The Economic Impacts of the Child Care Shortage in Northeastern Minnesota

Opportunities to Partner on Solutions

JULY 2018

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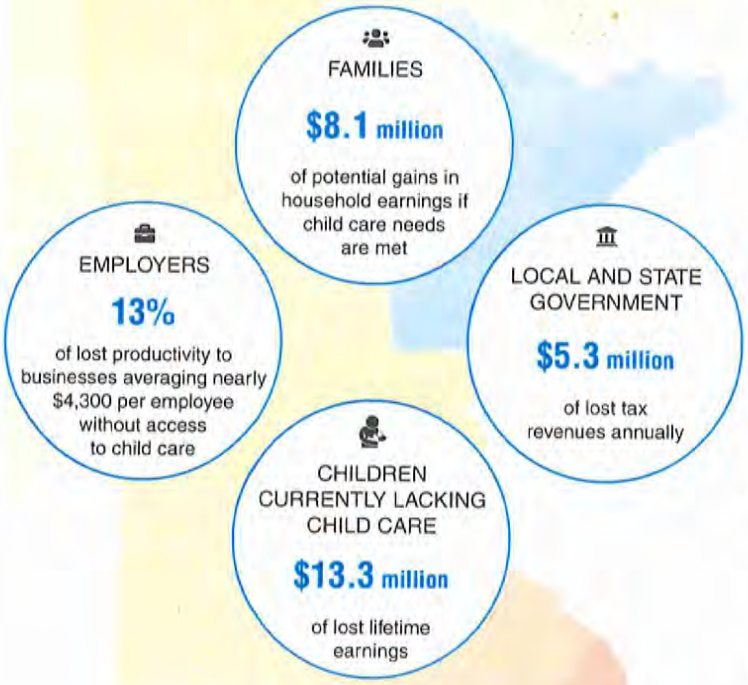
the Child Care Shortage

in Northeastern Minnesota



Current unmet need of child care and costs to meet need

Northeastern Minnesota needs

4,496 ADDITIONAL SLOTS

Licensed child care slots needed to cover the child care shortfall for children age 5 and younger

Total cost to expand capacity

New family child care facilities
$891K to $1.9 million

Existing child care centers add new slots
$4.5 to $11.3 million

The annual economic impact of the child care industry in northeastern Minnesota

Direct impact		Indirect impact		Total impact
$30 million	+	$18 million	=	$48 million

Northeastern Minnesota's total licensed child care programs, 2018

379 licensed family child care homes

2 out of 3 providers are located in the region's job centers

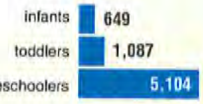
91 child care centers

4 out of 10 providers are located in the region's job centers

23 preschools

Total number of licensed family child care programs

Current number served all programs



July 2018

Child care in Northeastern Minnesota

In 2018, Wilder Research and the Center for Rural Policy and Development, conducted a study of the child care shortage in northeastern Minnesota at the request of the Blandin Foundation, the MInnesota Department of Iron Range Resources and Rehabilitation, and the Northland Foundation. This seven-county region includes Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis Counties. The funders of this study were also interested in the potential role that businesses could serve to help alleviate the regional child care shortage. Please see the full report here for sources of data, calculation methods, and examples of business solutions and issues to consider for the child care shortage.

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Contents

Contents (continued)

Figures

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Summary

Introduction

At the request of the Blandin Foundation, The Minnesota Department of Iron Range Resources and Rehabilitation (IRRR), and the Northland Foundation, Wilder Research and the Center for Rural Policy and Development completed this study of the child care shortage and its economic impacts in northeastern Minnesota. This seven-county region includes Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis counties. The funders of this study were also interested in potential public, private, and collaborative solutions to the child care shortage.

More information regarding study methodology, including how we calculated the extent of the child care shortfall, used a multiplier effect to estimate economic impact, and computed the costs to alleviate the child care shortage and the costs of the child care shortage to businesses and families can be found in the Appendix.

Current number of child care providers and number of children enrolled in northeastern Minnesota

- Currently, the region has 379 family child care programs. Two-thirds of these programs are located in the region's job centers, including 132 in Duluth and 54 in Grand Rapids).
- The number of family child care programs has decreased by more than 20 percent since 2011.
- The region has 91 child care centers and 23 preschools. Four out of 10 child care centers are located in the regional job centers.
- These 493 child care establishments in northeastern Minnesota serve a total of 649 infants, 1,087 toddlers, and 5,104 preschoolers (Child Care Aware, 2018).

Economic impact of the child care industry in the region

- The direct economic value of all goods and services produced and consumed by child care establishments per year in northeastern Minnesota totals approximately $30 million.
- That $30 million in direct spending generates indirect spending on additional jobs, goods, and services totaling an estimated $18 million annually.

- The combined direct and indirect economic spending of an estimated $48 million per year includes $1.8 million in local and state taxes and $4.2 million in federal taxes.

Estimated additional child care capacity needed in northeastern Minnesota

We estimate an additional 4,496 licensed child care slots – a 50 percent increase in current licensed capacity – are needed to cover potential demand for child care in northeastern Minnesota. This is based on the U.S. Census Bureau's population estimates of the number of children under age 6 with all parents in the workforce and the current number of licensed child care slots available.

The child care shortage varies considerably from county to county. Although child care shortfalls by age group (infants, toddlers, and preschoolers) are not available due to data limitations, infant care is widely known to be in short supply.

Estimating the costs to expand the number of child care slots to meet the need

The shortage of child care slots can be alleviated by increasing 1) the number of family child care (FCC) programs, 2) the number of slots within existing center-based establishments, and 3) the number of new child care centers. When estimating expansion costs, we assumed the existing ratios of family child care programs and child care centers would stay constant in each county.

- At an average cost per slot of $400 to $850, increasing the number of family child care programs in the region to cover the need for FCC slots would cost an estimated $891,000 to $1.9 million.
- At an average cost per slot of $2,000 to $5,000, the estimated costs to meet potential demand by expanding existing child care centers ranges from $4.5 million to $11.3 million.
- Based on the costs of three recent new center projects in the region, we estimate that to meet center-based child care needs in the region with new centers would cost from $8.8 million using existing structures to about $32.5 million for new construction.

Economic impact of child care shortage on northeastern Minnesota families, employers, government, and the future workforce

- The total potential new earnings of families in the region not able to work due to a lack of child care could reach $8.1 million annually if the child care shortage were solved.

- For employers, the child care shortage amounts to an estimated 13 percent reduction in productivity, averaging at least $4,290 per worker without access to child care for their children, not including employers' costs to recruit and train employees.
- Local and state governments are losing an estimated $2.3 million due to the child care shortage in the region. Similarly, the federal government is losing $3 million every year from lost economic activity associated with the shortage of child care.
- Of the 4,496 children currently without child care in northeastern Minnesota, an estimated 1,480 will not complete their high school education, which will likely reduce their future employability and earnings, potentially amounting to an estimated $13.3 million in lost lifetime earnings.

Possible solutions to the child care shortage

As a part of this study, we examined what employers in the region and in other parts of Minnesota are currently doing to help their employees gain access to child care. Potential solutions include:

- Making on-site child care available for workers, such as the center located at Essentia Health in Duluth.
- Creating a consortium-sponsored facility where employers and other entities join together to sponsor a child care facility where employees can send their children.
- Public-private partnerships where employers could partner with a federal, state, or local government entity to provide child care, such as a partnership with a school district. Or, for example, the city of Clarkfield in Yellow Medicine County where the city is working with a provider to open a child care center.
- Providing "backup" care is another way that employers can help workers when their employees' regular child care provider is sick, on vacation, or closed for another reason, such as the Mayo Clinic in Rochester.
- Another way employers, foundations, government agencies, and philanthropic organizations can help is by contributing financially to help reduce the child care shortage. In northeastern Minnesota, the Northland Foundation, the Minnesota Department of Iron Range Resources and Rehabilitation, the United Way of Northeastern Minnesota, and the Blandin Foundation have all made contributions toward closing the gap for the child care shortage.

Issues to consider

Study findings indicate that families, businesses, and government pay a price for the child care shortage in northeastern Minnesota and each of these stand to benefit from an expanded quality child care system. Solutions will need to engage multiple sectors. Large and small businesses, government, foundations, and other organizations should consider working together to invest in these ways to solve the current shortage and to ensure that the future workforce in the region has access to affordable, high-quality child care:

- Focus new funding and efforts on targeted, rural areas where child care is scarce.
- Continue to offer and increase microloans or micro-grants to providers to expand capacity and improve their current practices.
- Large and small businesses should collaborate with one another and their community partners (non-profits, governments, child care workers, and other stakeholders) to contribute to easing the child care shortage in the region.
- Explore partnerships with local school districts to offer preschool/Pre-K, before and after school, and non-school-day care, and other services that could be partly funded by the education system.
- Consider ways to boost the income and wages of the child care workforce.
- Conduct additional research on other root causes of why the northeastern Minnesota child care shortage exists in an attempt to keep existing providers from leaving the field and to find ways to encourage new providers into the field.

Introduction

The seven-county region of northeastern Minnesota has the largest child care shortage in the state (Center for Rural Policy and Development, 2017). More than a fifth of family child care programs have closed since 2011, creating problems for families and employers. The Blandin Foundation, the Northland Foundation, and the Minnesota Department of Iron Range Resources and Rehabilitation (IRRR) commissioned Wilder Research and the Center for Rural Policy and Development (CRPD) to prepare this report about the extent and costs of this child care shortage. This report is intended to help raise awareness and make the business case to spur solutions for the region's child care shortage.

Total licensed child care programs in northeastern Minnesota, 2018

We examined the effects of the child care shortage on businesses and families in the region, the estimated costs to increase the supply of quality child care to address the shortage, and the economic impacts of failing to make adequate investments to rectify this shortage.

Study purposes

The purpose of the study is to provide credible, objective, useful estimates for communicating with key audiences. This report provides a current snapshot of the child care shortage in northeastern Minnesota and estimates the:

- Value of the child care industry in the region.
- Costs to expand capacity among existing family and center providers.

- Economic impact of the child care shortage on northeastern Minnesota families and businesses.
- The present lifetime value of kindergarten readiness within the northeastern Minnesota region pertaining to the future workforce.

This report also offers examples of local and state business involvement in child care solutions, a topic of additional interest to the study's funders.

Study Methodology

Information on how we calculated the extent of the child care shortfall, used a multiplier effect to estimate economic impact, and computed the worth of the child care industry to businesses, families, and providers can be found in the Methodology section in the Appendix.

Limitations of study data and methods

Study authors strove to obtain and report the most current data on the number and types of child care programs in the region. However, those data are changing all the time. For example, this study is based on data available in April 2018 when the region had 91 child care centers. By July, the region had 92 centers, with the addition of one center in Carlton County.

Number of child care providers and children enrolled in northeastern Minnesota

This section enumerates the number of licensed family and center-based programs, the number of infants, toddlers, and preschoolers served, and the hourly rates charged as of April 2018. The information is provided by county and also for the regional job centers of Duluth, Grand Rapids, International Falls, Two Harbors, and the Chisholm, Hibbing, Virginia, and Eveleth area.

Types of child care programs

According to the Minnesota Department of Human Services, northeastern Minnesota has 379 family child care programs. As shown in Figure 1, two-thirds are in the region's job centers, including 132 in Duluth, followed by 54 in Grand Rapids. The region has 91 child care centers and 23 preschools. Duluth (32) and the Chisholm, Hibbing, Virginia, and Eveleth area (14) have the most of these two types of center-based programs.

The 91 child care centers includes 17 Head Start programs that are licensed as centers. They are included here because the slots they provide to eligible children reduces competition for slots in other centers.

For perspective, in 2011, the region had about 482 family child care programs, about 21 percent more than today.

Number of children enrolled

Combined, these 493 child care establishments (91 child care centers, 379 family-based providers, and 23 preschools) serve 649 infants, 1,087 toddlers, and 5,104 preschoolers. In St. Louis County, about two-thirds of the children enrolled in these child care programs are located in Duluth and Two Harbors.

Hourly child care rates

Six out of seven counties in the northeastern Minnesota region and all of the regional job centers have a lower average hourly child care rate for infant, toddler, and preschool care than the average statewide hourly rates. However, families in Aitkin County pay more than the state average for each age group in child care.

1. Number of licensed programs, number of children enrolled, and average hourly rates by type of program in northeastern Minnesota (2018)

	# of Licensed Programs by Type			# of Children Enrolled			Average Hourly Rates		
County	# Centers	# FCC	# Preschools	Infant	Toddler	Preschool	Infant	Toddler	Preschool
Aitkin	0	17	0	17	17	78	$5.45	$5.05	$5.05
Carlton	10	48	4	115	171	860	$3.21	$3.17	$3.12
Cook	1	6	0	8	11	59	$4.75	$4.33	$4.33
Itasca	15	66	3	90	120	727	$3.34	$3.00	$2.91
Koochiching	2	17	1	15	26	124	$2.83	$2.78	$2.72
Lake	1	13	1	8	19	98	$3.03	$2.95	$2.95
St. Louis	62	212	14	396	723	3,158	$3.44	$3.39	$3.31
Regional total	**91**	**379**	**23**	**649**	**1,087**	**5,104**	**$3.72**	**$3.52**	**$3.48**
Job Center									
Duluth	26	132	6	245	406	2021	$3.29	$3.38	$3.31
Grand Rapids	2	54	2	67	98	565	$3.70	$3.19	$3.10
International Falls	0	16	2	13	22	109	$2.83	$2.78	$2.72
Two Harbors	0	12	2	5	15	86	$2.85	$2.72	$2.72
Chisholm/Eveleth/Hibbing/Virginia	11	42	3	78	207	863	$3.45	$3.38	$3.25
Job center totals	**39**	**256**	**15**	**408**	**748**	**3,644**	**$3.22**	**$3.09**	**$3.02**
Statewide	**1,273**	**8,243**	**381**	**16,750**	**26,593**	**93,261**	**$5.01**	**$4.77**	**$4.58**

Sources: Child Care Aware of Minnesota, June 2018; Minnesota Department of Human Services, DHS Licensing Information Lookup (2018). Retrieved from: https://licensinglookup.dhs.state.mn.us

Economic impact of the child care industry in northeastern Minnesota

This section estimates the economic impact of the child care industry in northeastern Minnesota. Through their daily activities, family and center-based child care programs generate economic value for the region in two key ways. First, spending by child care programs directly impacts the personal income (wages) and tax revenues in the region. Secondly, these expenditures generate an indirect effect; that is, the child care activities induce other organizations and businesses to spend more, creating what is known as a "multiplier effect." The economic value is calculated using data collected and analyzed and models developed by IMPLAN. (See the Appendix for details.)

Direct economic impact of the child care industry in the northeastern region

The direct economic value of all goods and services produced and consumed by child care establishments per year totals approximately $30 million for the region. This includes all operational spending of child care establishments such as wages and purchases of inputs such as food, supplies, and other goods and services to provide care.

About half of that $30 million direct impact (about $16 million) is in wages and benefits to the 735 child care workers in the seven-county region. About $13 million (84%) of those wages and benefits are in St. Louis County.

Indirect or multiplier effect of child care spending in the region

That $30 million in direct spending also generates an indirect impact on the personal income, employment, and tax revenues of other industries in the regional economy. For example, when a child care establishment purchases food for children receiving care, the food providers are induced to spend more in labor and ingredients to satisfy the child care demand for food. Specifically, we estimate that the indirect economic activity generated by the child care industry contributes to 146 additional jobs in the region. Most commonly, these jobs are in real estate, restaurants, hospitals, and wholesale businesses.

This indirect spending on additional jobs, goods, and services generates an additional estimated $18 million annually.

Total economic impact of the child care industry in the region

In sum, the direct and indirect economic impacts of the regional child care industry are an estimated $48 million per year. That sum includes $1.8 million in local and state taxes and $4.2 million in federal taxes every year.

As shown in Figure 2, the largest total economic impact is $36.1 million in St. Louis County (75%), followed by $5.3 million in Itasca County (11%), and $3.9 million in Carlton County (8%).

2. Economic impact of the child care industry by county in the northeastern region of Minnesota, 2018 ($millions)

County	Total industry impact/value
St. Louis	$36.1
Itasca	$5.3
Carlton	$3.9
Cook	$1.0
Aitkin	$.9
Lake	$.8
Koochiching	$.02
Total for the region	**$48.0**

Source: IMPLAN (2018)

Estimated current unmet need for child care and costs to add capacity to meet potential demand for child care in northeastern Minnesota

Estimated additional child care capacity needed

We estimate an additional 4,496 licensed child care slots – a 50 percent increase in current licensed capacity – are needed to cover potential demand for child care in northeastern Minnesota (Figure 3). This is based on the U.S. Census Bureau's estimate of the number of children under age 6 with all parents in the workforce and the current number of licensed child care slots available,

Within the region, the child care shortage varies considerably from county to county. Aitkin and Koochiching counties show the greatest shortfalls in available child care slots in the region, with Aitkin County needing to increase its current number of licensed child care slots more than 150 percent to meet the potential demand from working families with children under age 6. Similarly, in Koochiching County, capacity would have to more than double the current number of child care slots (124%).

Child care shortfalls by age group (infants, toddlers, and preschoolers) are not available due to data limitations. However, infant care is widely known to be in short supply. State regulations strictly delineate the child-to-staff ratio. Infants and newborns, (defined as newborn to 12 months for family providers and newborn to 16 months for centers), are the most expensive to care for largely because they require the highest child-to-staff ratio, and staffing is the child care provider's largest expense, which is reflected in the comparatively higher cost of infant care (Figure 1).

According to the Minnesota Department of Human Services, one adult in a family child care setting may care for a maximum of six children under school age. Of those children, three may be infants and toddlers with a maximum of two infants. For center-based providers, the minimum staff-to-child ratio for infants is one staff person to four infants with a maximum group size of eight. The ratio for toddlers is one staff person to seven toddlers, for preschoolers it is 1:10, and for school-age children it is 1:15.

Given the staff-intensive nature of infant care and the added cost it brings to providers, for many providers it is a sensible business decision to move away from infant care and toward caring for older age groups that can provide more "paying customers" per staff person.

3. Total licensed capacity slots and additional capacity needed by county, 2018

County	Estimated number of children under age 6 with both or all parents in the workforce	Total licensed capacity (slots)	Additional capacity needed	Percent growth in capacity required to meet potential demand
Aitkin	543	214	329	154%
Carlton	1,647	1,032	615	60%
Cook	225	116	109	94%
Itasca	1,768	1,419	349	25%
Koochiching	597	266	331	124%
Lake	370	206	164	80%
St. Louis	8,420	5,821	2,599	45%
Total	**13,570**	**9,074**	**4,496**	**50%**

Sources: Calculations for this table are based on the following:
United States Census, American Community Survey 5-Year Estimates, Table DP03, Selected Economic Characteristics, 2012-2016.
Minnesota Department of Human Services, DHS Licensing Information Lookup (2018). Retrieved from: https://licensinglookup.dhs.state.mn.us/
Note: A 2017 report by the Center for Rural Policy and Development based on a previous 5-year estimate of the population estimated a 56% growth in capacity required to meet the potential demand.

Estimating the costs to expand the number of child care slots to meet the need for child care

The shortage of child care slots can be alleviated by increasing 1) the number of family child care (FCC) programs, 2) the number of slots within existing center-based establishments, and 3) the number of new child care centers. Because of licensure limits, existing family child care programs would likely not be able to meet the need with new slots. When estimating expansion costs, we assumed the existing ratios of family child care programs and child care centers would stay constant in each county. More information on how these expansion costs were calculated can be found in the Appendix.

Increasing the number of family child care programs

First Children's Finance advises family child care providers to expect start-up costs of between $5,000 and $10,000 and average costs per slot of $400 to $850.

Using this assumption plus the current ratio of family child care providers to child care centers, we calculated that increasing the number of family child care programs in the region to cover the need for FCC slots would cost an estimated $891,000 to $1.9 million (Figure 4).

More information on how these expansion costs were calculated and the estimated costs per county can be found in the Appendix.

4. Estimated costs to increase number of family child care programs in northeastern Minnesota, 2018 (as of 4/11/18)

Current # of Providers	Current Capacity	Average licensed capacity per family child care provider	Estimated number of family child care slots needed based on share currently provided by FCC providers	Estimated number of FCC providers needed	FCC cost of startup[a]
379	4,495	12	2,227	202	$891,000 to $1,890,000

Note: Family child care costs are calculated per provider.

[a] Startup costs are estimates from First Children's Finance via a Personal Conversation, 2018. Assumes the range of startup costs per provider recommended by First Children's Finance at $5,000 to $10,000 per provider and 12 children per provider.

Source: Calculations for this table are based on the following:
United States Census, American Community Survey 5-Year Estimates, Table DP03, Selected Economic Characteristics, 2012-2016.
Minnesota Department of Human Services, DHS Licensing Information Lookup (2018). Retrieved from: https://licensinglookup.dhs.state.mn.us/

Expanding capacity of existing child care center facilities

Again, assuming child care centers would provide the same ratio of child care capacity, we estimated the total amount needed to cover the shortage in center-based child care slots. The average cost per slot of $2,000 to $5,000 is based on a range of expansion costs for grant recipients funded by the Northland Foundation in 2017 and 2018. As shown in Figure 5, the estimated costs to meet potential demand by expanding existing child care centers ranges from $4.5 million to $11.3 million. Keep in mind that center-based child care is more widely available in population centers. Cook and Lake counties have one child care center each and Aitkin County has none.

5. Estimated costs to expand capacity for center-based child care (CCC) in northeastern Minnesota, 2018 (as of 4/11/18)

Current # of CCC providers	Current Capacity	CCCs as % of total licensed capacity	Estimated number of center-based child care slots needed	CCC cost of expansion[a]
91	4,579	50%	2,269	$4,537,000 to $11,344,000

Source: Calculations for this table are based on the following:
United States Census, American Community Survey 5-Year Estimates, Table DP03, Selected Economic Characteristics, 2012-2016.
Minnesota Department of Human Services, DHS Licensing Information Lookup (2018). Retrieved from: https://licensinglookup.dhs.state.mn.us/

Note: Center-based child care costs are calculated per child.

[a] Based on a range of cost of expansions for grant recipients funded by the Northland Foundation in 2017 and 2018.

Estimated costs to start up new child care centers

We also looked into cost estimates for starting up a new center-based child care program. Start-up costs for child care centers are considerably higher compared to adding capacity at existing child care centers. Based on the costs of recent new center projects in the region, we estimated that to meet center-based child care needs in the region by building centers from the ground up, costs would be approximately $32.5 million. Costs could be considerably lower ($8.8 million total) if an effort were made to use existing buildings for new centers.

The average cost per child care slot was $3,892 for three recent startups in the region that used existing buildings. For startups involving new construction, we used the average of two sample projects in the region, which came to $14,310 per slot.

We acknowledge that these are estimates based on a small sample of regional cases, and therefore, the actual cost to expand child care in the region will vary based on additional variables.

6. Estimated costs to start new center-based child care (CCC) facilities, 2018 (as of 4/11/18)

# of CCC Providers	Capacity	CCCs as % of total licensed capacity*	Estimated number of center-based child care slots needed	CCC startup costs	
				With existing building, average $3,892 per slot[a]	With new building, avg. $14,310 per slot[b]
91	4,579	50%	2,269	$8,830,000	$32,470,000

Sources: Calculations for this table are based on the following:
United States Census, American Community Survey 5-Year Estimates, Table DP03, Selected Economic Characteristics, 2012-2016.
Minnesota Department of Human Services, DHS Licensing Information Lookup (2018). Retrieved from: https://licensinglookup.dhs.state.mn.us/

Note: Center-based child care costs are calculated per child

[a] Based on three projects. Information provided by the Northland Foundation.

[b] Based on two projects. Information provided by the Northland Foundation.

Economic impact of the child care shortage on northeastern Minnesota families, employers, government, and future workforce

This section of the report estimates the economic impact the child care shortage has on reducing the potential earnings of families, the productivity of businesses and employers, and tax revenues in northeastern Minnesota.

Impact on families

Based on published studies of the relationship between employment and the availability of child care, we estimate that 245 parents (13%) of the total 4,496 children without child care in the region are not currently in the labor force due to lack of licensed or regulated child care. (See Appendix for more detailed information). Many of the other parents are likely using family members, the most common type of child care for children age 2 and younger, or working split shifts.

Based on average wages for parents of young children in the region, if these parents were to find a job, they could each earn an average of $33,000 annually. Accordingly, the total potential new earnings of families in northeastern Minnesota could reach $8.1 million annually if the child care shortage were solved.

Impact on businesses and employers

As fewer parents are able to work due to the lack of child care for their children, employers in the region also lose the possibility to hire these potential workers. The reduced workforce could impact productivity of firms and the economic output of the region as a whole. Since the extent of this constrained supply of human capital is unknown, the impact of lack of child care on employment is used as a proxy for the lost productivity of employers. Thus, a 13 percent reduction in employment, as cited in several research studies, could translate into a similar relative loss in the region's productivity.

Accordingly, based on average earnings in the region of around $33,000, employers or businesses could lose at least $4,290 per worker without access to child care for their children. We believe these are conservative estimates. This cost of lost productivity is

likely even higher because it does not include additional employers' costs to recruit and train employees. More research is needed to calculate those costs.

Impact on the government tax revenue

Due to the child care shortage for nearly 4,496 children in the region, local and state governments are not receiving tax revenues of $1.3 million annually. These are taxes associated with the investment and operation of child care establishments that would address the shortage in the industry. Similarly, the federal government is losing $3 million every year from lost economic activity associated with the shortage of child care. These include local, state, and federal taxes paid by child care workers and providers, and the taxes from other industries providing services to the child care industry.

In addition, parents who are not in the workforce due to the lack of child care are not paying income taxes. We estimate that from the lost earnings of $8.1 million, about $1 million in local and state tax revenue is lost every year because parents are unable to be in the workforce (based on an effective tax rate of 12.6 percent reported by the Minnesota Department of Revenue, 2017).

Impacts on the future workforce

Other potential and hidden impacts of the child care shortage in northeastern Minnesota stem from the relationship between kindergarten readiness due to attending high-quality early care and education, future education, and the present value of lifetime earnings. Wilder Research has calculated that every low-income (defined as at or below federal poverty guidelines) child in the region lacking child care and, ultimately, lacking kindergarten readiness potentially loses future lifetime income and other benefits worth $28,500 today. In addition, the public losses in taxes and marginal costs of health and welfare services and potential incarceration add up to an estimated $15,000 per low-income child.

Similarly, other studies of the relationship between early care and education and future education suggest that of the 4,496 children currently without child care in northeastern Minnesota, an estimated 1,480 will not complete their high school education and are thus less likely to continue formal education throughout their lives. That lack of education will likely reduce their future employability and earnings, which could add up to an estimated $13.3 million in lost lifetime earnings for this current group of children lacking child care.

Examples of best-practice business involvement in child care solutions

This section highlights examples of what employers in the region and in other parts of Minnesota are currently doing to help their employees gain access to child care.

Businesses providing on-site or off-site child care

Taylor Corporation, a printing business in North Mankato, operates a child care center for employees' children. Due to the irregular, overtime, weekend, and seasonal hours that many employees are required to work, Taylor found that employees were struggling to find child care that worked for their families. Also, when employees worked fewer hours during slow seasons, most child care providers would require them to pay the full amount for care even if the child was in care for fewer hours during the week. In the 1980s, Taylor Corporation realized that in order to remain a competitive employer, they needed to provide flexible child care to stabilize their employee base. At the Taylor Corporation child care center, the parents pay a fee that is close to the average child care rate in the area, but Taylor heavily subsidizes the operation, about 44 cents for every dollar parents pay. The benefit to Taylor Corporation is that they retain a high-quality staff who are in turn well-paid and receive raises, vacation time, professional development, and other benefits.

Operating a child care center may be too much of a commitment for smaller employers since centers need a critical mass of clients to operate efficiently. **Harmony Inc.** in Harmony has opened a child care center on-site that is open to both employees and the public. **Gardonville Telephone Cooperative** has done something similar, opening a center in Brandon that is available to the community as well as employees.

In Duluth, Essentia Health offers on-site child care to employees. In the Twin Cities, Best Buy, General Mills, Medtronic, Abbott-Northwestern Hospital, Boston Scientific, University of Minnesota, and HealthPartners offer on-site child care, primarily at their corporate offices.

Consortium care and public-private partnership models

A **consortium-sponsored facility** may be more practical in smaller communities with fewer employers. In a consortium, employers and possibly other entities join together to create or sponsor a child care facility for the benefit of their employees and/or the rest of the community. **Public-private partnerships** involve the employer(s) partnering with a

federal, state, or local government entity to provide child care in some way. One potential partner might be a local school district.

For example, two school districts in western Minnesota, **Montevideo** and **Benson,** have started offering child care services for their employees and community members. Depending on regulations, businesses in Minnesota communities could partner with a school district in a cooperative venture. School districts have trained staff, kitchen facilities, and possibly the advantage of being able to pay staff at a higher rate than many in-home providers can afford, while employers could subsidize its operation directly or provide financial assistance to their employees to help pay for care.

For small rural communities, a collective form of involvement may be most practical. One single business in a small community may be too small for any of the above options, but employers could collaborate with other community leaders and organizations to develop solutions. Community-based solutions can involve many types of stakeholders including businesses, government, parents, and child care providers.

For example, in the city of **Clarkfield** in Yellow Medicine County, the city is working with a child care provider to open a center that will serve 58 children. The Clarkfield city council contributed $25,000 to architecture and engineering fees. Local businesses in the community are providing cash or in-kind donations such as toys, art supplies, and books to the initiative.

Battle Lake in Otter Tail County has a similar campaign. The community is raising $600,000 to open a child care center in the city. Businesses are donating time and services to help make the center a reality. The new center would have capacity for up to 42 children including infants, toddlers, and preschoolers. The center broke ground in April 2018 and hopes to be open in time for the 2018-2019 school year.

Providing "backup" child care

In this scenario, parents make their own regular child care arrangements, but when that child care is not available because the provider is sick, on vacation, or closed for another reason, an employer can provide backup child care for parents by contracting with a designated backup provider. **Mayo Clinic** in Rochester contracts with Bright Horizons, a large, multi-national company that provides regular child care services along with capacity to handle drop-in situations.

Minnesota colleges and universities

Three of the 10 colleges and universities located within northeastern Minnesota – Fond du Lac Tribal and Community College in Cloquet, Lake Superior College in Duluth, and the University of Minnesota Duluth – offer child care on campus.

Financial assistance

The following examples regarding financial assistance from businesses, foundations, government agencies, and other grant-making organizations may help to reduce the child care shortage.

A few organizations located in the Midwest region, the state of Minnesota, and in the seven-county region of northeastern Minnesota offer grants and other assistance to child care providers to help them grow their businesses and make improvements.

The **Northland Foundation** has prioritized early care and education since 2003. The Foundation received two Child Care Grant Program awards in 2017 and 2018 totaling $215,000 from the **Minnesota Department of Employment and Economic Development**. With this public funding support, the Foundation has been able to help five providers – start-ups and expansions – to create 117 new infant, toddler, and preschool openings in 2017 with six more providers adding another 221 slots expected in 2018. In some cases the state-funded grants to providers are supplemented by small-business loans from the Foundation's Business Finance Program. The Foundation is also working with the **Minnesota Department of Iron Range Resources and Rehabilitation**, the **United Way of Northeastern Minnesota, First Children's Finance**, the **Northeast Minnesota Office of Job Training**, and the **Duluth Workforce Development Board** to identify grant recipients and provide technical assistance and business training. The continuation of these grants will depend on continuation of the state's grant program and Northland receiving another award. In addition, the Foundation has secured funding support for its Parent Aware Pathways Initiative, launched in 2013 to help child care providers access training to enhance the quality of their programs and earn a Parent Aware star rating (the State of Minnesota's child care quality-rating system). As administrators of **Minnesota Early Learning Scholarships** starting in July 2017, the Foundation connects lower-income families and other populations in need with nearly $2 million in state-funded scholarships to help them afford high-quality child care.

Blandin Foundation has invested in Itasca County's early education system since the mid-1990s. Early on, the Foundation recognized that it would take a change in mind-set across sectors to change the way local families with children were supported. Today, Blandin continues to fund a series of children and family events through the broad Children First! initiative, through the widely recognized Invest Early program (over 450

slots reserved for low-income families), and through two other wrap-around early learning programs in Remer and Hill City. In addition, Blandin Foundation is a founding member of the Start Early Funders Coalition and has just elected to support First Children's Finance's expansion to northeastern Minnesota. Blandin's total annual grant support for early learning is approximately $2,250,000 per year.

The Minnesota Department of Iron Range Resources & Rehabilitation (IRRR) granted $20,000 to United Way for technical assistance to help with child care in the region. The purpose of the funding is to reimburse a portion of the costs for private and nonprofit child care providers during the planning and development phase to ensure the projects are fiscally sound and in regulatory compliance. Technical assistance could be but is not limited to child care center specific business plans (after consultation with local SBDC office), financials, architecture consultation, code review, creation of policies and procedures, and other costs associated with child care center project planning due diligence.

For example, the IRRR granted $260,000 to City of Mountain Iron to perform site preparation for the construction of a child care facility in Mountain Iron. Also, the IRRR granted $175,000 to the City of Eveleth for infrastructure, HVAC, and building upgrades for Bright Minds Academy Daycare, which is a child care and child development center that is open 24 hours a day, seven days a week, and will be located Eveleth. Their mission is to provide high quality child care that meets the needs of each child and family in a safe, educational, and caring environment. With the current child care crisis, Bright Minds Academy Daycare will service the Iron Range community for youth ages 6 weeks to 12 years.

United Way of Northeastern Minnesota (UWNEMN) has been working on the regional child care crisis since 2014, when they conducted a study of needs from parent, provider, and employer perspectives. UWNEMN has since piloted a child care expansion grant process, awarding funding to local providers interested in starting up a new child care or expanding their existing child care business. UWNEMN also offers financial awards for providers who complete star ratings through Parent Aware. Scholarship amounts range from $250-$1,000. In addition, UWNEMN has also partnered to fund and provide free local child care training.

First Children's Finance (FCF) is a national Community Development Financial Institution that offers loans to providers to help them grow and improve their child care businesses in collaboration with the organizations mentioned above. FCF has provided 20 hours of technical assistance for business planning for each of the grantees above. FCF also offers the Rural Child Care Innovation Program funded by the Minnesota Department of Human Services. Communities can apply to this program. FCF works with the communities to identify their unique needs and the best solutions to their child care needs.

Issues to consider

Study findings show that families, businesses, and government pay a price for the child care shortage in northeastern Minnesota and stand to benefit from an expanded quality child care system. Lost wages, lost productivity, and costs to working families and businesses due to the child care shortage contribute to a weakened current and future workforce and regional economy. Solutions to this crisis-level shortage of child care will need to engage multiple sectors—private, public, and philanthropic. Large and small businesses, government, foundations, and other organizations in the region should consider working together as well as on their own to take the following public and private actions to invest in ways to solve the current shortage and to ensure that the future workforce in the region has access to affordable, high-quality child care:

- Focus new funding and efforts on targeted, rural areas where child care is scarce. While it is important to expand capacity in northeastern Minnesota overall to alleviate the shortage, specific attention should be given to the most rural communities with smaller populations. Rural counties with the largest child care shortages such as Aitkin, Cook, and Koochiching bear the greatest cost burden in order to expand their county's child care capacities or start new child care centers as the existing child care provider workforce is smaller compared to other northeastern Minnesota counties.
- Continue to offer and increase microloans or micro-grants to providers to expand capacity and improve their current practices. Northland Foundation, the Minnesota Department of Iron Range Resources and Rehabilitation, United Way of Northeastern Minnesota, and First Children's Finance already offer these types of financial assistance to providers.
- Larger employers could consider collaborating and donating to the organizations listed in the previous bullet in their grant initiatives.
- Smaller businesses in smaller towns and rural communities could pool their resources and collaborate with child care providers, potential funders, policy-makers, local governments, community organizations, and other stakeholders in order to contribute to easing the child care shortage. This could look like the previously highlighted examples in Yellow Medicine County or Battle Lake. Businesses could also start a council, co-ops, or other forms of governance in collaboration with local governments and community organizations in order to alleviate child care shortages in their areas.
- Encourage the State of Minnesota to continue offering funding through the Department of Employment and Economic Development, as they have done in 2017 and 2018, to help further expand child care slots.

- Form partnerships with local school districts to offer preschool/Pre-K, before and after school, and non-school-day care, and other services that could be partly funded by the education system. A school district has the existing facilities and potentially the workforce available to increase the number of child care slots in that community across all age groups. This would also be beneficial to school staff who are parents, as they would have access to on-site child care (and schools often are major employers in rural settings).

- Consider ways to boost the income and wages of the child care workforce. The region's aging workforce means longtime child care providers are retiring. At the same time, fewer younger caregivers are willing or able to take on the challenges and costs of running their own small business, with long hours and low pay. For child care centers, hiring and retaining staff is challenging due to the low pay and few benefits in the industry. They must balance the pressure to raise wages in order to attract and retain workers with the ongoing costs of regulations and the inability to charge higher rates to families in the region who are already strained to afford child care.

- Conduct additional research on other root causes of why the northeastern Minnesota child care shortage exists in an attempt to keep existing providers from leaving the field and to find ways to encourage new providers into the field. The question may be asked why the child care gap in northeastern Minnesota is not being filled by the marketplace. If additional slots are needed, why are centers and family child care businesses not stepping in to meet the need? Numerous stories in the media have offered several reasons why providers are leaving the field, such as an aging workforce and population, providers not earning enough money, burnout, and the numerous regulations providers have to comply with in order to run their businesses. We fully recognize that the quantitative data presented in this report is only one part of the story. Funders, legislators, and other local policy-makers should support additional research in order to collaborate with each other to identify innovative solutions.

- Finally, unless current trends change drastically, the share of child care capacity provided by family child care programs and child care centers will not stay the same. Currently, the number of family child care programs is dropping at a fast rate while the number of child care centers is trending flat or slightly up, which means center-based child care's share of capacity will only grow while the family child care share shrinks. Therefore, unless special effort is made to expand family child care programs, in all likelihood the higher costs associated with developing child care center capacity will be the challenge going forward.

Appendix: Study methodology

Calculating the regional direct and multiplier (indirect) effects

The method used in the multiplier effect calculations of these impacts is the Input-Output model developed by IMPLAN (http://www.implan.com/). This method measures the direct impact of an economic sector or industry's spending in a particular region by estimating the inputs used by the organization and the multiplier effects in other industries in the region. In addition, the IMPLAN model computes the impact on tax revenues, multipliers, and economic estimates using data from the U.S. Bureau of Labor Statistics (BLS), the U.S. Census, and the U.S. Department of Agriculture.

Calculating the child care shortage

To calculate the shortfall of child care in northeastern Minnesota region (Figure 3), CRPD staff subtracted the total licensed capacity from the estimated need to get additional capacity. These represent the number of slots needed to match the estimated number of children under 6 with both or all parents in the workforce.

To calculate the percent growth in capacity required to meet need, CRPD staff divided the additional capacity needed by the total licensed capacity as of April 2018. For example, in Aitkin County, based on a current capacity of 214 licensed slots and an estimated need from 543 children, CRPD staff calculated a need of 329 additional slots. Then, CRPD staff divided 329 by the 214 current capacity to show that Aitkin County would need to increase its licensed capacity 154 percent. The region as a whole would need to increase its capacity by 50 percent, but this figure varies greatly from county to county.

Calculating costs to expand capacity among existing family and center providers

CRPD staff compiled a list of family and center-based child care expansion and startup projects that received grants from the Northland Foundation as a result of DEED child care grants in 2017 and 2018. Also included is a startup project in Eveleth receiving a grant from the Minnesota Department of Iron Range Resources and Rehabilitation, but not from the Northland Foundation.

The projects fall into three groups: Expansions of existing family child care businesses, startups of child care centers going into existing buildings, and startups of child care centers using new construction. On a cost-per-slot basis, we can see that the expansions fall into a range of $2,000-$5,000 per slot. The three startups in existing buildings varied but averaged about $3,800. The costs of the two new buildings varied substantially. The

Duluth project came in at $9,064 per child; while the Mountain Iron project came in at $19,555 per child.

The difference in cost between startups in existing buildings and startups in new buildings appears to be in the extent of construction. This fits with an article recently released by CRPD on the housing shortage, showing the significant increase in construction costs over the last 10 to 20 years.

The cost difference between the two new build projects appears to lie mostly in the cost of site preparation; site work for the Mountain Iron project is expected to be approximately $260,000. The Duluth project did not specify, but assuming the site is in the city of Duluth, utility hookups may already be present, which could lower the cost of site preparation considerably.

The cost of furniture, fixtures, and equipment were specified in two projects. Those both came to $1,200 per child.

Calculating costs to expand number of family child care programs

To calculate estimated costs per slot for family child care (FCC), CRPD collaborated with First Children's Finance to obtain this estimate. First Children's Finance tells FCC providers to expect to spend $5,000 to $10,000 for a startup. Divided by the typical in-home family child care capacity of 12, CRPD arrived at a low end of approximately $400 and a high end of approximately $850 per child. CRPD multiplied the low-end estimate and the high-end estimate by the estimated number of slots needed for FCC in each county to arrive at a range of total cost FCC care in that county.

Costs to increase number of family child care programs in northeastern Minnesota by county, 2018 (as of 4/11/18)

County	Current # of Providers	Current Capacity	Average licensed capacity per family child care provider	Estimated number of family child care slots needed based on share currently provided by FCC providers	Estimated number of FCC providers needed	FCC cost of startup[a]	
						$400	$850
Aitkin	17	214	13	329	25	$131,600	$279,650
Carlton	48	580	12	346	29	$138,256	$293,794
Cook	6	74	12	70	6	$27,814	$59,104
Itasca	66	763	12	188	16	$75,063	$159,509
Koochiching	17	206	12	256	22	$102,535	$217,888
Lake	13	144	11	115	10	$45,856	$97,445
St. Louis	212	2,514	12	1,122	94	$448,987	$954,098

Source: Calculations for this table are based on the following:
United States Census, American Community Survey 5-Year Estimates, Table DP03, Selected Economic Characteristics, 2012-2016.
Minnesota Department of Human Services, DHS Licensing Information Lookup (2018). Retrieved from: https://licensinglookup.dhs.state.mn.us/

Note: Family child care costs are calculated per provider.

[a] Startup costs are estimates from First Children's Finance via a Personal Conversation, 2018. Assumes the range of startup costs per provider recommended by First Children's Finance at $5,000 to $10,000 per provider and 12 children per provider.

Calculating costs to expand capacity in existing child care centers

To calculate the cost of providing additional child care center (CCC) slots through expansion of existing centers, CRPD created a low-end estimate of $2,000 per slot and high-end estimate of $5,000 per slot based on the range of cost per slot for expansion projects funded by the Northland Foundation in 2017 and 2018. For each county, CRPD took the estimated number of needed slots that would be represented by CCC providers and multiplied by $2,000 and $5,000 for each county to arrive at a range of cost for each county.

Calculating costs to start up new child care centers

To calculate the cost of additional child care center (CCC) care through the startup of new centers, CRPD divided the projects according to those moving into and renovating existing buildings and those building new.

The average cost per slot for three recent startups in the region using existing buildings came to $3,892. CRPD multiplied this amount by the estimated number of needed slots represented by CCC providers for each county. Note that this same estimated number of slots for center care is used for expansion, startups with existing buildings, and startups with new construction, and therefore the totals cannot be added together.

For the cost of additional CCC care through startups in new construction, CRPD used the average of the two sample projects, which comes in at $14,310. CRPD multiplied this average by the estimated number of center-based slots needed for each county to arrive at an estimated cost for new construction.

One limitation of these estimates is that the average for new construction may not be complete because it is based on only two projects. However, the amount does come close to the range of First Children's Finance's estimated cost of starting a center using new construction of $15,000 to $30,000 per slot.

Calculating the impact on Northland families

The estimated number of parents who would benefit from child care availability is calculated as follows: (# children shortage) divided by [(# children under 6 per household) times (% children under age 6)] times (% of adults not working in the region). This estimate comes from an average 13 percent increase in the chance of finding a job when child care is available (Matthews, 2006; Blau & Tekin, 2007; Cannon, Jacknowitz & Painter, 2006; and Cascio, 2009). This impact is combined with the average earnings and employment rate in northeastern Minnesota (Minnesota Compass, 2018; U.S. Census, 2016).

The number of children (shortage) = 4,496 (Researchers' own calculations).

Average number of children (under 18) per household = 1.93 (US Census, 2016).

Adjustment factor for children under 6 is equal to 26 percent (Minnesota Compass, 2018).

Percentage of working-age adults not working in the region is 30 percent (Minnesota Compass, 2018).

Impact on the future northeastern Minnesota workforce

In addition to the direct and indirect economic impact, we calculated the value of providing early care and education based on estimates from Wilder Research (2016). These estimates combine evidence from the research literature on the impact of early childhood programs on social and economic outcomes with local data on the demographic characteristics and cost of resources in the region. We adapted the Minnesota estimates to the characteristics of northeastern Minnesota.

Other studies of the relationship between child care and future education have found that those lacking early care and education are nearly 33 percent less likely to graduate from high school and thus less likely to continue formal education throughout their lives (Reynolds, et al., 2010).

Review of employer involvement in child care

To assemble a list of best practices, CRPD staff searched for specific examples within Minnesota and nationwide and for research on the topic of employer-sponsored child care in general. Articles discussing the pros and cons of employer involvement in child care were also reviewed.

Overview

Various sources reveal that between 4 and 8 percent of companies nationwide offer on-site child care. However, a 2014 Bureau of Labor Statistics survey found that 14 percent of state and local government workers and 10 percent of workers in private industry offered "workplace-funded child care," defined as some type of assistance with child care funded by the employer, including on-site child care. The survey also found that 54 percent of workers in state and local government and 36 percent of workers in private industry had access to a dependent care reimbursement account provided by their employers (Stoltzfus, 2015). Most of these options could be applied to both centers and family-based child care.

The following sections describe various strategies and initiatives employers have used to help their (current and prospective) employees (and sometimes other parents/workers in the same community who are not employees) to get needed child care.

Businesses providing on-site or off-site child care

On-site child care entails providing a child care center on the campus or in the building where employees work, while *off-site child care* involves operating a child care center

away from the employees' work location. A company may operate the center itself or contract with a provider to operate it. On-site child care may be the most efficient way to provide scarce "after-hours" child care for parents who work shifts outside of "regular business hours."

Of course, child care establishments must meet the state's licensing regulations. Therefore, it makes sense for businesses that are not in the child care industry to contract with existing child care businesses that are already licensed and familiar with regulations. The Minnesota Department of Human Services provides general guidance on the requirements for employer-sponsored child care such as: caregiver qualifications and training; physical space and equipment needs; water, nutrition, and rest needs; record keeping; use of approved methods on behavior guidance; required polices regarding emergencies, illnesses, medical conditions, and transportation plans, and hours and days of operation (Minnesota Department of Human Services, 2018).

Cost, liability, and parents' ability to pay are issues that some employers face in operating an on-site facility, according to Marler and Enz (1993). While the one-time start-up costs may be covered by the company, the parents will likely need to pay for the actual care of their child. More research is needed to understand the financial impact opening such a "sponsored" child care facility may have on a company, as well as the balance of the start-up costs against the savings to the employer in terms of turnover, absenteeism, and productivity.

Consortium care and public-private partnership models

Two other models include a *consortium model*—two or more employers financing a center together, contracting with an operator—or a *public-private partnership*—where the employer partners with a public agency to operate the facility (Marler & Enz, 1993).

A **consortium-sponsored facility** may be more practical in smaller communities with smaller employers. In a consortium, employers and possibly other entities join together to create or sponsor a child care facility for the benefit of their employees and/or the rest of the community. Some of the difficulties in making a successful consortium include differences in corporate cultures, agreeing on things like "operating hours, location, cost, policies, shared responsibilities, and procedures. Strong leadership and accountability are required" (Marler & Enz, 1993).

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