In 2020, the County was 83.7% White (70,463 people), followed by 6.8% mixed race (5,736 people), 6.3% Black or African American (5,315 people), 1.7% Asian (1,432 people), 1.1% some other race alone (947 people), 0.3% American Indian and Alaska Native (240 people), and >0.1% Native Hawaiian and Other Pacific Islander alone (15 people) (United States Census Bureau, n.d-b). The largest mixed group are those who identify as White and Black or African American (33.0%, 1892 people) (United States Census Bureau, n.d-b), and 3.24% of residents (1,892 people) identify themselves as Hispanic (Data USA, n.d). These population distributions are similar to that of the 2010 Decennial Census (United States Census Bureau, n.d-c).

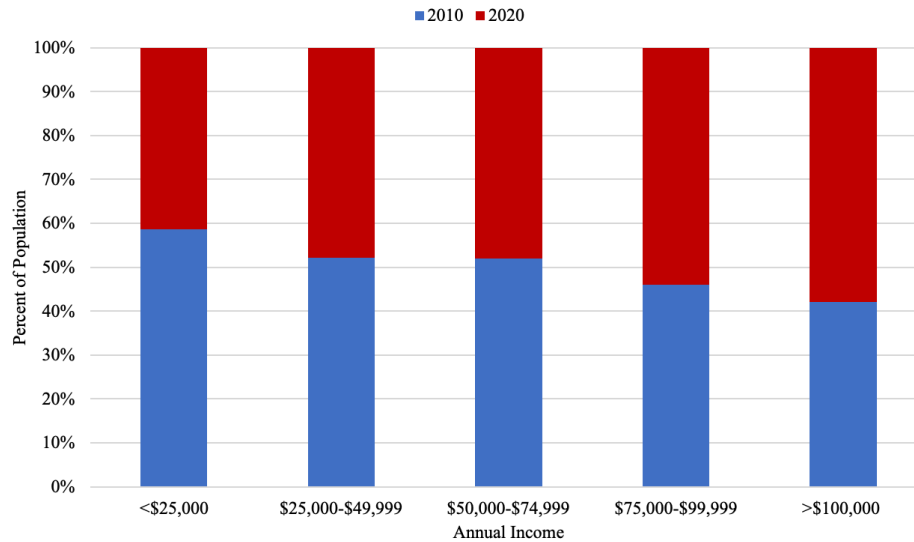
The population distribution of sexes and age groups are similar in 2010 and 2020. The proportion of males to females in Chemung County is roughly the same, although in 2020 there were estimated to be slightly more females than males (females: 50.4%, 42,433 people; males: 49.6%, 41,682 people) whereas there was estimated to be more males than females in 2010 (females: 49.6%, 44,088 people; males: 50.4%, 44,736 people) (United States Census Bureau, n.d-d; United States Census Bureau, n.d-e). The most populous age groups in Chemung County in 2020 were estimated to be the 25-34 years old (12.7%) and 45-54 years old (12.6%) age groups (United States Census Bureau, n.d-d). Additionally, it was estimated that there were more people under the age of 5 years old (5.6%) than people 85 years and older (3.3%) (United States Census Bureau, n.d-d). As shown in **Figure 1**, the population distribution among age groups was roughly similar between 2010 and 2020 (United States Census Bureau, n.d-d; United States Census Bureau, n.d-e). The median age between 2010 and 2020 was not significantly different, as the

median age in 2010 was 40.5 ( $\pm 0.6$ ) and 41.3 ( $\pm 0.4$ ) in 2020 (United States Census Bureau, n.d-d; United States Census Bureau, n.d-e).



**Figure 1.** Population age distribution estimates for 2010 and 2020 in Chemung County. Data obtained from the 2010 and 2020 Census Bureau’s American Community Surveys (United States Census Bureau, n.d-d; United States Census Bureau, n.d-e).

The population distribution of income groups has changed since 2010 in Chemung County. As displayed in **Figure 2**, the >\$100,000 income group was estimated to contain the largest proportion of the population in 2020 (27.50%), whereas the \$25,000-\$49,999 income group was estimated to contain the largest proportion of the population in 2010 (23.61%) (United States Census Bureau, n.d-f; United States Census Bureau, n.d-g). The \$25,000 to \$49,999 income group was estimated to be the second most populous group in 2020 (21.59%) (United States Census Bureau, n.d-f). The change in estimated proportion of population in each income group from 2010 to 2020 was only notable for the <\$25,000 income group (21.23% in 2010; 14.99% in 2020) and the >\$100,000 income group (20.04% in 2010; 27.50% in 2020) (United States Census Bureau, n.d-f; United States Census Bureau, n.d-g). These changes are reflected in the poverty rates for Chemung County from 2013 to 2022, which has decreased by 1.1% (15.8% in 2013; 14.7% in 2022) (New York State Community Action Association, 2013; Economic Opportunity Program, Inc. of Chemung and Schuyler Counties, 2022). Additionally, within this same time frame, the proportion of the population in poverty for children has decreased by 2.6% (23.7% in 2013; 21.1% in 2022), increased by 0.1% for adults (12.0% in 2013; 12.1% in 2022), and decreased by 1.1% for senior citizens (8.7% in 2013; 7.6% in 2022) (**Table 1**) (New York State Community Action Association, 2013; Economic Opportunity Program, Inc. of Chemung and Schuyler Counties, 2022). The poverty rate in Chemung County remains higher than the New York State average (15.1%  $\pm$  3.0% in Chemung County versus 13.9%  $\pm$  0.2% in New York State; 2021 American Community Survey estimates) (United States Census Bureau, n.d-h).



**Figure 2.** Annual income estimates adjusted for inflation for 2010 and 2020 among Chemung County community members. Data obtained from the 2010 and 2020 Census Bureau's American Community Surveys (United States Census Bureau, n.d-f; United States Census Bureau, n.d-g).

**Table 1.** Individuals in poverty for different age groups in Chemung County for 2013 versus 2022. Data obtained from the New York State Community Action Association (2013) and the Economic Opportunity Program, Inc. of Chemung and Schuylar Counties (2022).

Population	2013 (%)	2022 (%)
Total individuals in poverty	13,036 (15.8)	11,670 (14.7)
Children in poverty (<18 years old)	4,573 (23.7)	3,706 (21.1)
Adults in poverty (25+ years old)	6,823 (12.0)	6,800 (12.1%)
Senior Citizens in poverty (>65 years old)	1,129 (8.7)	1,161 (7.6%)

***b. Poverty-related sociodemographic information for Chemung County***

Indicators of poverty and economic hardship include health insurance coverage, homeownership and vacancy status of homes, labor force participation, adult educational attainment, child poverty, preschool enrollment, and number of female-headed households (New York State Community Action Association, 2013; Morrell, 2021).

**Health insurance coverage.** As of 2021, 98.1% of children (<19 years old) in Chemung County have health insurance, which is higher than the New York State average of 97.7% (New York State Department of Health, 2022). This trend is also observed for adult (18-64 years old) health insurance coverage (Chemung County: 95.0%; New York State: 92.5%) (New York State Department of Health, 2022). Additionally, in 2021, the percentage of people with public health insurance (such as Medicaid) was 27.6% in Chemung County, which is 1.9% higher than the New York State average (25.7%) (New York State Department of Health, 2022).

**Homeownership and vacancy status of homes.** According to the 2020 American Community Survey, 88.1% of housing units are estimated to be occupied and 11.9% of housing units are estimated to be vacant in Chemung County (United States Census Bureau, n.d-d). By this same measure, the estimated homeowner vacancy rate is 1.4% and rental vacancy rate is 8.4% for Chemung County (United States Census Bureau, n.d-d). The homeowner vacancy rate for Chemung County is similar to the New York State average (1.5%), but the rental vacancy rate is significantly different for New York State versus Chemung County (New York State: 4.0%  $\pm$  0.1%; Chemung County: 8.4%  $\pm$  2.3%) (United States Census Bureau, n.d-d).

**Labor force participation.** As determined by 2020 American Community Survey estimates, among the labor-force aged (19-64 years old), non-institutionalized population in Chemung County, 53.2% worked-full time, 26.5% worked less than full-time, and 20.2% did not work, which is similar to the proportions estimated for New York State (53.9% full-time workers, 25.7% less than full time workers, 20.4% did not work) (United States Census Bureau, n.d-f).

**Adult educational attainment.** For adults aged 25 years old and older in Chemung County, 2020 American Community Survey estimates reveal that 10.1% did not complete high school, 34.6% graduated high school (or equivalent), 19.0% have some college experience but no degree, 12.8% received an Associate's Degree, 12.7% received a Bachelor's Degree, and 10.8% received a graduate or professional degree (United States Census Bureau, n.d-i). Compared to Chemung County, New York State has a higher estimated percentage of people who did not complete high school (12.8%), people who received a Bachelor's Degree (20.9%), and people with a graduate or professional degree (16.5%) (United States Census Bureau, n.d-i). Conversely, New York State has a lower estimated percentage of people who graduated high school (or equivalent) (25.5%), people who experienced some college with no degree (15.5%), and people who received an Associate's Degree (8.9%) compared to Chemung County (United States Census Bureau, n.d-i).

**Child poverty.** As of 2020, Chemung County has a 2.1% higher percentage of children (<18 years old) experiencing poverty than the New York State (20.3% in Chemung County; 18.2% in New York State), which has remained constant since 2018 (New York State Department of Health, 2022).

**Preschool enrollment.** The 2021 American Community Survey estimated percentage of children in school between 3-4 years old is 8.2% lower in Chemung County than the New York State average (50.7% in Chemung County; 58.9% in New York State), which has improved since 2014-2018 (48.4% in Chemung County) (New York State Department of Health, 2022).

**Number of female-headed households.** Of the 34,328 households in Chemung County, 12.3% are family households with a female householder and no spouse present, which is lower than that of New York State as a whole (14.0%) as estimated by the 2020 American Community Survey (United States Census Bureau, n.d-j).

#### *IV. Relevant history of Chemung County*

##### *a. Carceral reindustrialization*

Chemung County's history of "carceral reindustrialization" provides context to the County's slightly elevated poverty rate compared to New York State (Morrell, 2021). In the 1950s, the Chemung Canal became a large trading area, prompting the creation of railway and steel industries in the County (Morrell, 2021). A few decades later, the deindustrialization movement in upstate New York caused the industries to fade and the population of Chemung County to decline until around 2000, resulting in economic desolation (Morrell, 2012). To economically revitalize the area, the state selected Elmira—Chemung County's primary metropolitan area—to be the site of a new prison that could replace the job opportunities lost from deindustrialization (Morrell, 2012). The state viewed the jobs that would be created from the prison as ideal because the prison would create more state workers and because incarceration is a recession-resistant sector (Morrell, 2012). By 1988, Elmira and the surrounding areas had two prisons: the Elmira Correctional Facility completed in 1876 and the Southport Correctional Facility completed in 1988 (Morrell, 2012). As of 2012, almost 2,500 men were incarcerated in these two prisons (Morrell, 2012). Southport Correctional Facility—the solitary confinement prison that resulted from the economic revitalization initiative in the 1980s—resides 800 men (Morrell, 2012). In 2021, the number of total people incarcerated between these two facilities was reduced to 1,800 (Morrell, 2021).

This plan to economically revitalize the area by building the Southport Correctional Facility was not successful as evident by the economic circumstances of Elmira today. The median income in Elmira from 2016 to 2018 was \$19,820 lower than the rest of Chemung County, which itself has a median income lower than New York State and the United States (**Table 2**) (Chemung County Health Department, 2016). Additionally, the poverty rate in Elmira from 2016 to 2018 is 12% higher than the Chemung County average (Chemung County Health Department, 2016). Horseheads, a nearby town only a ten-minute drive away, has an estimated poverty rate about three times lower than Elmira (25.5% in Elmira in 2022; 8.4% in Horseheads in 2022), highlighting the lasting economic impact of carceral reindustrialization (United States Census Bureau, n.d-k).

**Table 2.** Median income and poverty rate for Elmira and Chemung County compared to state and national averages in 2016. Data from the Chemung County Health Department (2016).

<b>Geographic Region</b>	<b>Median income</b>	<b>Poverty rate</b>
Elmira	\$29,865	30.2%
Chemung County	\$49,685	18.2%
New York State	\$58,687	15.4%
United States	\$53,482	13.5%

In addition to economic divides, carceral reindustrialization has had an impact on social and racial equity. The presence of the Southport Correctional Facility has made poor community members in Elmira vulnerable to criminalization (Morrell, 2012). This criminalization and the carceral solution have had a disproportionate impact on communities of color, as 25% of African American residents in Elmira are in the Elmira Correctional Facility (Morrell, 2012). At the Southport Correctional Facility, security employees are 96% White and those incarcerated are 75% Black and Latinx, highlighting a racially divided environment (Morrell, 2012). In addition to the moral challenges that arise with incarceration, those who are employed in the prison feel negatively impacted with the perceptions that others have towards their work, resulting in employees that feel “undervalued or misunderstood” (Morrell, 2021). These feelings of dissatisfaction among those who work at the prison along with the disproportionate impact of incarceration on communities of color ultimately effects the community at large.

#### *a. Community assets*

One important community asset related to poverty in Chemung County is the Ernie Davis Community Center, previously known as the Neighborhood House (Chemung County Historical Society, 2021). Historically, the Neighborhood House was well known as a safe space for all community members, but particularly Black residents (New York Heritage Digital Collections, 1989). The space began as the Industrial School, founded by the Ladies Temperance and Benevolent Union of Elmira in 1878 with the goal of providing learning opportunities for economically disadvantaged people, such as sewing lessons to encourage people to sell homemade items (Chemung County Historical Society, 2021). In the 1920s, after growing the program into a larger set of buildings, the school was renamed the Neighborhood House, which prided itself on being open to all and providing guidance on not only ways to increase wealth, but also offering recreational activities and sports (Chemung County Historical Society, 2021). In the 1960s, the Neighborhood House engaged with the Civil Rights Movement (Chemung County Historical Society, 2021). More specifically, the facility pursued the “New Direction” paradigm, where they hoped to not only provide community activities, but also eliminate racism in the community (Chemung County Historical Society, 2021). The house closed in 1987 due to financial strain but opened again in 1990 as the Ernie Davis Community Center as it is known today (Chemung County Historical Society, 2021). The Ernie Davis Community Center continues the initiatives created by the Equal Opportunities Program in 1996 that was initiated the year prior, and facilitates the Head Start Program, emergency assistance programs, and rehabilitation for substance use, for example (Chemung County Historical Society, 2021).

This center was pivotal in creating a sense of community among residents, particularly before the Civil Rights Movement when the city was heavily segregated (New York Heritage Digital Collections, 1989). Before the 1960s, African American residents were essentially assigned to the East Side of Elmira (New York Heritage Digital

Collections, 1989). During the Civil Rights Movement, Elmira began a process of “urban renewal,” where community members were able to move freely through an open housing policy (New York Heritage Digital Collections, 1989). Although this process did allow marginalized groups to be better integrated into the community, it made the Neighborhood House not as accessible to people who no longer lived in the area (New York Heritage Digital Collections, 1989). Nonetheless, even today, the Ernie Davis Community Center is a critical community asset for providing public opportunities.

## V. Evidence-based interventions

### a. Limitations in researching interventions

Information on community and evidence-based interventions is limited for regions like Chemung County due to the lack of intervention evaluation and publication in the United States. Possible explanations for this lack of intervention evaluation and publication include limited infrastructure and financial resources for community groups that implement the interventions. Thus, most information about poverty alleviation initiatives is from other countries, limiting the scope of this literature review.

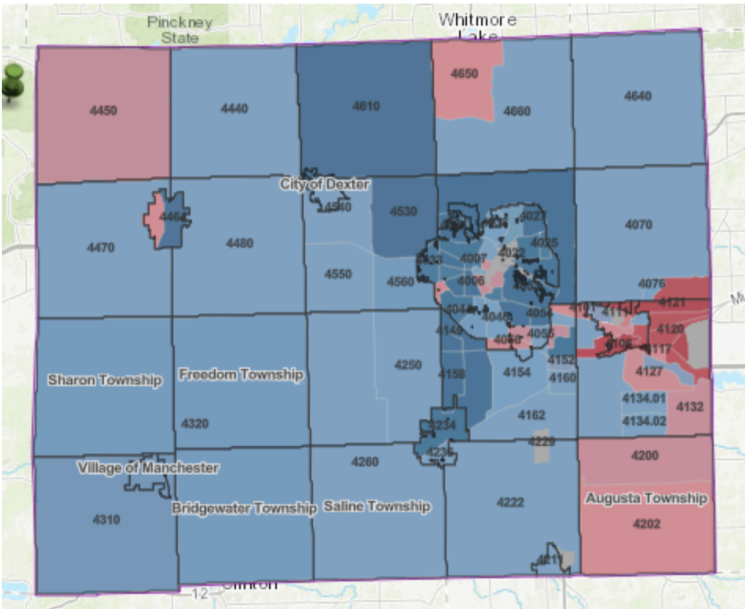
### b. Intervention #1: “Data driving equity” community dashboard

**Overview and relevancy to Chemung County.** The thorough evaluation of opportunities for community-based initiatives requires detailed and accessible data. The development of a dashboard that contains relevant county data for poverty alleviation initiatives can better inform decisions on intervention designs and policy. This dashboard can be modeled based on Washtenaw County’s “Opportunity Index” that was launched in 2021 (University of Michigan Poverty Solutions, 2021). Compared to Chemung County, Washtenaw County in Michigan has a substantially larger population size (Washtenaw County: 344,791; Chemung County: 88,830; 2020 Decennial Census), lower poverty rate compared to the state average (12.4% in Washtenaw County versus 13.1% in Michigan; 14.9% in Chemung County versus 13.9% in New York, 2021 American Community Survey),<sup>1</sup> land area (Washtenaw County: 706.00 mi<sup>2</sup>; Chemung County: 407.33 mi<sup>2</sup>; 202 Decennial Census), and population per square mile (Washtenaw County: 537.3; Chemung County 206.6, 2020 Decennial Census) (United States Census Bureau, n.d-l). These sociodemographic differences may not significantly impact project outcomes in Washtenaw versus Chemung County because this intervention’s success is not based on the population’s characteristics. Rather, the intervention’s success is based on the presentation and use of the Census Bureau’s data.

**Intervention description.** Washtenaw County’s “Opportunity Index” launched in 2021 by the county’s Office of Community and Economic Development (University of Michigan Poverty Solutions, 2021).<sup>2</sup> The Opportunity Index is an interactive dashboard that highlights the location of different resources and variation in economic opportunity indicators in the Michigan county (**Figure 3**) (University of Michigan Poverty Solutions, 2021). The purpose of this initiative is to (a) inform community and policy stakeholders on how social inequity impacts opportunity access and (b) provide accessible data to inform intervention design (University of Michigan Poverty Solutions, 2021). This dashboard primarily serves community members due to its facilitation in designing evidence-based economic empowerment interventions, but also the Office of Community and Economic Development and the University of Michigan Poverty Solutions group who can use this data to aid with poverty research and policy design (University of Michigan Poverty Solutions, 2021). The funding sources for this project are not accessible. Because this dashboard was launched recently, key outcomes of this initiative will become evident as future policy is constructed.

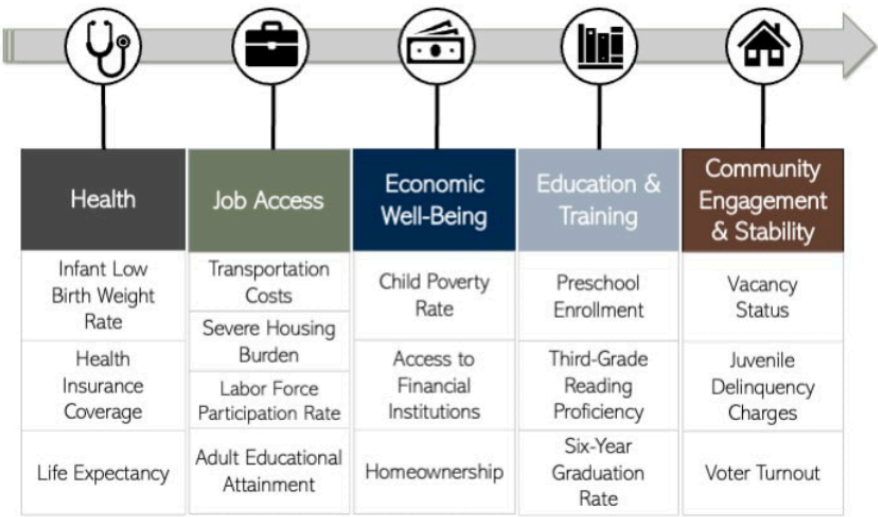
<sup>1</sup> Due to differences in data collection methodology in different geographic regions, comparing the poverty rates in Washtenaw County versus Chemung County may not be accurate.

<sup>2</sup> Link to the Opportunity Index dashboard: <http://www.opportunitywashtenaw.org/opportunity-index1.html>



**Figure 3.** Screenshot of the Opportunity Index dashboard for Washtenaw County. The dashboard is color-coded for different levels of opportunity access, with dark blue indicating high access to opportunity to dark red indicating low access to opportunity (Opportunity Washtenaw, n.d).

**Dashboard creation methodology.** The dashboard considers five categories of indicators to describe economic opportunity: health, job access, economic well-being, education and training, and community engagement and stability (Opportunity Washtenaw, n.d). These categories are broken down into specific, measurable indicators that are evaluated by the Census Bureau (Opportunity Washtenaw, n.d). These specific indicators are displayed in **Figure 4** (Opportunity Washtenaw, n.d).

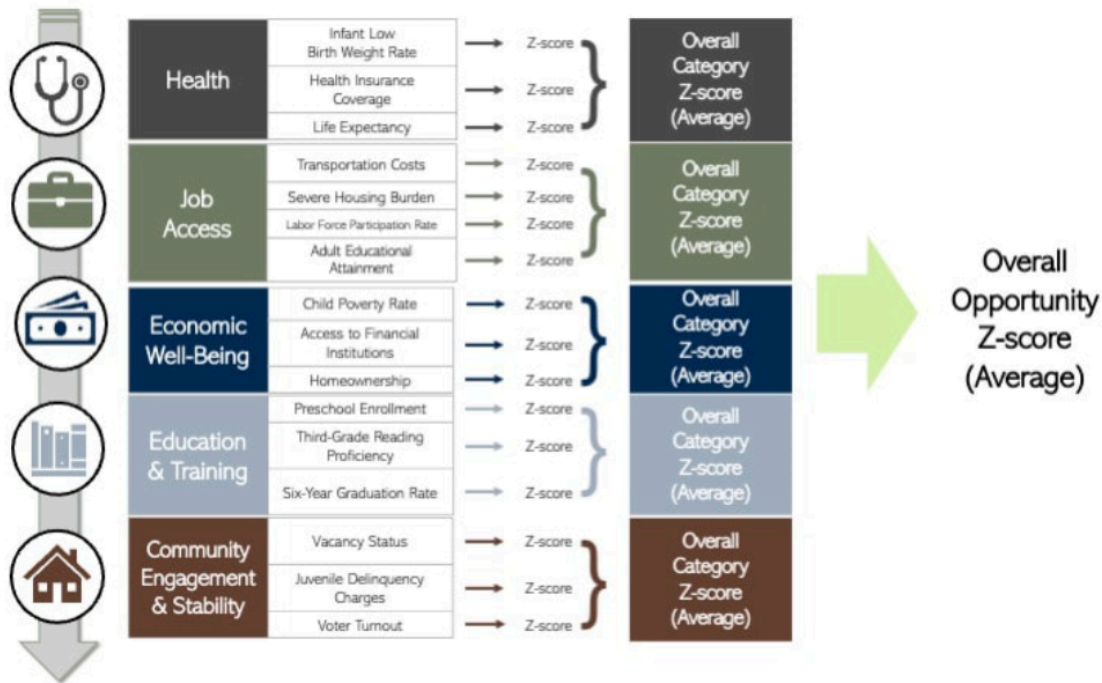


**Figure 4.** Specific indicators for each of the economic opportunity categories used in the Opportunity Index dashboard by Washtenaw County, Michigan (Opportunity Washtenaw, n.d).

To produce Opportunity Index “scores,” a z-score is produced for each indicator by comparing a geographic location’s precise datapoint for this indicator to the county average datapoint (**Figure 5**) (Opportunity Washtenaw, n.d). Thus, a positive z-score signifies that a geographic region’s indicator is higher than the county’s average and



a negative z-score signifies that a geographic region's indicator is lower than the county's average (Opportunity Washtenaw, n.d). Once these z-scores are calculated for each indicator, the indicator's z-scores are averaged for each category (Opportunity Washtenaw, n.d). Then the category z-scores are averaged to output an Opportunity Index "score" (Opportunity Washtenaw, n.d). The purpose of this z-score is to standardize the data to accurately make comparisons between geographic regions (Opportunity Washtenaw, n.d).



**Figure 5.** Illustrative representation of the methods used to calculate the Opportunity Index "scores" for the Washtenaw County dashboard (Opportunity Washtenaw, n.d).

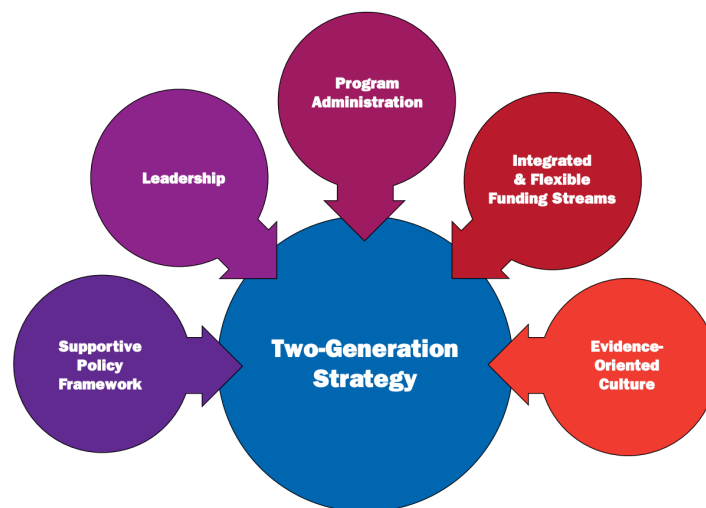
### c. Intervention #2: Two-Generation Program

**Overview and relevancy to Chemung County.** In Chemung County, the most populated category of educational attainment for those aged 25 years and older is estimated to be completion of high school (or equivalent degree) (34.3%; 2021 American Community Survey) (United States Census Bureau, n.d-h). The next most populous group are those who have some college experience but no degree (18.5%; 2021 American Community Survey) (United States Census Bureau, n.d-h). An intervention is necessary to increase the number of people pursuing education after high school and to complete degrees once initiated, since the highest educational attainment of a parent is the sole most telling factor for the social mobility of this parent's children (Aspen Institute, 2012). Two-generation approaches break generational cycles of poverty by providing economic opportunities to both parents and their children. A two-generation approach program may be reasonably implemented in Chemung County because there are existing programs in the County that can be braided to achieve this approach (i.e., Head Start program, Ernie Davis Economic Opportunity Program) (New York Heritage Digital Collections, 1990).

Results of two-generation programs are promising. For example, the Jeremiah Program in Minneapolis demonstrated a narrowing of the educational gap between low and high educational attainment, as 60% of the program's graduates received an Associate's Degree, 40% received a four-year degree, and 90% of participants say that their children are performing at or above their grade level (Jeremiah Program, n.d). Due to this program's demonstrated success, it is worth considering its implementation in Chemung County to sustainably address generational poverty.

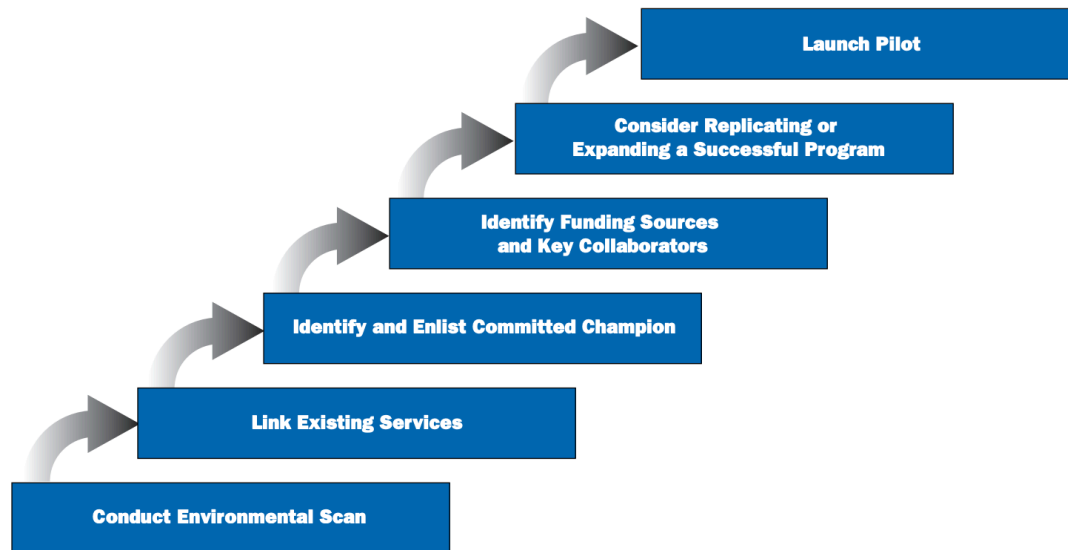
**Intervention description.** A critique of poverty alleviation programs that aim to increase the likelihood of economic wellbeing for children alone is that these programs fail to stimulate the growth of families in the present, thereby disregarding the current economic needs of these families (United States Department of Housing and Urban Development, 2016). Two-generation approaches to economic empowerment, however, aim to sustainably increase the economic wellbeing for individuals by providing economic resources not only for children, but for their parents too to interrupt intergenerational poverty early on in its cycle (United States Department of Housing and Urban Development, 2016). The Aspen Institute, a leading organization for the implementation of two-generation programs, describes five primary focuses for Two Generation programs: (1) physical and mental health, (2) early childhood education, (3) postsecondary and employment pathways, (4) economic assets, and (5) social capital (Aspen Institute, 2020). Leaders of this approach include the Annie E. Casey Foundation, Ascend and Aspen Institute, and the Foundation for Child Development (Aspen Institute, 2012).

Logistically, these programs can be complex as they require the coordination of numerous factors shown in **Figure 6** (Aspen Institute, 2012).



**Figure 6.** Components of a two-generation intervention, from (King *et al.*, 2013).

Despite requiring the coordination of numerous factors, two-generation initiatives are accessible economically because these programs consider different levels of funding for municipalities (King *et al.*, 2013). Regardless of a community's specific resources, there are similarities in the methods successful programs develop, as shown in **Figure 7** (King *et al.*, 2013).



**Figure 7.** Common steps followed in successful community-based two-generation programs. Figure from (King *et al.*, 2013).<sup>3</sup>

**Key outcomes.** Having a robust early childhood education is a critical component of positive future economic outcomes, as there is a 13% return on invested capital for every one year of strong early childhood education (Aspen Institute, 2020). Additionally, providing resources for parents to achieve higher educational opportunities increases economic wellbeing, as income is estimated to double when a college degree is obtained (Aspen Institute, 2020). There is a 17% increase in future economic income for only a \$3,000 addition to parent’s earnings, highlighting the economic sustainability of these programs (Aspen Institute, 2020).

**Funding sources.** The cheapest way to implement a two-generation program would be to establish a partnership with existing programs to collaboratively build a pilot program (King *et al.*, 2013). This method is made particularly easy because the implementation of a two-generation program would not require these partnering programs to change their operation focuses, as these focuses are likely similar to that of a two-generation program (United States Department of Housing and Urban Development, 2016). When funding is required, two-generation programs have historically obtained funds from the United States Department of Education’s Even Start Family Literacy Program, Full Service Community Schools Program, and Promise Neighborhoods grants (United States Department of Housing and Urban Development, 2016).<sup>4</sup> Additionally, funding is available from the United States Department of Labor’s Strengthening Working Families<sup>5</sup> and Head Start University Partnership grants<sup>6</sup> (United States Department of Housing and Urban Development, 2016). The W.K. Kellogg Foundation is providing support for two-generation program implementation specifically for communities experiencing poverty (United States Department of Housing and Urban Development, 2016).<sup>7</sup>

<sup>3</sup> More specific information on what these specific steps require can be found at: <https://www.aecf.org/blog/learn-more-a-collection-of-resources-on-two-generation-approaches>, <https://www.fcd-us.org/assets/2016/04/Dual-Gen-Getting-Started-Guide.pdf>.

<sup>4</sup> More information can be found at <https://www2.ed.gov/programs/evenstartformula/index.html> for the Even Start Family Literacy Program, <https://www2.ed.gov/programs/communityschools/index.html> for the Full-Service Community Schools Program, and <https://www2.ed.gov/programs/promiseneighborhoods/index.html> for the Promise Neighborhoods grant.

<sup>5</sup> More information can be found at [https://www.dol.gov/sites/dolgov/files/ETA/skillstraining/SWFI\\_Granttee\\_Abstracts.pdf](https://www.dol.gov/sites/dolgov/files/ETA/skillstraining/SWFI_Granttee_Abstracts.pdf).

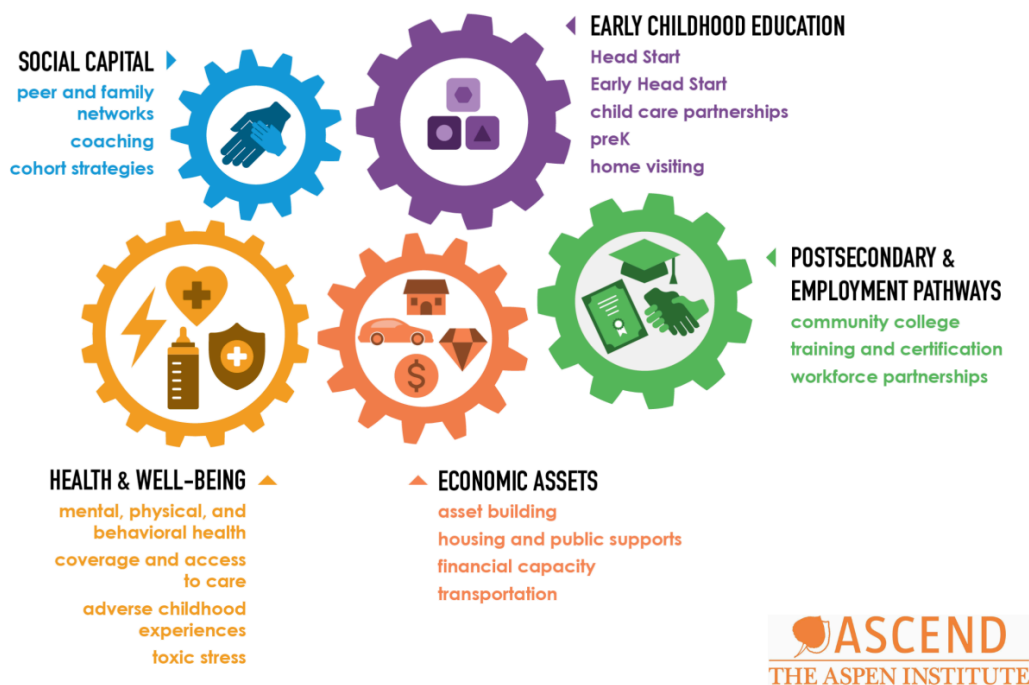
<sup>6</sup> More information can be found at <https://www.acf.hhs.gov/opre/project/head-start-university-partnership-grants-dual-generation-approaches-2013-2019>.

<sup>7</sup> List of two-generation-related grants from the W. K. Kellogg Foundation can be found at <https://www.wkkf.org/grants#pp=10&p=1&q=two%20generation>.

**Specific community-based example #1: The Community Action Project of Tulsa County (Career Advance®).**

The Career Advance® program is a two-generation program piloted in 2009 in collaboration with the Tulsa Community College and Tulsa Technology College to focus on free childcare and vocational training in healthcare, particularly vocational training for Certified Nurse Aids, Registered Nurses, health information technology, Medical Assistants, and Pharmacy Technicians among other career paths (King *et al.*, 2013).<sup>8</sup> This community-based intervention is relevant to Chemung County because Tulsa County built their model using Head Start—an existing program in Chemung County—and because Tulsa County has a similar estimated poverty rate to Chemung County in 2020 (14.7% in Tulsa County; 14.9% in Chemung County) (United States Census Bureau, n.d-m).<sup>9</sup>

For this program, parent participants are enrolled from existing Head Start centers (Chase-Lansdale *et al.*, 2017). Other community partners for successful program implementation include the Child and Family Services and Union Public Schools in the area (King *et al.*, 2013). The key elements of the program include small cohorts, professional development opportunities such as peer mentorships, covered expenses of educational and training costs as well as transportation help, bonuses for good work, and childcare (King *et al.*, 2013; Aspen Institute, 2020) (**Figure 8**).



**Figure 8.** Key components of Ascend's two-generation program (Aspen Institute, 2020).

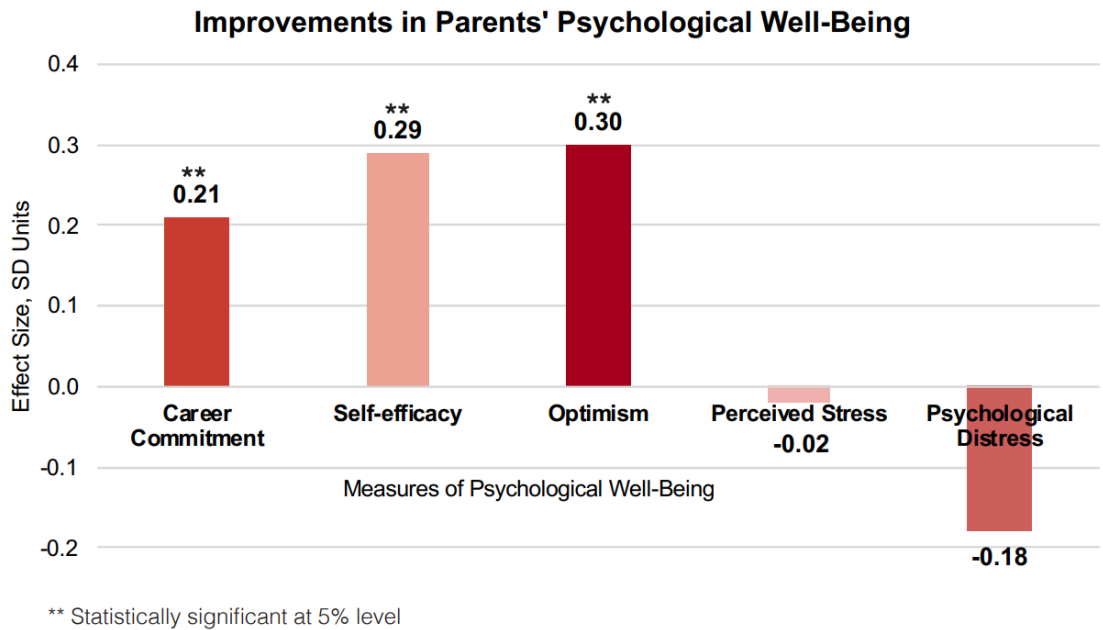
Initial funding for this program was obtained by Tulsa County's George Kaiser Family Foundation, but more recently, funding has been granted from the United States Department of Health and Human Services' Health Professionals Opportunities Grant (King *et al.*, 2013), the Health Profession Opportunities-University Partners Grant, and the Kellogg Foundation (CAP Tulsa, n.d.). The program is evaluated by the Institute for Policy Research at Northwestern University and the Ray Marshall Center at UT Austin's Lyndon B. Johnson's School of Public Affairs (King *et al.*, 2013).

<sup>8</sup> Project QUEST, the SOURCE, and Anne Arundel Community College two-generation initiatives are examples of programs that do not focus on healthcare specifically. To learn more about these programs—and 14 other programs—see Adams's publication (Adams, n.d.).

<sup>9</sup> Due to differences in data collection methodology in different geographic regions, comparing the poverty rates in Tulsa County versus Chemung County may not be accurate.

The effectiveness of the program was evaluated via a cohort study using Head Start participants as a control group. Data was collected using parent surveys and administrative data from 2011 to 2015 (Chase-Lansdale *et al.*, 2017). Of those evaluated, one-third of parents were single, and all families had less than \$15,190 in annual income (Chase-Lansdale *et al.*, 2017).

Results of the evaluation were positive. Compared to the Head Start control group, Career Advance® participants had just less than double the amount of program graduates employed in healthcare (27% in the Head Start group; 51% in the Career Advance group®) (Chase-Lansdale *et al.*, 2017). Additionally, following one year of graduation from the program, 61% of Career Advance® participants had a career certification whereas only 4% of the parents in the control group had this same achievement (Chase-Lansdale *et al.*, 2017). As shown in **Figure 9**, there were improvements observed in the psychological well-being of parents despite the stress of being in school (Chase-Lansdale *et al.*, 2017).



**Figure 9.** Improvements in well-being following Career Advance® participation (Chase-Lansdale *et al.*, 2017).

Because this program has now been operating for a decade, the Aspen Institute recently released a report to confirm the continuation of these positive outcomes and provide recommendations to increase program equity (Aspen Institute, 2021). If Chemung County is interested in implementing a similar program, this resource could be of value.

**Specific community-based example #2: The Early Learning Coalition of Duval County.** The Early Learning Coalition of Duval County is a valuable intervention to Chemung County because the poverty rate is estimated to be the same for Duval County and Chemung County in 2020 (14.9%), there is a similar distribution of ages in 2020 (under 5 years old: 6.4% in Duval County and 5.2% in Chemung County; Under 18 years old: 22.6% in Duval County and 21.1% in Chemung County), and the household income from 2017 to 2021 is comparable (\$59,541 in Duval County versus \$58,175 Chemung County) (United States Census Bureau, n.d-m).<sup>10</sup>

<sup>10</sup> Due to differences in data collection methodology in different geographic regions, comparing the poverty rates and age distributions in Duval County versus Chemung County may not be accurate.

The Early Learning Coalition of Duval County is less robust than the Tulsa County program, but it has still provided meaningful results for those in the community. To fund the initiative, leaders used a braided funding regime by collaborating with many community partners as to develop numerous sources of funding (Adams, 2016). Examples of these community partners include United Way, Kids Hope Alliance, Division of Early Learning, and the Rice Family Foundation (Early Learning Coalition of Duval, n.d). The program is led by the Duval County Coalition in Florida and serves to distribute vouchers for prekindergarten, facilitate the referral of child-care facilities, and cover transportation costs (Adams, 2016). Most recently, 12,595 children were enrolled in their school readiness program, 8,567 were enrolled in voluntary pre-kindergarten, and they had 514 providers to execute the initiative (Early Learning Coalition of Duval, n.d).

Positive outcomes have been observed from this program's implementation. Program evaluators have observed improved teacher-child interactions since 2018 through the Classroom Assessment Scoring System (Early Learning Coalition of Duval, 2022). Additionally, in 2022, 83% of child-care providers in the program have at least 4 stars (127 providers out of 153 total) as determined by the Guiding Stars of Duval (Early Learning Coalition of Duval, 2022). In fact, the largest category of providers had 5 stars (75 providers) (Early Learning Coalition of Duval, 2022). The Guiding Stars of Duval rates child-care providers based on professional development, teacher-child relationships, curriculum, and child assessment (Early Learning Coalition of Duval, 2022). Lastly, the coalition provides screening for children between the ages of 0 and 5 years old to see if developmental milestones are met (Early Learning Coalition of Duval, 2022). From 2021 to 2022, the number of screenings increased by 25% and the number of referrals doubled (Early Learning Coalition of Duval, 2022).

#### **d. Intervention #3: Better Beginnings, Better Futures**

**Overview and relevancy to Chemung County.** Targeting interventions for preschool to third grade aged children is critical for increasing future economic success. Interventions like these are associated with an increase in income from \$18,130 to \$22,708 at 38 years old and children who matriculate from these programs are more likely to be in the top 25% of income groups (greater than \$27,500) (Reynolds *et al.*, 2019). This age group is critical for creating “developmental continuity” because by age nine, there are numerous developmental milestones that must be established and the return on investment for programs implemented in this age group are higher than any other age group (Reynolds *et al.*, 2019). The Better Beginnings, Better Futures targets this age group as a method of decreasing poverty for growing generations.

In Chemung County, the Ernie Davis Community Center specifically targets those from 13 to 21 years old and the Bird to Five School Readiness program targets those from 0-5 years old (Economic Opportunity Program Inc., n.d.). For the 4 to 12 years old age group that is critical for developmental continuity, Chemung County has a Center of Excellence Afterschool Program (Economic Opportunity Program Inc., n.d.). It is unclear how much this program is driven by the community's specific and changing priorities, and reforming this program to include elements of the Better Beginnings, Better Futures initiatives may be beneficial in reducing the poverty rate of the county.

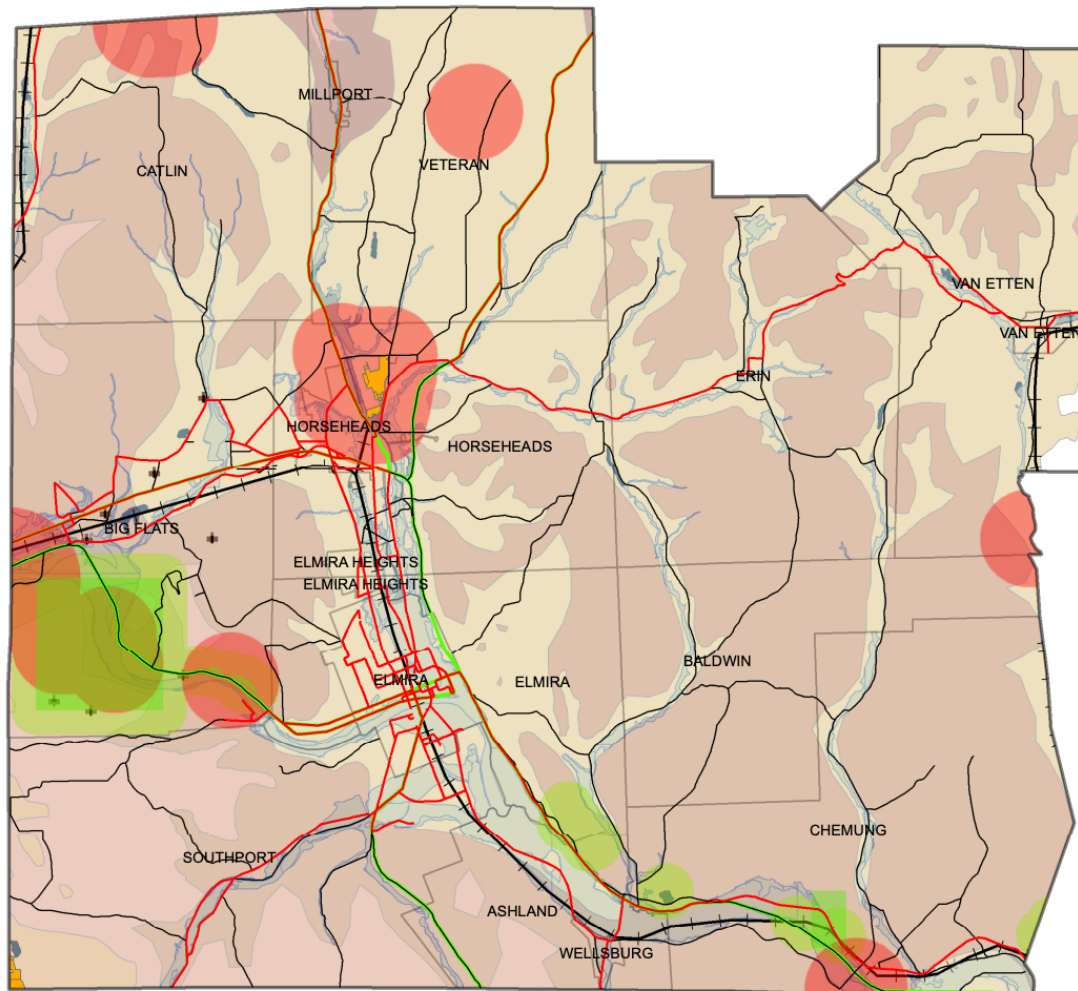
**Intervention description.** Better Beginnings, Better Futures is a community-based program for children in Ontario, Canada that aims to create a successful transition into early school (Peters *et al.*, 2016). The program is funded by the Ontario government and aims to promote strong child development, prevent developmental issues among children, and elevate the environmental context in which children grow (Peters *et al.*, 2016). To meet these aims, the program involves the creation of a community center to include before and after school enrichment programs, a breakfast club, one-on-one support, camps for families, and home visitations (Peters *et al.*, 2016). There is no “specific” mechanism by which the program has been designed because the program is successful due to the prominent role that community members have in programming (Peters *et al.*, 2016). More specifically, community members are responsible for identifying the needs of the community center's programming to tailor the center's activities based on community interests.

**Key outcomes.** To measure the success of this program, researchers conducted a longitudinal, quasi-experiment study where three neighborhoods with a Better Beginnings, Better Futures center were compared to neighborhoods without the community center (Peters *et al.*, 2016). The researchers collected the costs for the program from a cohort's junior kindergarten year to grade 12, resulting in over a decade worth of information (Peters *et al.*, 2016). The results were that \$2.50 Canadian dollars were saved by families for every dollar invested in the program (Peters *et al.*, 2016). Additionally, results indicated positive impacts on family cohesion and "positive neighborhood-level effects" (Peters *et al.*, 2016). Among Better Beginnings, Better Future graduates, healthcare costs were, on average, \$894 Canadian dollars higher, educational system costs were \$4,453 Canadian dollars lower, and social services were \$2,773 Canadian dollars lower. Therefore, the total average savings for Better Beginnings, Better Future graduates was \$6,331 Canadian dollars (Peters *et al.*, 2016). It is important to note that because this study was conducted in Canada, the application of these results to the United States is unclear. However, because Canada is set up to provide more robust welfare regimes than the United States, projects like these may be more impactful in the United States compared to Canada (Peters *et al.*, 2016). One key challenge with this program was participation, but when the government required that a majority of the Better Beginnings, Better Future committees comprise of community residents and required the employment of a community development coordinator, turnout was expected to improve (Worton *et al.*, 2014).

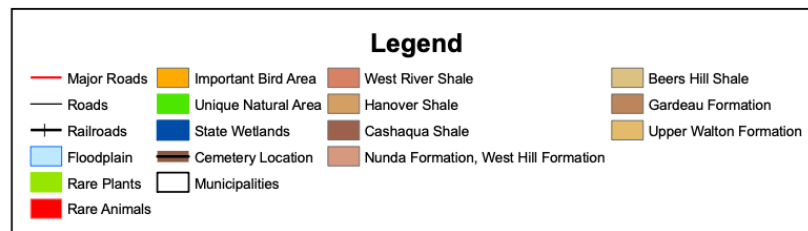
#### ***e. Intervention #4: Biodiversity and Ecotourism***

**Overview and relevancy to Chemung County.** The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has identified ecotourism and biodiversity conservation as a possible poverty alleviation strategy in the publication titled *Eradication of Poverty, Especially Extreme Poverty*. This strategy was described for Central and South Asia, but has been applied to other geographic regions (United Nations Educational, Scientific, and Cultural Organization, 2006). In this publication, UNESCO explicitly described how there is not one single approach to an intervention that focuses on the natural environment because all natural landscapes are different (United Nations Educational, Scientific, and Cultural Organization, 2006). Some common intervention designs include the selling of sustainable products for tourists, bed-and-breakfast homes run by local families, the production of local goods, and festivals (United Nations Educational, Scientific, and Cultural Organization, 2006). UNESCO argues that because tourism sectors amplify small and medium-sized businesses, further development of this sector can cause major economic effects without the investment of large infrastructure (United Nations Educational, Scientific, and Cultural Organization, 2006). Furthermore, the building of these small and medium-sized ecotourism-related businesses has community-wide benefits that are not as directly related, such as "joint management of communal resources turned over to tourist development" (United Nations Educational, Scientific, and Cultural Organization, 2006). Thus, these types of interventions require the access of natural resources and also skill-building trainings for community members. As shown in **Figure 10**, there are many natural resources that Chemung County has to offer, particularly rare plants and rare animals (Chemung County, n.d.). Therefore, highlighting these natural resources may be beneficial in boosting Chemung County's local economy, especially given the drainage of the community's economy following the carceral reindustrialization. In this section, a community-based forestry intervention will be explored to inform the impact the biodiversity and ecotourism industries can have on economic revitalization of Chemung County.





This is a map of some of the  
Natural Resources in Chemung County,  
including important species areas.



**Figure 10.** Natural resources in Chemung County (Chemung County, n.d.).

**Intervention description.** In 2009, the evaluation of a poverty reduction, equity-driven initiative in the Black Belt region of Alabama was published (Diop and Fraser, 2009). Due to slavery and racist policies in the region, African Americans do not own much land. It is in part due to this history that the poverty rate in the Black Belt is 34.9%, whereas Alabama's state average is 18.8% as of 2009 (Diop and Fraser, 2009). This state average is even much higher than the national average at the time (13.3%) (Diop and Fraser, 2009). Additionally, this region has a lower educational attainment and income per capita than other counties in Alabama, similar to Chemung County where the proportion of adults over 25 years old with at least a Bachelor's Degree is statistically significantly lower than



the state in 2021 (Chemung County  $27.8\% \pm 3.1\%$ ; New York State:  $39.9\% \pm 0.3\%$ ) (United States Census Bureau, n.d-h) and the income per capita is lower for the county than the state (\$31,379 Chemung County; \$43,208 in New York State) (United States Census Bureau, n.d-k).

Because land is a valuable resource for increasing economic opportunity, the goal of this intervention was to not only provide land opportunities to African Americans in the region, but also provide technical training and education on forestry to create a forestry community (Diop and Fraser, 2009). On a larger scale, this intervention hoped to reconnect the diminishing relationship between communities and local natural resources worldwide (Diop and Fraser, 2009). This diminishing relationship is caused by a lack of community efforts, lack of public land, and lack of strong agencies to use land in a beneficial way (Diop and Fraser, 2009). To meet these goals, the intervention had five primary programs: (1) technical training and education, which include seminars at the Federation's Rural Training Research Center for example (2) demonstrations conducted by local owners of land, (3) cooperative development from the marketing and selling of products, for example (4) outreach, and (5) youth development (Diop and Fraser, 2009).

This specific intervention was started by the Federation of Southern Cooperatives, a group founded in 1967 by civil rights leaders, with influence from the Ford Foundation's Community-Based Forestry Demonstration Program. Collaborators of the project include Tuskegee and Alabama A&M Universities, the USDA Forest Service, and the Alabama Forestry Commission and Natural Resources Conservation Services, and LRLEAN (a grassroots organization) (Diop and Fraser, 2009). The program was funded by some of these programs and the Ford Foundation (Diop and Fraser, 2009).

**Key outcomes.** While the planted trees grew, the program educated landowners to use goat silvopasture as a funding source (Diop and Fraser, 2009). From this practice, over nine months, participants were able to generate income ranging from \$1,900 to \$3,500 (Diop and Fraser, 2009). The specific economic benefits from the trees have not been determined, but participants built a sense of community, learned ways to diversify economic opportunities, and practiced sustainable farming (Diop and Fraser, 2009).

#### ***f. Intervention #5: Community-based rehabilitation***

**Overview and relevancy to Chemung County.** Chemung County has a significantly higher proportion of people with a disability than the rest of New York, according to the 2021 American Community Survey (Chemung County:  $15.4\% \pm 2.0\%$ ; New York State:  $12.0\% \pm 0.1\%$ ) (United States Census Bureau, n.d-h). By this same measure, the most common disability type is ambulatory difficulty (7.8%), followed by independent living difficulty (7.3%), and cognitive difficulty (6.9%) (United States Census Bureau, n.d-h).

Disability and poverty have a strong relationship. Adults who are disabled have almost twice the poverty rate as those who are not disabled (National Disability Institute, n.d.). One explanation for this association is that poverty and disability create a positive feedback loop, where disability makes it difficult to seek or maintain employment, which then in turn increases economic instability and poverty (Mousavi, 2015).

One proposed method of breaking this positive feedback loop are community-based rehabilitation programs, which have been acknowledged by the World Health Organization as a method to reduce poverty (Mousavi, 2015). A primary characteristic of community-based rehabilitation initiatives is that they are centered on the idea that a person's disabilities must not only be considered just from the perspective of the individual with the disabilities, but also the community as a whole (Mousavi, 2015). The following is the formal definition of a community-based rehabilitation program:

“A strategy within general community development for the rehabilitation, equalization of opportunities and social inclusion of all people with disabilities. CBR is implemented through the combined efforts of people with disabilities themselves, their families, organizations and communities, and the relevant governmental

and non-governmental health, education, vocational, social, and other services.” (ILO, UNESCO, WHO, 2004).

These programs are primarily described in the context of global health, particularly for countries with extreme poverty, but are expected to be applied to communities (Mousavi, 2015). Although the specific ways in which these interventions ought to operate in different communities are highly dependent on the communities themselves, community-based rehabilitation programs generally have five parts: health, education, livelihood, social activities, and empowerment (Hemmi *et al.*, 2017).

Unfortunately, information on the application of community-based initiatives in the United States is not accessible. Therefore, the intervention described here is from an international community. It is still presented nonetheless because there is a need to address community members with disabilities when considering poverty-alleviating initiatives, and community-based rehabilitation seems to be the primary way in which disabilities are addressed in the context of poverty.

**Intervention description.** A community-based rehabilitation program was implemented in the Mandya and Ramanagar districts in India (Mauro *et al.*, 2014). This intervention aimed to measure pension access, use of disability-assistance technology, paid work, and autonomy four and seven years following the implementation of the intervention (Mauro *et al.*, 2014). In total, the program had 2540 participants, with 1919 in the intervention group and 621 in the control group (Mauro *et al.*, 2014). To run the program, numerous non-governmental agencies collaborated such as the Maria Olivia Bonaldo organization and the Sri Raman Maharishi Academy for the Blind and a scientific advisory committee was created using scholars, social workers, and government officials, for example (Mauro *et al.*, 2014). The intervention’s publication does not discuss specifics of the program. However, the program does mention self-help groups facilitated by community members with disabilities themselves (Mauro *et al.*, 2014).

**Key outcomes.** The program identified positive impacts on pension access, use of disability-assistance technology, paid work, and autonomy both four- and seven-years following program implementation (**Table 3**) (Mauro *et al.*, 2014). For example, pension access increased by 35.2% four years following program implementation (Mauro *et al.*, 2014).

**Table 3.** Outcomes of program indicators four- and seven-years following intervention implementation. Table from Mauro *et al.* (2014).

Outcomes (years)	Treated % Improvement	Control % Improvement	Number of treated	Number of controls	Effect %	CI 95%	SD	p Value
Pension and allowances								
After 4	42.80	10.33	314	230	35.2	26.8 to 43.6	0.035	<0.001
After 7	67.15	38.38	314	230	29.7	22.8 to 36.5	0.046	<0.001
Mobility aid and appliance								
After 4	6.81	1.85	637	379	4.9	2.3 to 7.5	0.012	<0.001
After 7	9.43	5.80	637	379	4.2	1.4 to 7.1	0.015	<0.005
Paid job/work								
After 4	9.15	0.00	263	148	10.7	6.8 to 14.6	0.018	<0.001
After 7	14.34	1.43	263	148	12.3	7.8 to 16.7	0.019	<0.001
Personal/practical autonomy								
After 4	40.29	7.83	265	115	35.4	27.1 to 43.6	0.041	<0.001
After 7	43.40	11.30	265	115	36.2	27.9 to 44.5	0.043	<0.001

Kernel Matching method.

**Considerations.** Although this specific intervention has demonstrated positive results, it is important to note that there is literature describing the inefficiency of community-based rehabilitation programs. Numerous studies have

categorized the quality of published community-based rehabilitation programs as “very low” (Velema *et al.*, 2008; Tripney *et al.*, 2015; Robertson *et al.*, 2012). The mixed evidence for community-based rehabilitation initiatives has led to the design of new interventions for those with disabilities, such as “supported employment” or the “twin-track approach” that aims to address inequities between those with and without disabilities (Van Niekerk *et al.*, 2011; Department for International Development, 2000). Unfortunately, neither of these new intervention designs have well-documented success. There remains a need to address this gap among people with disabilities in poverty, both in Chemung County and the world at large, so this is an important consideration for future literature reviews and for novel intervention designs.

## **VI. Other considerations**

### **a. Career Technical Education**

As mentioned previously, the largest group of educational attainment in Chemung County for those 25 years old and older is those with a high school or equivalent degree (34.3%; 2021 American Community Survey), with the next largest category being those with college experience but no degree (18.5%; 2021 American Community Survey) (United States Census Bureau, n.d-h). Particularly for those with some college experience, bridging the educational gap between no post-high school degree and post-high school degree can increase the economic opportunities for Chemung County residents. In 2010, it was indicated that those who graduate college earn 60% more than those who graduated high school (Goldin and Katz, 2010).

Career technical education programs that aim to ready people for specific occupations by providing educational opportunities can increase economic mobility. These programs have demonstrated success, as Career technical education programs in Californian community colleges have observed an increase in income by 25% for those who obtain an Associate’s Degree and an increase in income by 10% for those who obtain certificates less than an Associate’s Degree (Stevens *et al.*, 2015). Other studies have demonstrated that an Associate’s Degree can increase earnings by 33% and shorter term certificates increase income by 13-22% (Bailey *et al.*, 2004). It has also been shown that some certificates are more lucrative than others, with health-related certificates being more lucrative than business-related certificates for example.<sup>11</sup>

In Chemung County, there were 53 one to two-year postsecondary certificates awarded in 2020 (Data USA, n.d). Of these certificates, 77.4% certificates were in Licensed Practical and Vocational Nurse Training, 7.55% were in Radiography, and 15.1% were in General Cosmetology (Data USA, n.d). There were 7 two to four-year postsecondary certificates awarded, with all 7 of them being in Registered Nursing (Data USA, n.d). Twelve Associate’s Degrees were awarded, with 91.7% of them being in General Human Services and 8.33% of them being in Liberal Arts and Sciences (Data USA, n.d). In 2020, most degrees were awarded by Elmira College (256 degrees), followed by Schuyler Steuber Chemung Tioga Allegany BOCES (72 degrees) and the Arnot Ogden Medical Center (11 degrees) (Data USA, n.d).

A career technical education/vocational training program already exists in Chemung County,<sup>12</sup> but given the potential usefulness of these programs in increasing economic mobility, this program ought to be reevaluated on how to maximize effectiveness.

### **b. Elevating entrepreneurial opportunities**

---

<sup>11</sup> The following is the link to a dashboard that displays average annual salaries corresponding to different types of certificates: <https://salarysurfer.cccco.edu/Salaries.aspx>. Resources like this can be useful in intervention design.

<sup>12</sup> The following is the link to this program in Chemung County: [https://chemung.ny.networkofcare.org/mh/services/agency.aspx?pid=adulthoodeducationandtrainingservicesgstboces\\_207\\_2\\_0](https://chemung.ny.networkofcare.org/mh/services/agency.aspx?pid=adulthoodeducationandtrainingservicesgstboces_207_2_0)

In the 1980s, the Southport Correctional Facility was built in Chemung County as a method of economic revitalization. The reliance of prisons (i.e., Elmira Correctional Facility, Southport Correctional Facility) by the local economy has brought about racial and moral consequences for residents, requiring the need to decrease the reliance of the prison on economic security (Morrell, 2021). Susanville, a town in California that was also selected as the site of a new prison to increase economic security of the area during the increase in mass incarceration, describes this reliance (French, 2002):

“It was all connected: Fewer good jobs meant that more people ended up in prison, but it also made prison labor artificially attractive, because it was some of the only work left that came with great benefits, a living wage, and an early, comfortable retirement.”

Increasing entrepreneurial opportunities for residents can help reduce this economic reliance on the prisons. Entrepreneurship has been documented to enhance not only growth in the economy, but also higher educational attainment (Mitra and Abubakar, 2011), and has been considered more sustainable than philanthropic methods of poverty alleviation (Parwez, 2017).

It is important to note, though, that there are communities where entrepreneurship promotion did not successfully improve living conditions. Because of Chemung County—and Elmira and particular—has economic reliance on the prisons, entrepreneurship may play a more important role in community empowerment than areas that do not have this economic reliance. Chemung County already has an entrepreneurship development program,<sup>13</sup> so evaluating methods of increasing this program’s output may be beneficial in sustainable poverty alleviation.

## ***VII. Recommendations***

To inform any intervention design, developing a data dashboard like Washtenaw County’s Opportunity Index will help better compile and communicate relevant data that can be used for policy development, grant writing, and evaluation of existing and future interventions. It is recommended that Chemung County develops a similar dashboard. In the creation of this dashboard, collaboration with students at Cornell University may be useful in the same way that Washtenaw County collaborated with the University of Michigan.

Both the two-generation programs and Better Beginnings, Better Future intervention described target children, with two-generation programs targeting the educational empowerment of parents too. Because the two-generation program has demonstrated long-term positive outcomes, it is advised that a two-generation program be considered in Chemung County. This would be made feasible by the fact that some resources necessary for two-generation programs (i.e., the Ernie Davis Community Center’s Head Start program and the existing career technical education programs) are already in existence in Chemung County. Because of the more robust demonstrated success of two-generation programs over the Better Beginnings, Better Futures program, it is advised that instead of implementing a Better Beginnings, Better Future program, the current Center of Excellence Afterschool Program at the Ernie Davis Community Center is evaluated for how much it is driven by community needs. The rationale for this recommendation is that a key component of the Better Beginnings, Better Futures was the influence of community interests in program planning.

Especially given Chemung County’s unique biodiversity (**Figure 10**), it is recommended that the existing biodiversity centers in Chemung County increase employment and program opportunities to reconnect residents to the county’s natural landscape while also providing economic opportunities (Chemung County, n.d.). Additionally, because of the natural features in Chemung County, an increase in ecotourism initiatives through entrepreneurial

---

<sup>13</sup> To learn more about Chemung County’s entrepreneurship program, see <https://chemungchamber.org/elevate-elmira-entrepreneurs>

endeavors may provide more economic infrastructure while also promoting the need for natural biodiversity preservation, especially due to emerging threats from climate change.

As recommended previously, existing career technical education and entrepreneurship programs ought to be reevaluated to determine how to maximize impact, given the economic benefits of building a stronger workforce for an economy that is based on prisons.

Lastly, the high proportion of people with disabilities in Chemung County must be considered for any poverty-alleviation initiative given the demonstrated relationship between disability and poverty. It is recommended that Chemung County collect data on the employment rate among those with disabilities, how these disabilities affect the number of hours worked, and the types of jobs available in the county for those with disabilities. Once this information is known, novel interventions can be designed to economically empower this disproportionately impacted community.

### **VIII. References**

- Adams, G., Derrick-Mills, T., & Heller, C. (2016). Strategies to meet the child care needs of low-income parents seeking education and training.
- Aspen Institute. (2012). *An Ascend at the Aspen Institute Report: Two Generations, One Future. Moving Parents and Children Beyond Poverty Together*. <https://www.aspeninstitute.org/wp-content/uploads/files/content/docs/ascend/Ascend-Report-022012.pdf>
- Aspen Institute. (2020). *Understanding 2Gen with Graphic*. <https://ascend-resources.aspeninstitute.org/resources/understanding-2gen-with-graphic/>
- Aspen Institute. (2021). *State of the Field: Two-Generation Approaches to Family Well-Being*. <https://ascend-resources.aspeninstitute.org/resources/state-of-the-field-two-generation-approaches-to-family-well-being/>
- Bailey, T., Kienzl, G., Marcotte, DE. (2004). *The Return to a Sub-Baccalaureate Education: The Effects of Schooling, Credentials and Program of Study on Economic Outcomes*. <https://www2.ed.gov/rschstat/eval/sectech/nave/subbac-ed.pdf>
- CAP Tulsa. n.d. *Connecting Research to Practice*. <https://captulsa.org/our-impact/research-innovation/connecting-research-practice/>
- Chase-Lansdale, P. L., Sommer, T. E., Sabol, T. J., Chor, E., Brooks-Gunn, J., Yoshikawa, H., ... & Morris, A. (2017). What are the effects of pairing head start services for children with career pathway training for parents?. Retrieved from [https://www.captulsa.org/uploaded\\_assets/pdf/CAP-Tulsa-impact-analysis\\_March-2017.pdf](https://www.captulsa.org/uploaded_assets/pdf/CAP-Tulsa-impact-analysis_March-2017.pdf).

- Chemung County Health Department. (2016). *Chemung County Community Health Assessment 2016-2018*.  
[https://www.arnohealth.org/uploads/resources/612355\\_chemung-cty-cha-2016-2018-120116-v1.6-8x11-final.pdf](https://www.arnohealth.org/uploads/resources/612355_chemung-cty-cha-2016-2018-120116-v1.6-8x11-final.pdf)
- Chemung County Historical Society. (2021). *The Neighborhood House and EOP*.  
<http://chemungcountyhistoricalsociety.blogspot.com/2021/02/the-neighborhood-house-and-eop.html>
- Chemung County, New York. n.d. *Chemung County Natural Resources Map*.  
<https://www.chemungcountyny.gov/198/Chemung-County-Natural-Resources-Map>
- Data USA. n.d. *Chemung County, NY*. <https://datausa.io/profile/geo/chemung-county-ny?racesUniversities=ipedsRace0>  
 (Accessed: January 19, 2023).
- Department for International Development. (2000). *Disability, poverty, and development*.  
<https://hpod.law.harvard.edu/pdf/Disability-poverty-and-development.pdf>
- Diop, A., & Fraser, R. (2009). A community-based forestry approach to poverty alleviation in Alabama's Black Belt Region. *International Forestry Review*, 11(2), 186-196.
- Early Learning Coalition of Duval. (2022). *Reach for the Stars: 2021-2022 Annual Report*.  
[https://www.canva.com/design/DAE1vOH4Pks/Sh83Mw8zpewrr9VlbopLzg/view?utm\\_content=DAE1vOH4Pks&utm\\_campaign=share\\_your\\_design&utm\\_medium=link&utm\\_source=shareyourdesignpanel#1](https://www.canva.com/design/DAE1vOH4Pks/Sh83Mw8zpewrr9VlbopLzg/view?utm_content=DAE1vOH4Pks&utm_campaign=share_your_design&utm_medium=link&utm_source=shareyourdesignpanel#1)
- Early Learning Coalition of Duval. n.d. *Homepage*. <https://www.elcduval.org/>
- Economic Opportunity Program Inc. n.d. *Programs*. <https://www.cseop.org/ernie-davis-community-center>
- Economic Opportunity Program, Inc. of Chemung and Schuyler Counties. (2022). *Chemung County*.  
<https://www.nyscommunityaction.org/assets/docs/PovRep2022/Chemung.pdf>
- French, Piper. (2002). *A Future for Susanville*. Bolts Magazine. <https://boltsmag.org/susanville-prison-closure/>
- Goldin, C., & Katz, L. F. (2010). *The race between education and technology*. harvard university press.
- Iemmi, V., Kumar, K. S., Blanchet, K., Gibson, L., Hartley, S., Murthy, G. V., ... & Kuper, H. (2017). Community-based rehabilitation for people with physical and mental disabilities in low-and middle-income countries. *The Cochrane Database of Systematic Reviews*, 2017(3).

- International Labor Organizations, United Nations Educational, Scientific and Cultural Organization, World Health Organization (ILO, UNESCO, WHO) (2004). *CBR: A strategy for rehabilitation, equalization of opportunities, poverty reduction and social inclusion of people with disabilities*. Geneva: WHO.
- Jeremiah Program. n.d. *Mission and History*. <https://jeremiahprogram.org/about-us/our-mission/>
- King, C. T., Coffey, R., & Smith, T. C. (2013). A Getting-Started Guide for State and Local Policy Makers.
- Mauro, V., Biggeri, M., Deepak, S., & Trani, J. F. (2014). The effectiveness of community-based rehabilitation programmes: an impact evaluation of a quasi-randomised trial. *J Epidemiol Community Health*, 68(11), 1102-1108.
- Mitra, J., Abubakar, Y. A., & Sagagi, M. (2011). Knowledge creation and human capital for development: the role of graduate entrepreneurship. *Education+ training*.
- Morrell, A. R. (2012). The prison fix: Race, work, and economic development in Elmira, New York. [https://academicworks.cuny.edu/gc\\_etds/1673/](https://academicworks.cuny.edu/gc_etds/1673/)
- Morrell, A. R. (2021). Hometown Prison: Whiteness, Safety, and Prison Work in Upstate New York State. *American Anthropologist*, 123(3), 633-644. [https://anthrosource.onlinelibrary.wiley.com/doi/full/10.1111/aman.13614?casa\\_token=UsRPmvg3-8AAAAA%3AiyKp6w5GYgz7WRy-u2x6J0ORKFFapnuQxvun2S9bHgUtDuWtQDnN29WXx4ySY-4HQ8M82W-eqNA1xVg](https://anthrosource.onlinelibrary.wiley.com/doi/full/10.1111/aman.13614?casa_token=UsRPmvg3-8AAAAA%3AiyKp6w5GYgz7WRy-u2x6J0ORKFFapnuQxvun2S9bHgUtDuWtQDnN29WXx4ySY-4HQ8M82W-eqNA1xVg)
- Mousavi, T. (2015). The role of community-based rehabilitation in poverty reduction. *Disability, CBR & Inclusive Development*, 26(1), 125-39.
- National Disability Institute. n.d. *Financial Inequality: Disability, Race and Poverty in America*. <http://www.advancingstates.org/sites/nasud/files/Disability-Race-Poverty-in-America.pdf>
- New York Heritage Digital Collections. (1989). *Delmar Rouse oral history interview, October 3, 1989*. <https://nyheritage.contentdm.oclc.org/digital/collection/p16694coll129/id/353/rec/9>
- New York Heritage Digital Collections. (1990). *Lawrence King Jr. oral history interview, March 29, 1990*. <https://nyheritage.contentdm.oclc.org/digital/collection/p16694coll129/id/325/rec/18>

New York State Community Action Association. (2013). *Chemung County Poverty Profile*.

[https://www.nyscommunityaction.org/assets/docs/Chemung%20\(5\).pdf](https://www.nyscommunityaction.org/assets/docs/Chemung%20(5).pdf)

New York State Department of Health. (2022). *New York State Community Health Indicator Reports (CHIRS)*.

[https://webb11.health.ny.gov/SASStoredProcess/guest?\\_program=%2FEBI%2FPHIG%2Fapps%2Fchir\\_dashboard%2Fchir\\_dashboard&p=ch&cos=7](https://webb11.health.ny.gov/SASStoredProcess/guest?_program=%2FEBI%2FPHIG%2Fapps%2Fchir_dashboard%2Fchir_dashboard&p=ch&cos=7) (Accessed: January 19, 2023).

Opportunity Washtenaw. n.d. *Methodology*. <http://www.opportunitywashtenaw.org/methodology.html>

Parwez, S. (2017). Community-based entrepreneurship: evidences from a retail case study. *Journal of Innovation and Entrepreneurship*, 6(1), 1-16.

Peters, R. D., Petrunka, K., Khan, S., Howell-Moneta, A., Nelson, G., Pancer, S. M., & Loomis, C. (2016). Cost-savings analysis of the better beginnings, better futures community-based project for young children and their families: A 10-year follow-up. *Prevention Science*, 17(2), 237-247.

Reynolds, A. J., Ou, S. R., Mondì, C. F., & Giovanelli, A. (2019). Reducing poverty and inequality through preschool-to-third-grade prevention services. *American Psychologist*, 74(6), 653.

Robertson, J., Emerson, E., Hatton, C., & Yasamy, M. T. (2012). Efficacy of community-based rehabilitation for children with or at significant risk of intellectual disabilities in low-and middle-income countries: A review. *Journal of Applied Research in Intellectual Disabilities*, 25(2), 143-154.

Stevens, AH., Kurlaender, M., Grosz, M. (2015). *Career Technical Education and Labor Market Outcomes: Evidence from California Community Colleges*. [https://poverty.ucdavis.edu/sites/main/files/file-attachments/w21137\\_0.pdf?1454438562](https://poverty.ucdavis.edu/sites/main/files/file-attachments/w21137_0.pdf?1454438562)

Tripney, J., Roulstone, A., Vigurs, C., Hoglebe, N., Schmidt, E., & Stewart, R. (2015). Interventions to improve the labour market situation of adults with physical and/or sensory disabilities in low-and middle-income countries: a systematic review. *Campbell Systematic Reviews*, 11(1), 1-127

United Nations Educational, Scientific, and Cultural Organization. (2006). *Poverty alleviation and community-based tourism: experiences from Central and South Asia*. <https://unesdoc.unesco.org/ark:/48223/pf0000179864>

United States Census Bureau. n.d-a. *Quick Facts: Elmira city, New York; Tioga County, New York; Schuyler County, New York; Steuben County, New York; Chemung County, New York*.



<https://www.census.gov/quickfacts/fact/table/elmiracitynewyork,tiogacountynewyork,schuylercountynewyork,steubencountynewyork,chemungcountynewyork/BZA010220> (Accessed: January 19, 2023).

United States Census Bureau. n.d-b. *P1: Race, 2020*.

<https://data.census.gov/table?q=population&g=0500000US36015&y=2020&tid=DECENNIALPL2020.P1>  
(Accessed: January 19, 2023).

United States Census Bureau. n.d-c. *P1: Race, 2010*.

<https://data.census.gov/table?g=0500000US36015&y=2010&tid=DECENNIALPL2010.P1> (Accessed: January 19, 2023).

United States Census Bureau. n.d-d. *DP05: ACS Demographic and Housing Estimates, 2020*.

<https://data.census.gov/table?q=population&g=0500000US36015&y=2020&tid=ACSDP5Y2020.DP05>  
(Accessed: January 19, 2023).

United States Census Bureau. n.d-e. *DP05: ACS Demographic and Housing Estimates, 2010*.

<https://data.census.gov/table?g=0500000US36015&y=2010&tid=ACSDP1Y2010.DP05> (Accessed: January 19, 2023).

United States Census Bureau. n.d-f. *S2701: Selected Characteristics of Health Insurance Coverage in the United States, 2020*.

[https://data.census.gov/table?q=health+insurance+coverage&g=0100000US\\_0500000US36015&y=2020&tid=ACSSST5Y2020.S2701](https://data.census.gov/table?q=health+insurance+coverage&g=0100000US_0500000US36015&y=2020&tid=ACSSST5Y2020.S2701) (Accessed: January 19, 2023).

United States Census Bureau. n.d-g. *S2701: Selected Characteristics of Health Insurance Coverage in the United States, 2010*.

[https://data.census.gov/table?q=S2701:+SELECTED+CHARACTERISTICS+OF+HEALTH+INSURANCE+COVERAGE+IN+THE+UNITED+STATES&g=0100000US\\_0500000US36015&y=2010](https://data.census.gov/table?q=S2701:+SELECTED+CHARACTERISTICS+OF+HEALTH+INSURANCE+COVERAGE+IN+THE+UNITED+STATES&g=0100000US_0500000US36015&y=2010) (Accessed: January 19, 2023).

United States Census Bureau. n.d-h. *Chemung County, New York*. <https://data.census.gov/profile?g=0500000US36015>  
(Accessed: January 19, 2023).

United States Census Bureau. n.d-i. *S1501: Educational Attainment, 2020*.

[https://data.census.gov/table?q=Educational+Attainment&g=0100000US\\_0400000US36\\_0500000US36015&y=2020](https://data.census.gov/table?q=Educational+Attainment&g=0100000US_0400000US36_0500000US36015&y=2020) (Accessed: January 19, 2023).

United States Census Bureau. n.d-j. *S0102: Population 60 Years and Over in the United States, 2020*.

<https://data.census.gov/table?q=s0102&g=0500000US36015&y=2020&tid=ACSSST5Y2020.S0102> (Accessed: January 19, 2023).

United States Census Bureau. n.d-k. *Quick Facts: Elmira city, New York; Horseheads village, New York*.

<https://www.census.gov/quickfacts/fact/table/elmiracitynewyork,horseheadsvillagenewyork/PST04522> (Accessed: January 19, 2023).

United States Census Bureau. n.d-l. *Quick Facts: New York; Michigan; Washtenaw County, Michigan; Chemung County, New York*.

<https://www.census.gov/quickfacts/fact/table/NY,MI,washtenawcountymichigan,chemungcountynewyork/BZA010220> (Accessed: January 19, 2023).

United States Census Bureau. n.d-m. *Quick Facts: Duval County, Florida; Tulsa County, Oklahoma; Chemung County, New York*.

<https://www.census.gov/quickfacts/fact/table/duvalcountyflorida,tulsacountyoklahoma,chemungcountynewyork/BZA010220> (Accessed: January 19, 2023).

United States Department of Housing and Urban Development. (2016). *Two-Generation Approaches*.

<https://www.hud.gov/sites/dfiles/PIH/documents/kindergarten2genratnappro.pdf>

University of Michigan Poverty Solutions. (2021). *Washtenaw County set to launch updated Opportunity Index*.

<https://poverty.umich.edu/2021/04/14/washtenaw-county-set-to-launch-updated-opportunity-index/>

Van Niekerk, L., Coetzee, Z., Engelbrecht, M., Hajwani, Z., Landman, S., Motimele, M., & Terreblanche, S. (2011).

Supported employment: Recommendations for successful implementation in South Africa. *South African Journal of Occupational Therapy*, 41(3), 85-90.

Velema, J. P., Ebenso, B., & Fuzikawa, P. L. (2008). Evidence for the effectiveness of rehabilitation-in-the-community programmes. *Leprosy review*, 79(1), 65-82.