



Comparing Bingocize Engagement in Kentucky's Rural and Urban Nursing Facility Sites

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Background and Context

- **Bingocize** alternates between physical exercises and the familiar game of bingo, interspersing physical activity, to enhance senior health.¹
- Bingocize is implemented twice per week for 45-60 minute sessions, resulting in 15 total minutes of range of motion therapy.
- Rural facilities greatly differ from urban facilities, facing more unique challenges such as recruiting and retaining workforce, increased barriers to physical activity, limited specialized programming, and limited financial resources.²
- Programming success in rural versus urban nursing facilities depends on resource availability, trained staff, and program adaptability.³
- This research aims to identify trends in **total and unique participation** across **rural and urban** settings to analyze if engagement in Bingocize programming is stable across varied settings.

Key Findings

- Both urban and rural areas experienced an **initial surge** in total participation, rates peaking significantly in the second month of implementation, followed by a decline and eventual **stabilization in subsequent months**, ultimately showing a **consistent pattern**.
- Unique participant attendance displayed significant variability with no clear pattern, with **urban areas** showing an **early spike that diminished** over time, while **rural areas** demonstrated a more **moderate and steady** growth rate from the start.

Methods

Data Collection and Analysis:

- Data collected through paper attendance logs from 17 nursing facilities within the Kentucky CMP Project and input into Qualtrics by the UK CMP team

Eligibility Criteria:

- Nursing homes actively participating at the time of analysis.
- Minimum of four months of attendance data.

Urban or Rural Status Determination:

- Facility addresses cross-referenced with the 2010 US Census "County Rural Lookup" records.⁴
- Categorized as mostly urban, mostly rural, or completely rural.
- Mostly rural and completely rural sites were combined for analysis.

Attendance Data Analysis:

- Used Excel pivot tables for detailed analysis.
 - Unique participants: Attended at least 1 Bingocize session, counted once.
 - Total participant data: Cumulative attendance, counts participant each month they attend.
- Growth rates utilized for equitable comparisons across facilities with different resident capacities.

Figure 1. Growth Rates of Cumulative Total Participant Attendance by Site

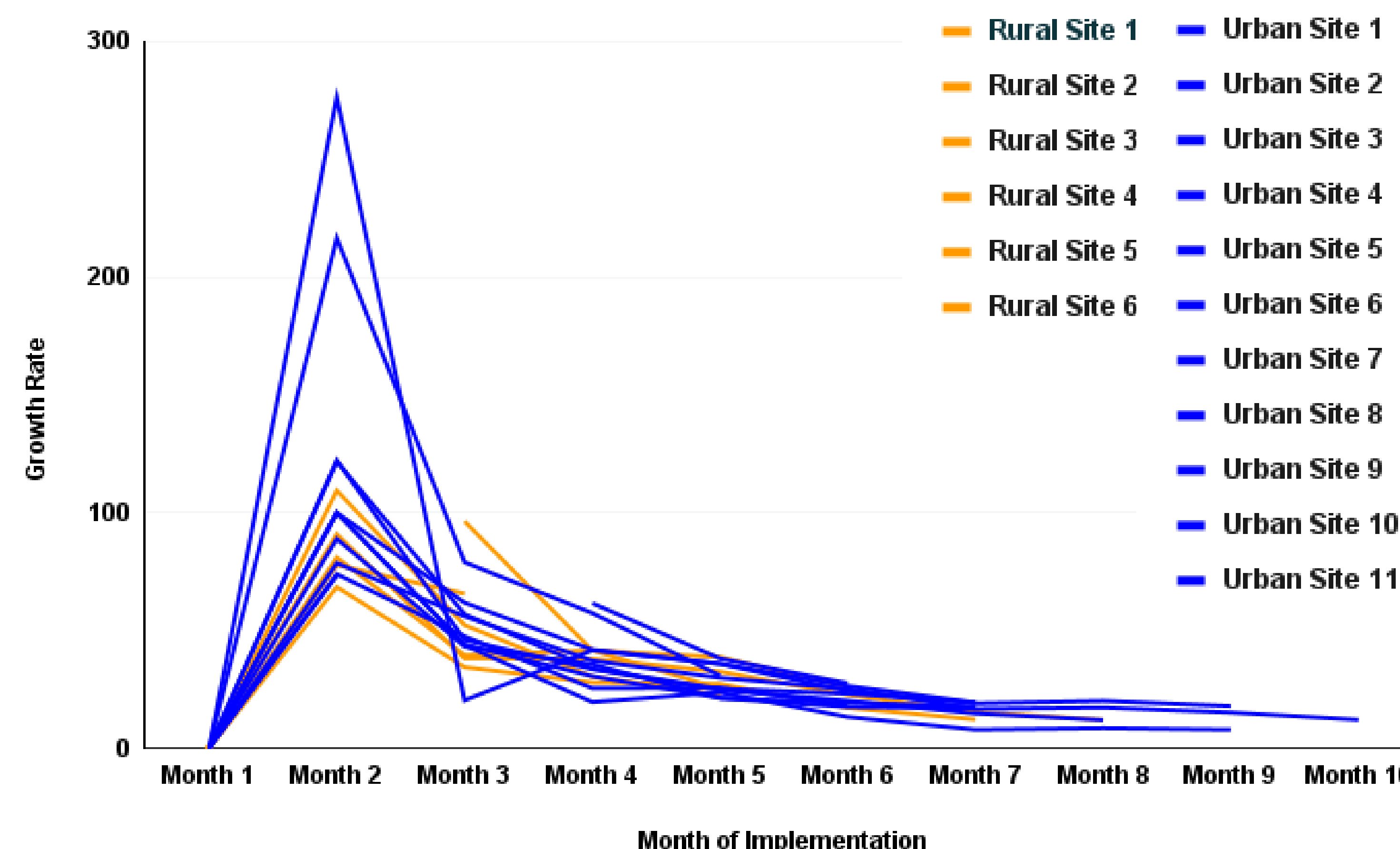


Figure 2. Bingocize Kentucky Nursing Facilities and Community Partners

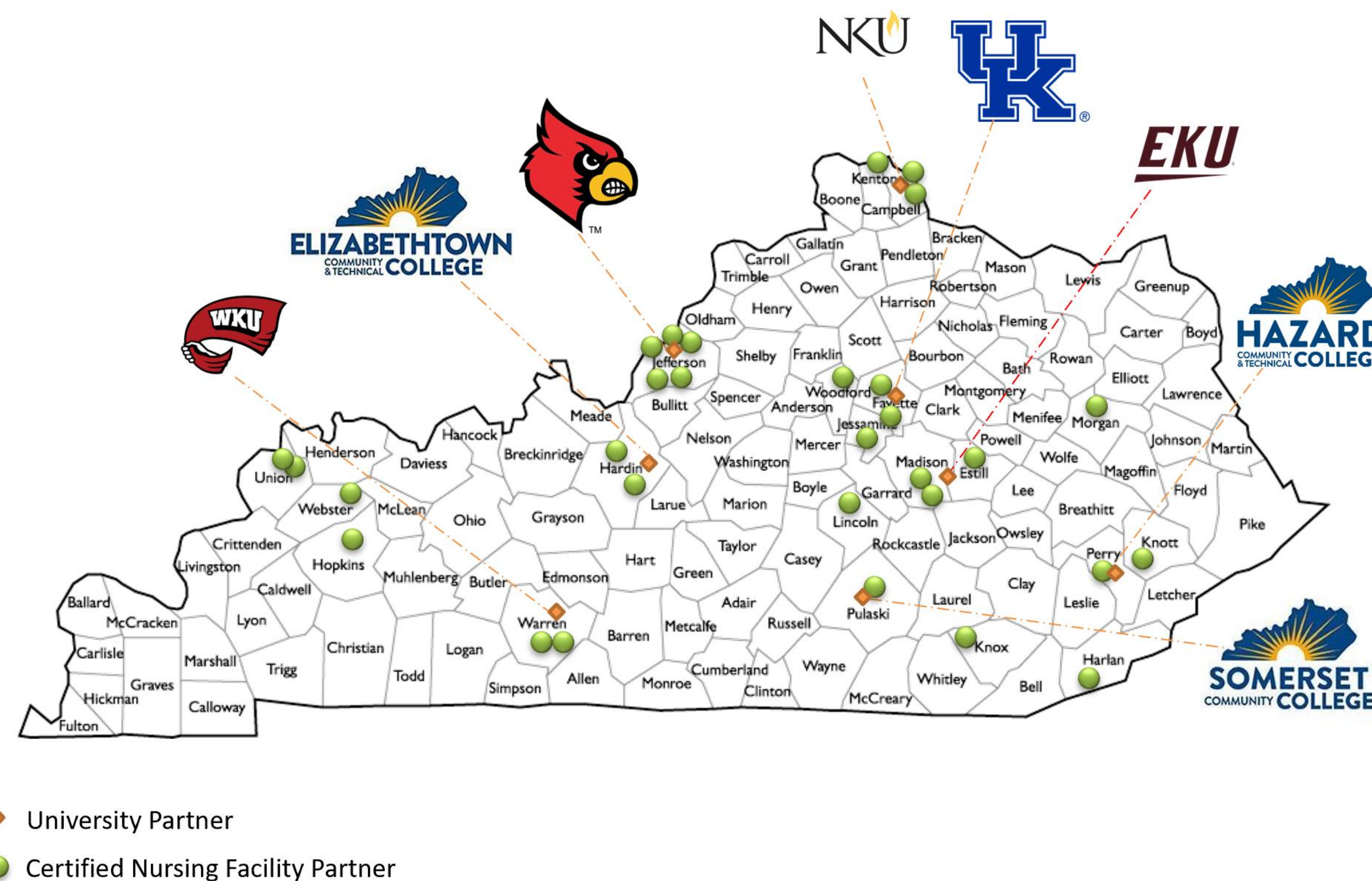
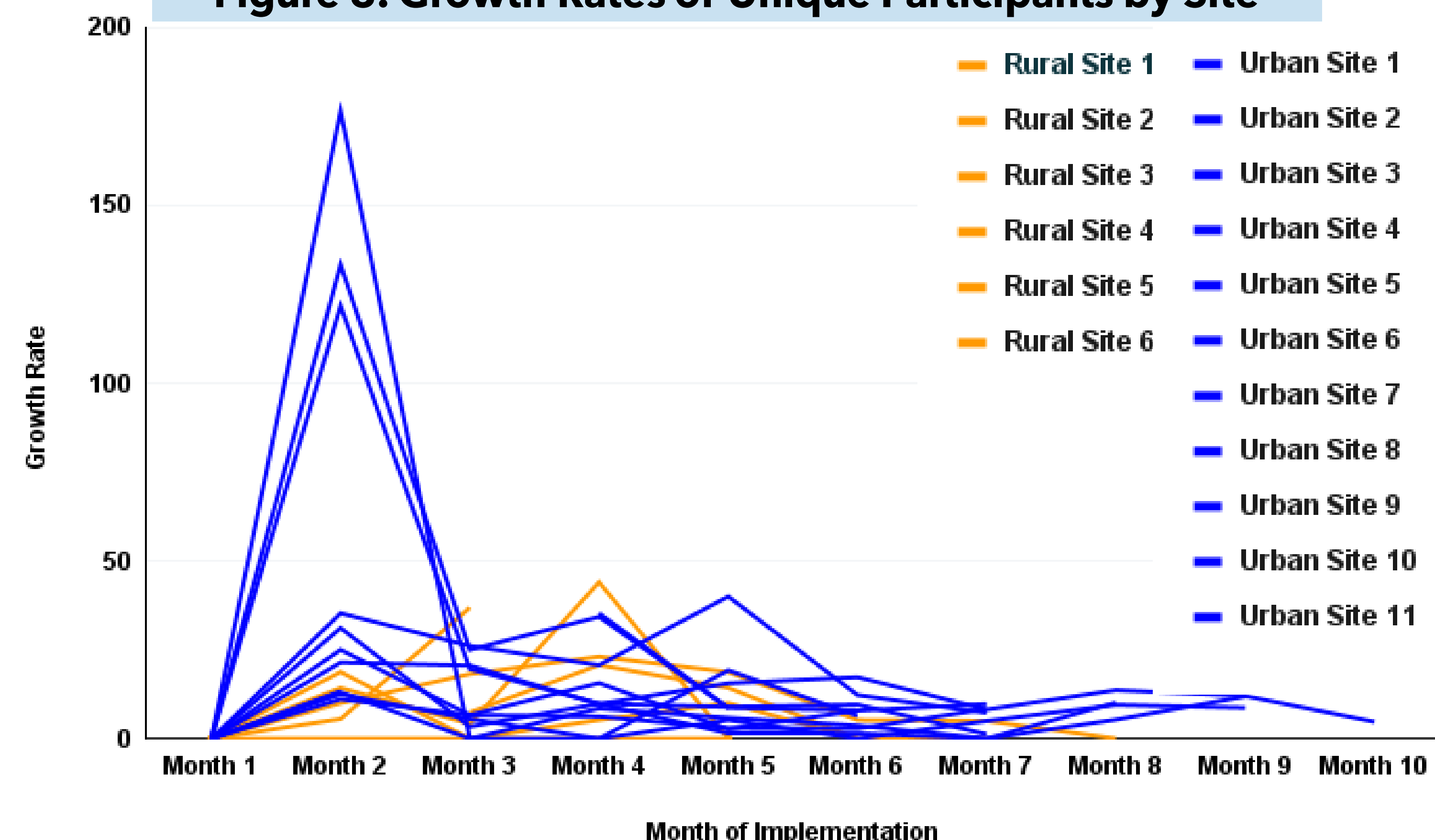


Figure 3. Growth Rates of Unique Participants by Site



Results

- On average, urban areas experienced an initial surge in total participation, peaking at 122.89% in the second month, then settling to an **average growth rate of 12.04%** by the tenth month.
- Rural areas, on average, saw an initial 85.49% growth in total participation in the second month, which **averaged out to 12%** by the eighth month.
- Both urban and rural settings exhibited a similar overall trend:
 - A participation increase from the first to second month.
 - A sharp decline from the second to third month.
 - **Stabilization in subsequent months.**
- Average growth rates of unique participants displayed variability with no consistent pattern between rural and urban settings:
 - Urban areas showed an average early growth of 54.83%, declining to 4.76% by the tenth month,
 - Rural areas had a more stable average starting growth rate of 9.72%.

Discussion and Conclusions

- Strong initial participation denotes high initial appeal of Bingocize, possibly due to effective promotion or novelty.⁵
- The post-surge decline in participation may reflect typical attrition or suggest areas needing program refinement for sustained engagement.⁶
- Steadier growth in rural areas may reflect a **consistent demand** for Bingocize, signifying its suitability for nursing facilities.⁷
- Variations in unique participant growth indicate the effectiveness of the Bingocize program, which broadly appeals to the preferences of nursing facility residents by offering engaging activities.⁸
- The Bingocize program has numerous aspects that appeal to facilities like long-term care, ensuring **sustained** engagement as demonstrated through stable total participation. Offering programming like Bingocize that sustains engagement and provides physical and mental benefits to participating residents is **critical in improving quality of life for the aging population.**

References



Funding

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