



Making Quality Ends Meet:

2019-2021 Cost Projections for AR Early Childhood Care & Education

Lorraine McKelvey, Ph.D.
Andrew Forsman, M.P.S.

UAMS

COLLEGE OF MEDICINE
DEPARTMENT OF
FAMILY AND PREVENTIVE MEDICINE
UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

RED
Research and Evaluation Division
Department of Family and Preventive Medicine

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better beginnings
 EVERY CHILD DESERVES OUR BEST

Report Summary

More than 9,000 children in Arkansas are estimated to receive child care subsidies each month, provided through the Child Care and Development Fund (CCDF) and administered by the Arkansas Department of Human Services, Division of Child Care and Early Childhood Education (DCCECE).¹ Subsidies assist families in paying for early childhood care and education (ECCE) arrangements so low-income parents can work or attend training and education programs. One of the key determinants of access to ECCE programs for families receiving CCDF subsidies is provider payment rates set by DCCECE. When payment rates are low relative to market prices, providers may choose not to serve children using subsidies, which then negatively impacts those families access to services.

To help determine if subsidy payment rates are appropriate, a process called cost modeling is used to estimate providers' cost to provide care under multiple different circumstances. The estimates can be used to set reimbursement rates for vouchers so that they, 1) ensure equitable access of children receiving CCDF vouchers to ECCE programs, and 2) provide sufficient financial reimbursement to support providers to improve the quality of their programs through Quality Rating and Improvement Systems (Arkansas Better Beginnings).² This report provides the results of cost modeling projections, which factor in the minimum wage increases that will be implemented from 2019-2021 (base of \$7.25/hr. in 2017, to \$11/hr. in 2021) to determine if existing CCDF reimbursement rates are sufficient for each program type to ensure access to services.

Using the current reimbursement rates and a variety of assumptions about wages, inflation, classroom demographics, and program revenue, our models project the following for Arkansas's Early Childhood Care and Education programs over the next three years:

Urban Center-Based Programs and Family Child Care Homes

Despite declining profitability over the next three years, our findings suggest that CCDF reimbursement rates are likely sufficient for the average urban center-based program to absorb the minimum wage increases through the end of 2021. Findings suggest current CCDF reimbursement rates are likely insufficient at Better Beginnings Level 2, but by 2021 profit margins for Level 1 and Level 2 programs will support program quality improvement. While not all programs meet these criteria, we believe urban centers should be considered a lesser fiscal priority for rate increases, at least in the current fiscal year.

Despite declining revenue for large Family Child Care Homes (FCCH) over the next three years, our findings suggest reimbursement rates are likely high enough for most urban FCCHs (large and small) to absorb the minimum wage increases when they are fully implemented in 2021.

Rural Center-Based Programs and Family Child Care Homes

Our findings suggest the minimum wage increases will put much more financial stress on rural programs than their urban counterparts. Rates should be increased in the current fiscal year to help offset the increased

¹ <https://arktimes.com/arkansas-blog/2018/05/17/child-care-voucher-program-to-expand-dramatically-governor-says>

² <https://www.childtrends.org/publications/market-rate-surveys-alternative-methods-data-collection-analysis-inform-subsidy-payment-rates>

personnel costs and allow programs to remain financially healthy so that children receiving vouchers have access to care.

In response, we developed two additional sets of cost models: one to help estimate the rates needed for rural centers to break-even financially (Table 4a) and one to show how programs would fare if the current urban rates were universally adopted for all centers across the state (Table 4b). Results suggest that although they would establish greater incentives for programs to increase in quality, the urban rates are unnecessarily high for rural center-based programs. We suggest any rate adjustments for rural centers fall somewhere between these two sets of rates.

Our findings also suggest rural FCCHs have the greatest need for rate increases. Both gross revenue losses and wage declines for FCCH owners over the next three years are projected to be as high as 31%, translating to a less-than-minimum-wage salary for owners all three years.

Because DCCECE currently reimburses FCCH programs at the same rate as center-based programs, we estimated FCCHs financial outcomes using the break-even (Table 4a) and current urban rates (Table 4b) as were used in center-based estimates. Results suggest break-even rates would stabilize the average rural FCCH, but adopting urban rates as universal would allow owners an hourly wage similar to/higher than the minimum wage each year.

Conclusions and Considerations

It would appear urgent to act to ensure access of children receiving care through the CCDF program in rural areas. Cost modeling estimates suggest programs are likely finding it financially difficult to compensate staff with the increase that was required in January 2019. Further, there is an indication that the reimbursement structure that was developed to support program quality improvement may be insufficient to support movement from Level 1.

It is important to note that all of our estimates were based upon average enrollment patterns for center-based and FCCH programs. Results will vary based on enrollment patterns. Further, DCCECE is actively engaged in the development of higher levels of quality for Better Beginnings. Higher quality typically means lower ratios of children per educator, thereby reducing the potential revenue for programs. Rates will need to be increased in the future as new Better Beginnings levels are added to the system, both to ensure the reimbursement rate is sufficient to allow access to services and to adequately reimburse programs as they climb the quality ladder.

Cost Model Background & Development

The Purpose of Cost Modeling

More than 9,000 children in Arkansas are estimated to receive child care subsidies each month, provided through the Child Care and Development Fund (CCDF) and administered by the Arkansas Department of Human Services, Division of Child Care and Early Childhood Education (DCCECE).³ Subsidies assist families in paying for early childhood care and education (ECCE) arrangements so low-income parents can work or attend training and education programs. One of the key determinants of access to ECCE programs for families receiving CCDF subsidies is provider payment rates set by DCCECE. When payment rates are low relative to market prices, providers may choose not to serve children using subsidies, which then negatively impacts those families access to services.

To help determine if subsidy payment rates are appropriate, a process called cost modeling is used to estimate providers' costs to provide care under multiple different circumstances. The estimates can be used to set reimbursement rates for vouchers so that they, 1) ensure equitable access of children receiving CCDF vouchers to ECCE programs, and 2) provide sufficient financial reimbursement to support providers to improve the quality of their programs through Quality Rating and Improvement Systems (Arkansas Better Beginnings).⁴ By using economic cost modeling, researchers and policymakers can better understand how changes in inside forces (e.g., providing more expensive care, namely that of infants and toddlers⁵), outside forces (ex. minimum wage increases), or regulatory shifts could affect the financial well-being of providers.

Developing Arkansas's Cost Model

In 2014-2015, the Arkansas Division of Child Care and Early Childhood Education (DCCECE) began to phase in substantial regulatory changes. First, it implemented new rules for minimum licensing, including lower child-teacher ratios and mandatory education requirements for child care directors. Second, it introduced a tiered reimbursement system for programs that serve families who use state-funded vouchers to pay for tuition. To identify how these changes could affect ECCE programs' profitability, DCCECE contracted with independent evaluators in the Research and Evaluation Division of the University of Arkansas for Medical Sciences' Department of Family and Preventive Medicine (RED) to prepare a series of cost models.

The UAMS team adapted an existing cost model developed by Louise Stoney and Anne Mitchell at the Alliance for Early Childhood Finance⁶ to fit Arkansas's regulatory and economic landscape. The team discussed formula adjustments with Stoney and Mitchell and then populated a base model for Arkansas with data gathered from the following sources:

- State Occupational Employment and Wage Estimates from the Bureau of Labor Statistics
- Arkansas Better Chance (ABC) operational guidelines

³ <https://arktimes.com/arkansas-blog/2018/05/17/child-care-voucher-program-to-expand-dramatically-governor-says>

⁴ <https://www.childtrends.org/publications/market-rate-surveys-alternative-methods-data-collection-analysis-inform-subsidy-payment-rates>

⁵ <https://www.governing.com/gov-institute/voices/col-investment-infants-toddlers-early-childhood-education.html>

⁶ <http://www.earlychildhoodfinance.org/about-the-alliance/biographies>

- Division of Child Care and Early Childhood Education data
- Child Care Resource & Referral staff
- Arkansas Advocates for Children and Families
- ASU Early Childhood Services

In a series of focus groups and individual interviews, UAMS vetted the model with program administrators involved in each of the following ECCE settings: Center-based programs in urban and rural settings, family child care homes (FCCHs) in urban and rural settings, and ABC preschool programs operating in school districts and community settings.

The first section of each interview collected data about program size; operation times; enrollment, months and hours of operation, tuition source (ABC, private, voucher), and income mix of children. During the second section of the interview, the team asked administrators to report expenses and revenue in the past year (see Table 1 below) and then used the feedback to generate final models for various ECCE settings.

There have been multiple uses and revisions to Arkansas’s cost models since their initial development. In 2016, DCCECE used the model’s findings to formulate voucher reimbursement rates for different age groups in rural and urban regions according to the quality level of their program. The models were updated again to project the cost of care with the last of a minimum wage increase to \$8.50, which happened in January 2018.

Table 1. Common costs & revenue sources for child care programs		
Personnel Costs	Non-Personnel Expenses	
Wages/Salary	Rent/Lease	Education supplies
Mandatory benefits	Utilities	Education equipment
Social Security	Building insurance	Office supplies
Medicare	Maintenance, repairs, & cleaning	Office equipment
Unemployment	Audits	Payroll/Contract services
Workers compensation	Governmental fees/permits	Credit card processing fees
Health insurance	Food & food prep	Advertising
Reserve fund	Kitchen supplies	Postage
	Consultants/Training	Miscellaneous*
	Transportation	
Revenue		
CCAP payment rates (child care subsidies for at-risk families)		
USDA Child & Adult Care Food Program funds (CACFP)		
Private-pay tuition		

Note: Expenses that did not fit into these categories were grouped in the miscellaneous category

Program Characteristics and Cost Model Assumptions: 2019-2021

Since the last cost of care estimation in 2018, there have been additional changes to the ECCE business landscape. Most notably, on Nov. 6, 2018, Arkansas voters passed Issue 5 to increase the state minimum wage. On January 1, 2019, the minimum wage increased to \$9.25 per hour and will continue to increase until the year 2021 when it will settle at \$11 per hour⁷.

Increasing Arkansas's minimum wage is certainly positive for Arkansas's ECCE workforce, as a recent UAMS study found 2 of 5 teachers are food insecure and 3 of 5 are unable to make ends meet financially.⁸ However, this will likely pose some challenges to ECCE businesses because the overwhelming majority of ECCE wages will increase by 2021, thereby increasing costs to providers. Adjustments to the existing cost models permit researchers at RED to anticipate how these changes will specifically affect different types of programs. This information can be used by DCCECE to ensure that the reimbursement rates for children that are paid with state funding are sufficient to remain competitive in the ECCE market.

The following section details the data input decisions and assumptions used to model the typical program characteristics in Arkansas. Because our results are based on these typical-case models, some programs will fall above or below our economic projections depending on their specific circumstances.

Schedule of Operation

Using DCCECE data, we found that centers are open 260 days per year on average. The vast majority (98%) of FCCs operate year-round with varying hours per day (estimated 68 hours/week). To gauge whether current funding is adequately supporting programs that are likely to exceed Level 3, we also estimated the cost of operating full-day, year-round programs that meet the regulations for Arkansas Better Chance.

Enrollment Capacity

In May 2019, DCCECE provided data for all licensed programs which showed the average capacity of children largely does not vary between rural and urban programs. Based on those data (Figure 1) and the ratios required by minimum licensing standards, we estimate that, on average, urban and rural center-based programs are licensed to provide care to children in five classrooms (one room with infants, one room with toddlers, one room with age 3, one room with age 4, and one room for school-age children).

Importantly, Figure 1 also shows that Preschool children in Arkansas occupy many more quality slots than infants or toddlers, which has implications for how our model is structured. Also worth noting, Level 2 programs were excluded from Figure 1 because there are so few programs at that quality level.

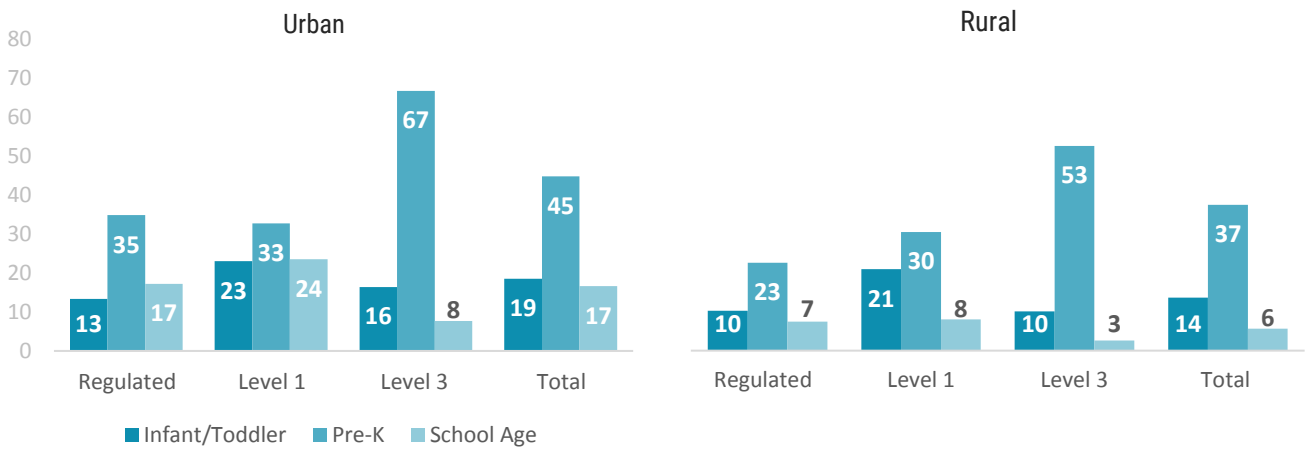
⁷ AR minimum wage increased from \$8.50 an hour to \$9.25 on Jan. 1, 2019; \$10 on Jan. 1, 2020; and \$11 on Jan. 1, 2021 (https://www.sos.arkansas.gov/uploads/elections/Issue_5_for_Website.pdf)

⁸ <https://familymedicine.uams.edu/arkansas-workforce-study/>

Teacher-Child Ratios and Personnel Costs

Teacher-child ratios are important to cost modeling because higher-quality programs have more teachers and fewer children, which increases personnel costs and decreases tuition revenue. There are no ratio requirements for Better Beginnings Levels 1-3 beyond those used for Arkansas minimum licensing. Ratios for programs categorized as ABC are estimated using Arkansas Better Chance ratios, which are somewhat lower than Early Head Start/Head Start ratios and requirements (see Table 2 below for ratio requirements).

Figure 1: Enrollment capacity of early care & education programs, 2019



In addition to the number of teachers overall, personnel expenses also change based on staff qualifications. Higher-quality centers employ staff with better qualifications, which increases costs associated with staff compensation and benefits. Retirement and health care plans are typically not provided in lower-quality programs, but are often needed in higher-quality programs to retain teachers with pre-service education.

Licensing data for FCCHs are more difficult to interpret because programs are licensed for the maximum number of children in care based on the number of adults in the program and not the age distributions of the children. To determine FCCH ratios for our model, we interviewed training and technical assistance providers and operators of small and large family child care homes. Based on their feedback, we assigned a small family home to have eight children (one infant, two toddlers, three 3-year-olds, two 4-year-olds, and one 5-year-old) and large family homes to have the maximum allowed children (16; four infants, three toddlers, three 3-year-olds, three 4-year-olds, and three 5-year-olds). These enrollment patterns were used for both urban and rural FCCHs.

Enrollment patterns for high-quality FCCH programs were based on ratios recommended by the National Association for Family Child Care (NAFCC).⁹ NAFCC accreditation requires: 1) a qualified assistant to be present when there are more than six children in care, 2) that no more than 12 children are in care at any one time, 3) when there are six or fewer children present, no more than two may be under age two, and 4) when there are seven or more children present, no more than four are under age two. Therefore, for both urban and rural FCCH models, small quality programs were estimated with one infant, one toddler, two 3-year-olds, one 4-year-old,

⁹ <https://www.nafcc.org/2017>

and one 5-year-old. Large quality programs were estimated with two infants, two toddlers, three 3-year-olds, three 4-year-olds, and two 5-year-olds.

Table 2. Current adult-to-child ratios in AR early care			
Age	Arkansas Regulated Ratio (Adult to Child)	Quality Program (ABC) Ratio	Nationally Recommended Ratio
<i>Infant</i>	1:5	1:4	1:4
<i>1-Year-Old</i>	1:5-8 ¹⁰	1:4	1:4
<i>2-Year-Old</i>	1:8	1:7	1:5
<i>3-Year-Old</i>	1:12	1:7	1:5
<i>4-Year-Old</i>	1:15	1:10	1:10
<i>School-Aged</i>	1:18	NA	1:8 -1:15

Enrollment patterns for high-quality FCCH programs were based on ratios recommended by the National Association for Family Child Care (NAFCC).¹¹ NAFCC accreditation requires: 1) a qualified assistant to be present when there are more than six children in care, 2) that no more than 12 children are in care at any one time, 3) when there are six or fewer children present, no more than two may be under age two, and 4) when there are seven or more children present, no more than four are under age two. Therefore, for both urban and rural FCCH models, small quality programs were estimated with one infant, one toddler, two 3-year-olds, one 4-year-old, and one 5-year-old. Large quality programs were estimated with two infants, two toddlers, three 3-year-olds, three 4-year-olds, and two 5-year-olds.

Care Prices

The tiered reimbursement rates set by DCCECE differ based on geography (urban/rural) but not program type (center/FCCH) and increase as program quality increases. Table 3 shows full-time rates for each of the three levels included in the state’s child care quality rating improvement system, Better Beginnings.

For centers and FCCHs, private tuition was set to full-time voucher reimbursement rates for programs at Levels 1, 2, and 3 of Better Beginnings. For minimally licensed programs that do not accept vouchers, tuition was set to the 50th percentile for urban and rural settings based on results of the 2015 Market Price Survey¹². In order to account for the number of hours school-age children are in care compared to other age groups, the half-time rate was used for school-age classrooms.

Some programs operate at levels of quality that exceed Better Beginnings levels (ABC and Early Head Start/Head Start programs, for example) and adjustments are required to accurately estimate their extra costs. Within our models, tuition or reimbursement for tuition for rural quality programs is based off the 2019 ABC rate for preschoolers (\$27.90/day). The infant rate was set at a 19% increase and the toddler rate was set at an 11%

¹⁰ AR License Birth-18 Months

¹¹ <https://www.nafcc.org/2017>

increase over the day rate for preschoolers. The rate for school-age children was set at a 5% increase above the current Level 3 rate.

Table 3.
Full-time rates & percentile of the 2015 market price¹², by child age, geography & quality rating

	BB Level 1			BB Level 2			BB Level 3		
	Rate	Center %ile	Family %ile	Rate	Center %ile	Family %ile	Rate	Center %ile	Family %ile
Rural									
<i>Infant</i>	\$21.05	75	83	\$22.11	83	84	\$24.21	90	91
<i>Toddler</i>	\$19.66	70	78	\$20.65	80	82	\$22.61	88	90
<i>Preschool</i>	\$17.40	63	71	\$18.27	74	73-80	\$20.01	78	83
<i>School-Age</i>	\$16.53	63	66	\$17.36	75	77	\$19.01	80	86
Urban									
<i>Infant</i>	\$28.56	75	95	\$29.98	82	96	\$32.84	85	98
<i>Toddler</i>	\$26.67	75	96	\$28.00	80	97	\$30.67	87	98
<i>Preschool</i>	\$23.60	72	88	\$24.78	77	91	\$27.14	83	97
<i>School-Age</i>	\$22.42	75	91	\$23.54	79	92	\$25.78	87	98

Urban programs at Level 3 that care for infants and toddlers are currently receiving more than the ABC rate for those children. Therefore, day rates for infants and toddlers in urban programs were modeled with a 5% bonus above Level 3 funding, preschoolers were assumed to be at the ABC rate (\$27.90/day), and school-age children were modeled with a 5% increase above Level 3 funding.

Wages

Wages were estimated using Bureau of Labor Statistics data for 2018 and available compensation data reported in 2017 early childhood workforce study conducted by UAMS¹³. Most results from our models were generated using these numbers (notes are provided when we tested variations). Results are reported using gross profit/loss estimates for centers and FCCHs. Hourly wage estimates for FCCHs are also reported.

Other Model Assumptions

In addition to the information above, we used the following assumptions to help estimate program costs and revenue in our models:

1. **Personnel Expense (centers only):** Updated all wages using most recent Bureau of Labor Statistics data (May 2018).

¹² https://humanservices.arkansas.gov/images/uploads/dccece/Arkansas_Market%20Price%20Study-2015.pdf

¹³ <https://familymedicine.uams.edu/arkansas-workforce-study/>

2. **Personnel Expenses:** Updated minimum wage to \$9.25 an hour for the 2019 model, \$10.00 an hour for the 2020 model, and \$11.00 an hour for the 2021 model.
3. **Personnel Expenses (centers only):** Adjusted salaries modeled below the minimum wage to the new minimum wage for each of the 2019, 2020, and 2021 models. Salaries above the minimum wage were not adjusted.
4. **Non-Personnel Expenses:** Calculated the rate of inflation from the time of the original cost model in 2015 to 2018, which was the most recent year of data available. Calculated a yearly rate of inflation (1.76%) and multiplied that rate by the number of years between 2015 and the year modeled. Adjusted non-personnel expenses by that rate, which was 7% for the 2019 model, 8.8% for the 2020 model, and 10.5% for the 2021 model.
5. **Revenue:** Updated USDA Child and Adult Care Food Program (CACFP) reimbursement rates to those for the 2018-2019 school year and calculated a 1% and 2% increase for the 2020 and 2021 models, respectively.

Projections for 2019-2021: Urban Programs

Forecasted Outlook for Urban Center-Based Programs

Based on current DCCECE reimbursement rates and the adjustments to our model detailed above, the financial outlook for urban centers over the next three years is mixed. Most centers in urban areas are projected to remain profitable overall but will become less so over time, with Level 1 and 2 centers being just above break-even by 2021. Similarly, regulated centers (those not part of Better Beginnings, ABC, or Head Start) are likely to be unprofitable by 2021 provided their tuition rate is less than the current Better Beginnings Level 1 voucher reimbursement rate. Our findings do suggest, however, that the increased reimbursement rates DCCECE set for programs as they move up the quality ladder are still high enough to help offset those increased costs and incentivize continued quality improvement.

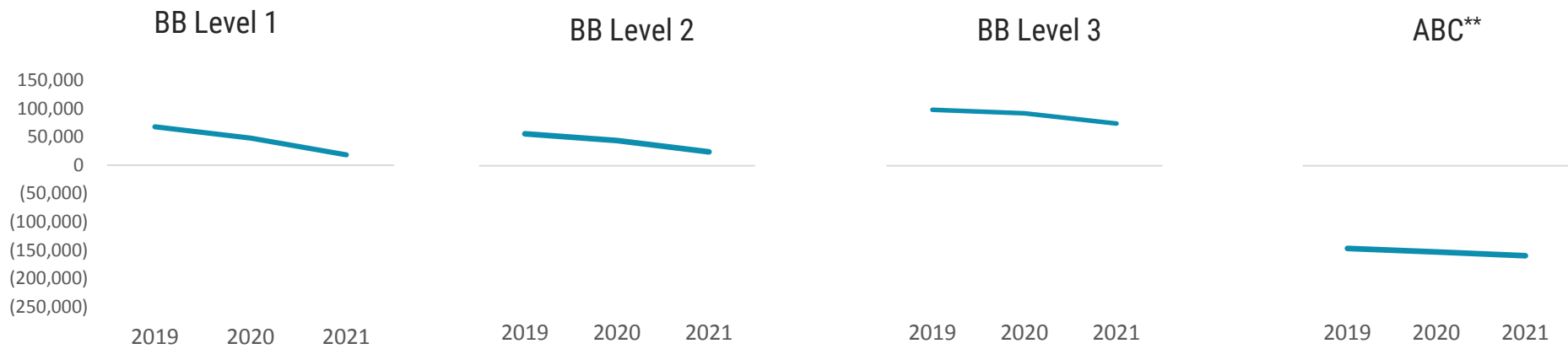
DCCECE is currently developing additional, higher levels in the Better Beginnings system. To help estimate the costs programs in those new levels could incur, we modeled full-day, full-year programs operating under ABC standards. Because those quality standards substantially reduce the number of children in their care, programs in this category are projected to end 2019 with substantial losses that will worsen over time. This demonstrates it would be fiscal difficult for the average urban center in Arkansas to operate a full-day, full-year program using nationally recommended best practices without substantially higher Better Beginnings reimbursement rates for tuition or other additional funding (this assumes that centers have five classrooms and that one of those classrooms serves school-aged children, who increase the revenue of programs substantially compared to other age groups).

For profit/loss graphs, see Figures 2 and 3 on page 12.

Recommended Actions for Urban Center-Based Programs

Our findings suggest that reimbursement rates for urban centers will likely allow programs to absorb the increases in the minimum wages through the end of 2021, provided they serve children in similar numbers and configurations of classrooms as were modeled. While not all urban centers meet these criteria, our results suggest urban centers should be considered a lesser fiscal priority for rate increases.

Figures 2 & 3: Regardless of quality level, urban centers are projected to become less profitable* over the next three years, primarily due to minimum wage increases.



However, the rates of financial reimbursement support programs to move upwards in Better Beginnings, especially as planned minimum wage increases end in 2021.



Notes: *Programs here modeled with 116 children in five classrooms (one infant, one toddler, one 3-year, one 4-year, and one school-age). **ABC program standards operated as full year.

Forecasted Outlook for Urban Family Child Care Homes

Based on current DCCECE reimbursement rates and the previously described adjustments to our model, the financial outlook for urban FCCHs over the next three years is mixed. Because minimum wage increases ultimately do not impact small FCCHs (i.e. the owner being the only employee), gross revenue is projected to remain nearly unchanged over the next three years regardless of quality level. However, for large FCCH programs, who employ additional staff, gross revenue is projected to decline by 9-31% over the same time.

The financial incentive for FCCHs to move up the quality ladder is minimal in most cases, with small FCCHs not seeing a meaningful bump in gross revenue (\$2,900 or more) until Level 3, and large FCCHs losing revenue when moving to Level 2 (mostly due to higher personnel expenses). In both cases, programs see a steep drop in revenue when moving from Level 3 to quality (as defined by NAFCC ratios).

Hourly wages for FCCH owners over the next three years are very diverse, depending on program size and quality level (\$7.42 to \$16.17 in 2019, \$6.13 to \$15.12 in 2020, \$5.15 to \$14.31 in 2021). Again, because the minimum wage increases do not impact small FCCH programs, wages fall only slightly over this time regardless of quality level. However, for large FCCHs with additional staff, we project an 11% average loss in wages for owners of large FCCHs from Level 1 through Level 3. Those losses increase to a projected 31% for those in large, high-quality settings.¹⁴

For revenue and wage graphs, see Figures 4 and 5 on page 14.

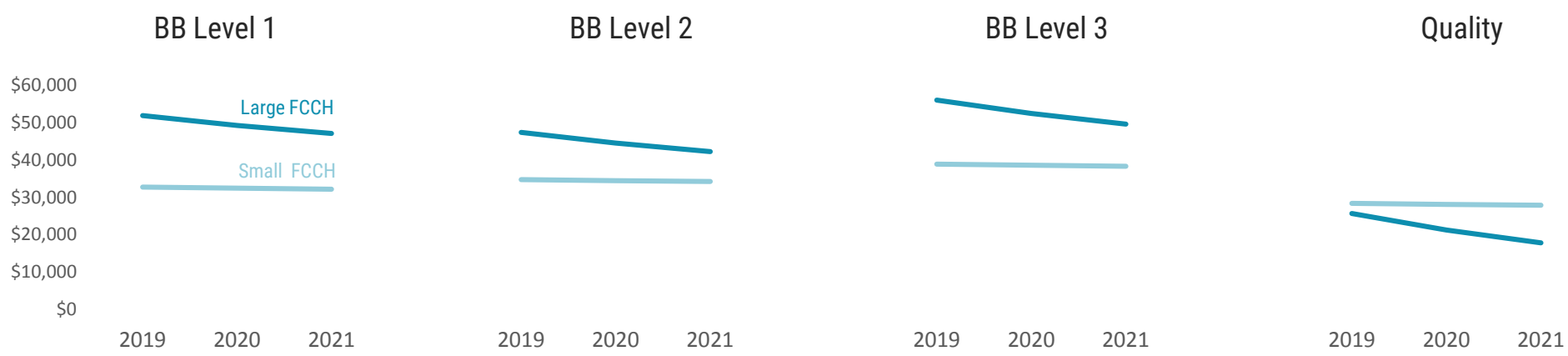
Recommended Actions for Urban Family Child Care Homes

Our findings suggest that reimbursement rates for urban FCCHs likely allow programs to absorb the increases in the minimum wages through the end of 2021. However, reduced profitability at the highest end of the quality spectrum demonstrates how unlikely FCCHs are to operate using national best practices (including reducing teacher to child ratios) without additional support. Rates will need to be increased in the future as new Better Beginnings levels are added to the system, both to ensure those programs can break even and to incentivize programs to continue climbing the quality ladder.

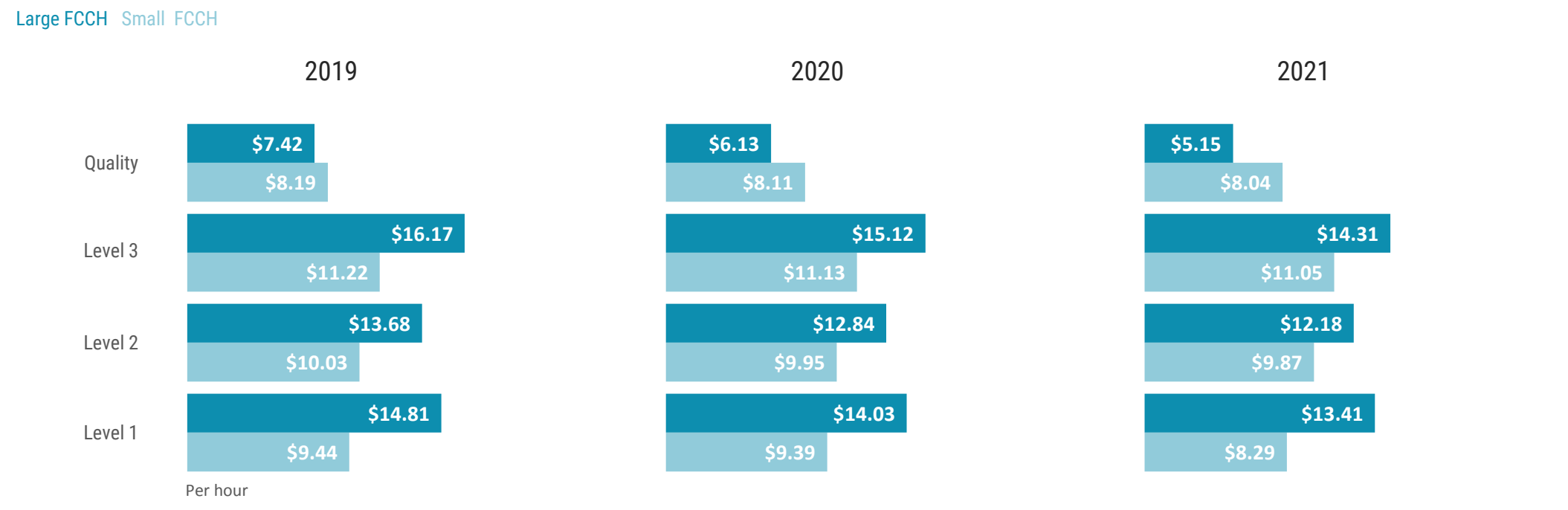
There has been an overall reduction in the number of FCCH providers in the state, but the rates for urban FCCH providers, like center-based providers, appear to be sufficient for the coming years. Because FCCH owners work long hours with minimal (or no) additional staff, they could potentially benefit from technical assistance that helps them streamline their administrative workload and/or establish shared-services models with other providers (pooling resources to access business products and services at reduced prices).

¹⁴ FCCH owners' pay comes from their businesses' revenue for the year. The revenues shown in Figure 4 therefore produce the wages seen in Figure 5. Even if FCCH owners had revenues high enough to support paying themselves the minimum wage, they would make \$32,708 in 2019, \$36,244 in 2020, and \$38,896 in 2021 assuming an average of 68hrs/week. However, center-based teachers often work fewer hours with similar salaries (Pre-K teachers earned an average of \$33,150 in 2018 according to the UAMS workforce study).

Figures 4 & 5: Regardless of quality level, gross revenue* in large urban FCCHs is projected to decline through 2021.*** Small FCCH revenue is essentially flat.**



Financial reimbursement provides minimal incentive for owners of urban FCCHs to move up the quality ladder.** For large FCCHs, Level 1 programs are disincentivized to increase quality.**



Notes: *Gross revenue calculated at 85% of max enrollment. **Small FCCHs modeled with eight children (one infant, two toddlers, three 3-year-olds, two 4-year-olds, and one 5-year-old). Large FCCH modeled with 16 children (four infants, three toddlers, three 3-year-olds, three 4-year-olds, and three 5-year-olds). ***AR minimum wage = \$9.25 in 2019, \$10.25 in 2020, and \$11.00 in 2021. ****Hourly wage calculated backwards from gross revenue, assuming 68hrs/week.

Projections for 2019-2021: Rural Programs

Forecasted Outlook for Rural Center-Based Programs

Based on current DCCECE reimbursement rates and the previously described adjustments to our model, the financial outlook for rural centers over the next three years is less optimal than for their urban counterparts. When modeled as the average program (assumes five classrooms, one of which serves school-aged children, who increase the revenue of programs substantially compared to other age groups), rural centers are projected to be unprofitable in 2019 and sustain increasingly higher losses through 2021, regardless of their quality level. Additionally, the financial incentive for centers to move up the quality ladder is mixed, with Level 2 centers sustaining greater losses than Level 1 programs until 2021 when the minimum wage increase is fully in place.

As with urban centers, we modeled expenses for programs in the higher Better Beginnings levels that are still under development by DCCECE using ABC costs. Results again show that operating a full-day, full-year program using nationally recommended best practices would be fiscally difficult for the average rural center without substantially higher reimbursement rates for tuition or additional support.

For profit/loss graphs, see Figures 6 & 7 on page 16 for current rates.

Recommended Actions for Rural Center-Based Programs

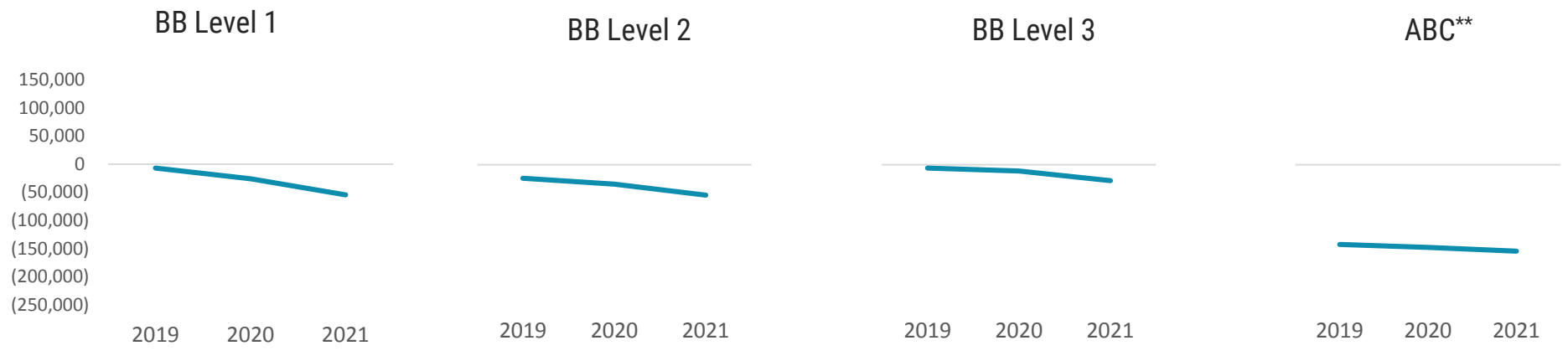
Noting the above, we recommend increasing reimbursement rates for rural centers. We modeled two sets of rates for DCCECE to review.

The rates provided in Table 4a on page 19 were used to model programs' break-even reimbursement rates. Our model projects doing so would stabilize the average rural center-based ECCE business, allowing the average program to operate at a minimal profit margin. The break-even rates also establish financial incentives for centers to move up the quality ladder.

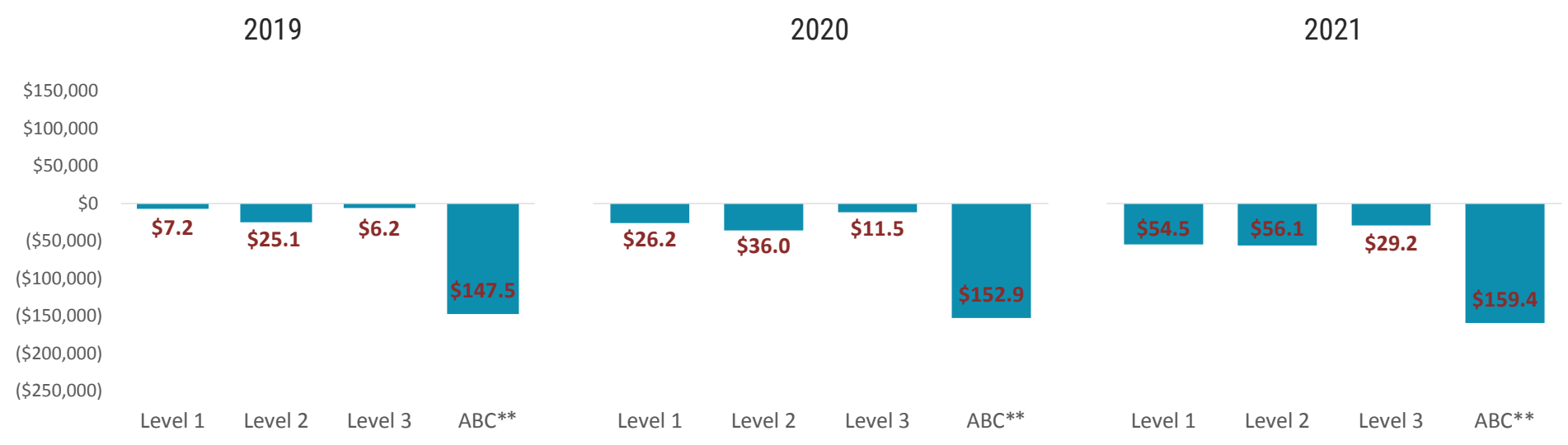
In addition to modeling the break-even rates for rural center-based programs, we estimated the cost models for rural programs if the state were to implement a set of universal rates (those of urban programs, see Table 4b on page 20) across the state. Results suggest that the urban rates are too high for programs based on the rural estimates. However, the use of urban rates for rural programs does establish incentives for programs to move up in quality. Reimbursement rates for rural centers clearly lie somewhere between the break-even and current urban rates.

See Figure 10 on page 21 for profit/loss graphs that compare current, break-even, and universal urban rates.

Figures 6 & 7: Regardless of quality level, rural centers are likely operating with profit losses,* which are projected to become more severe over the next three years.



Our models project that Level 1 programs are disincentivized to increase quality, most severely before 2021 when the minimum wage increase is fully implemented.



Notes: * Programs here modeled with 116 children in five classrooms (one infant, one toddler, one 3-year, one 4-year, and one school-age). **ABC program standards operated as full year.

Forecasted Outlook for Rural Family Child Care Homes

Based on current DCCECE reimbursement rates and the previously described adjustments to our model, the financial outlook for rural FCCHs, like center-based programs, is less optimal than for their urban counterparts over the next three years. Not only do rural FCCHs start 2019 with less gross revenue (regardless of quality level), their three-year losses are higher than urban FCCHs at 17-31%. Rural FCCH owners are also projected to earn less than the Arkansas minimum wage from 2019-2021, making them the worst paid category of ECCE staff in the state.¹⁵

We also project falling wages for owners of large FCCHs, with a projected 19% average loss (2019-2021) for those in minimum licensing through Level 3 and a projected 31% loss for those in quality settings (wages for owners of small rural FCCHs are projected to remain relatively flat over this time). Additionally, the financial incentive for FCCHs to move up the quality ladder is minimal in most cases, with small FCCHs not seeing a meaningful bump in gross revenue (\$2,900 or more) until Level 3, and larger FCCHs actually seeing a drop in revenue after Level 2 (mostly due to higher personnel expenses).

For revenue and wage graphs using current rates, see Figures 8 and 9 on page 18.

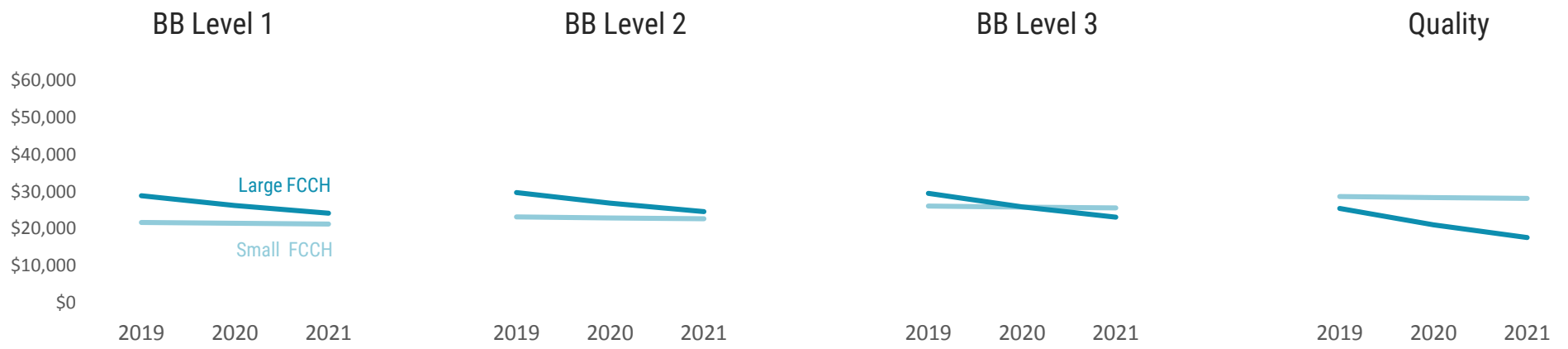
Recommended Actions for Rural Family Child Care Homes

Noting the above, we strongly recommend increasing reimbursement rates for rural FCCHs. The rates provided in Table 4a on page 19 (which were identified for center-based programs) were used to model programs' break-even reimbursement rates. Our model projects doing so would at least stabilize the average rural FCCH business, allowing most owners to remain profitable all three years. Again, we modeled the use of urban rates in rural programs (rates provided in Table 4b on page 20). Results indicate that the urban rates, if used in rural FCCH, generate profit margins in which owners earn hourly wages that are similar to/ higher than the minimum wage.

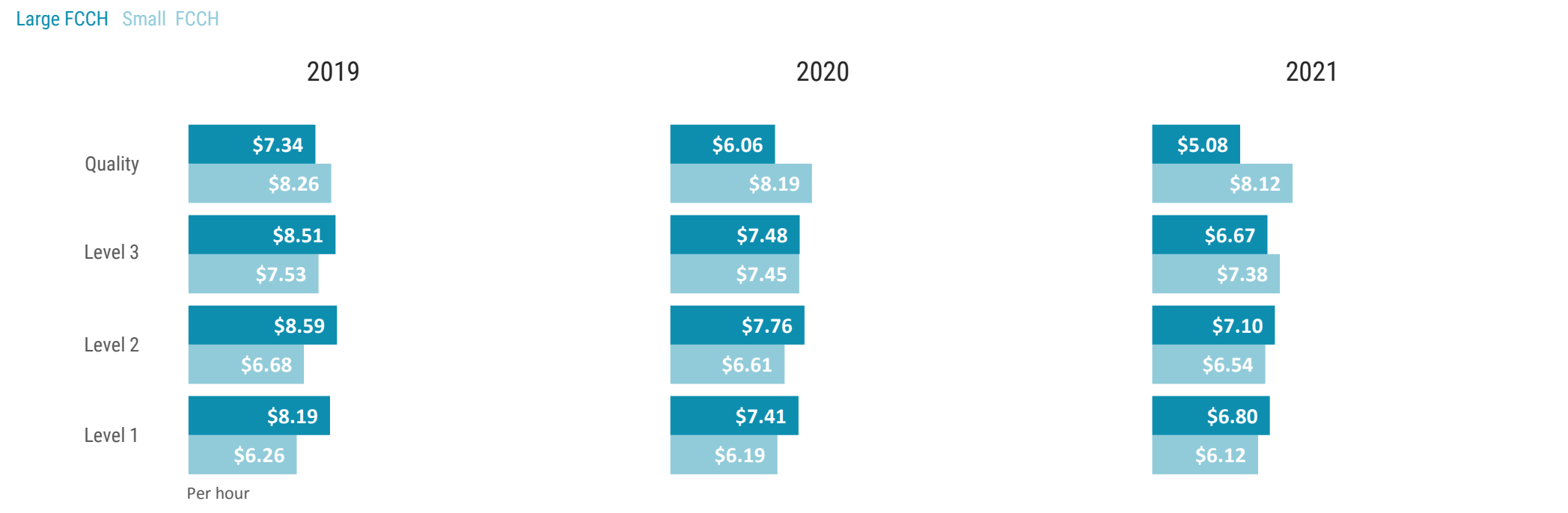
See Figure 11 on page 21 for revenue graphs that compare current, break-even, and universal urban rates.

¹⁵ FCCH owners' pay comes from their businesses' revenue for the year. The revenues shown in Figure 4 therefore produce the wages seen in Figure 5. Even if FCCH owners had revenues high enough to support paying themselves the minimum wage, they would make \$32,708 in 2019, \$36,244 in 2010, and \$38,896 in 2021 assuming an average of 68hrs/week. However, center-based teachers often work fewer hours with similar salaries (Pre-K teachers earned an average of \$33,150 in 2018 according to the UAMS workforce study).

Figures 8 & 9: Regardless of quality level, gross revenue* in large rural FCCHs** is projected to decline over the next three years.*** Small FCCH revenue is flat.



Financial incentives for programs to move up the quality ladder are virtually absent for owners of rural FCCHs. Wages**** are well under the AR minimum at all quality levels.



Notes: *Gross revenue calculated at 85% of max enrollment. **Small FCCHs modeled with eight children (one infant, two toddlers, three 3-year-olds, two 4-year-olds, and one 5-year-old). Large FCCH modeled with 16 children (four infants, three toddlers, three 3-year-olds, three 4-year-olds, and three 5-year-olds). ***AR minimum wage = \$9.25 in 2019, \$10.25 in 2020, and \$11.00 in 2021. ****Hourly wage calculated backwards from gross revenue, assuming 68hrs/week.

Table 4a.
Tuition/rates for rural centers & rural family child care homes (FCCHs), 2019-2021

2019	Approximate Break-Even Rates				
	Rate Increase	Infant	Toddler	Pre-K	School Age (Half-Time)
<i>Level 1</i>	2%	\$21.47	\$20.05	\$17.75	\$12.65
<i>Level 2</i>	7%	\$23.66	\$22.10	\$19.55	\$13.93
<i>Level 3</i>	3%	\$24.94	\$23.29	\$20.61	\$14.69
<i>Quality</i>	35%	\$44.82	\$41.81	\$37.67	\$20.21
2020					
<i>Level 1</i>	7%	\$22.52	\$21.04	\$18.62	\$13.27
<i>Level 2</i>	10%	\$24.32	\$22.72	\$20.10	\$14.32
<i>Level 3</i>	4%	\$25.18	\$23.51	\$20.81	\$14.83
<i>Quality</i>	37%	\$45.49	\$42.43	\$38.22	\$20.51
2021					
<i>Level 1</i>	15%	\$24.21	\$22.61	\$20.01	\$14.26
<i>Level 2</i>	15%	\$25.43	\$23.75	\$21.01	\$14.97
<i>Level 3</i>	8%	\$26.15	\$24.42	\$21.61	\$15.40
<i>Quality</i>	40%	\$46.48	\$43.36	\$39.06	\$20.96

Notes: Quality is reimbursement rate used for Quality (NAFCC) programs.

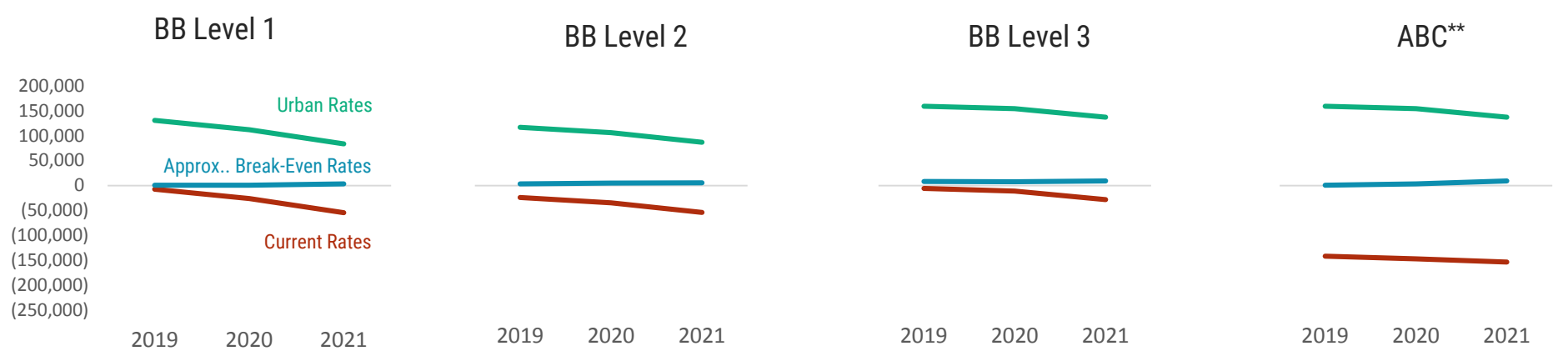
Table 4b.

Tuition/rates for rural centers & rural family child care homes (FCCHs), 2019-2021

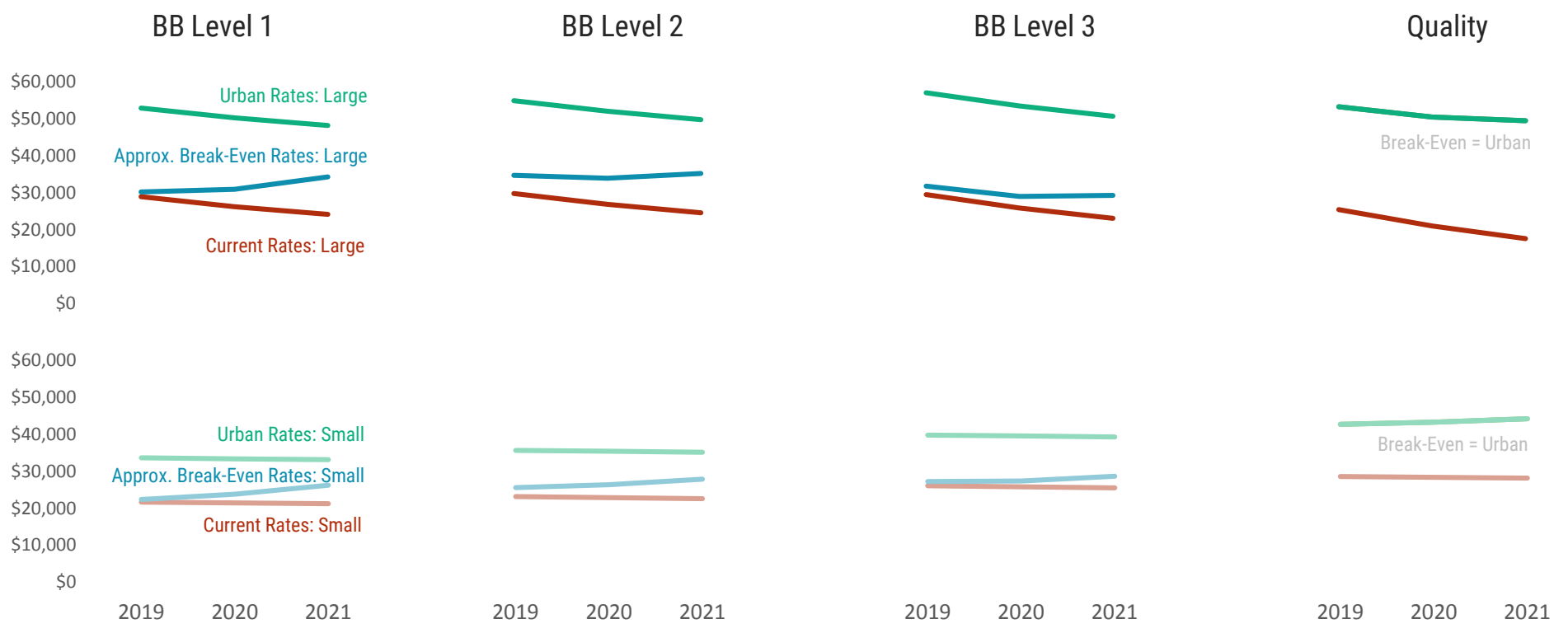
2019	Adopting Urban Rates as Universal Rates				
	Rate Increase	Infant	Toddler	Pre-K	School Age (Half-Time)
<i>Level 1</i>	0%	\$28.56	\$26.67	\$23.60	\$16.82
<i>Level 2</i>	0%	\$29.98	\$28.00	\$24.78	\$17.66
<i>Level 3</i>	0%	\$32.84	\$30.67	\$27.14	\$19.34
<i>Quality</i>	35%	\$44.82	\$41.81	\$37.67	\$27.41
2020					
<i>Level 1</i>	0%	\$28.56	\$26.67	\$23.60	\$16.82
<i>Level 2</i>	0%	\$29.98	\$28.00	\$24.78	\$17.66
<i>Level 3</i>	0%	\$32.84	\$30.67	\$27.14	\$19.34
<i>Quality</i>	37%	\$45.49	\$42.43	\$38.22	\$27.82
2021					
<i>Level 1</i>	0%	\$28.56	\$26.67	\$23.60	\$16.82
<i>Level 2</i>	0%	\$29.98	\$28.00	\$24.78	\$17.66
<i>Level 3</i>	0%	\$32.84	\$30.67	\$27.14	\$19.34
<i>Quality</i>	40%	\$46.48	\$43.36	\$39.06	\$28.43

Notes: Quality is reimbursement rate used for Quality (NAFCC) programs.

Figures 10 & 11: We modeled break-even rates to stabilize profits for the average rural center in Better Beginnings*. Adopting urban rates would make rural centers* too profitable.



Similarly, our approximate break-even rates would stabilize gross revenue*** for the average rural FCCH*, while adopting urban rates would support programs with fewer children.



Notes: *Programs modeled with 5 classrooms (1 infant, 1 toddler, 1 3-year, 1 4-year, 1 one school-age). Small FCCHs modeled with 8 children (1 infant, 2 toddlers, 3 3-year-olds, 2 4-year-olds, and 1 5-year-old). Large FCCHs modeled with 16 children (4 infants, 3 toddlers, 3 3-year-olds, 3 4-year-olds, and 3 5-year-olds). **ABC program standards operated as full year. ***Gross revenue at 85% of max enrollment.

This report was funded by the Arkansas Department of Human Services, Division of Child Care & Early Childhood Education. For more information, contact Lorraine McKelvey (mckelveylorraine@uams.edu) or Andrew Forsman (jforsman@uams.edu).

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