An Analysis of Quality of Life Findings among Money Follows the Person Program Beneficiaries

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Overview of Problem

This study will examine the quality of life survey findings of 154 recipients of services provided through the Kentucky Money Follows the Person program. In order to accomplish this, the term ‘quality of life’ must first be defined and examined from the viewpoint of its role in the provision of health related services. Also, as a point of reference, a brief background concerning the Money Follows the Person program and its development will be provided. Lastly, after ‘quality of life’ is defined for the purposes of this study, 183 surveys (154 baseline and 29 follow up) will be statistically analyzed in order to determine what variables correlate to either positive or negative QOL trends among program participants. Using this information, this study will then determine whether program implementation among the 154 individuals examined affected QOL.

Literature Review

Defining ‘Quality of Life’

In order to fully comprehend and appreciate the role that Quality of Life (QOL) data plays in both program implementation and policy making, it is crucial to define exactly what QOL is, and how information is collected. Through a variety of literary sources, it can be concluded that there are various definitions of ‘quality of life,’ several different means of collection concerning quality of life data, and that quality of life data oftentimes plays an important role in the implementation of health policy.

Concluding the reasoning behind collecting QOL data can be a difficult task due to the somewhat ambiguous nature associated with the definition of life, consciousness, and perception of life. Barofsky, in his work ‘Patients Rights, Quality of Life, and Health Care System Performance,’ asserts that the development of QOL data and its use in medical treatment coincided with the development of the human rights movement in Post World War II western societies. Over the last several decades, the collection of QOL data and its use in providing medical services to patients has become an increasingly popular and useful tool in program implementation. Gellert states that ‘quality of life research offers a systematic and data-driven effort to evaluate the impact of health care practices upon the non-biological and qualitative dimensions of patients’ lives,’ while concluding that ‘when epidemiological and quality of life data drive national health care planning, improved approaches to the management of health service delivery may become apparent.’ Accordingly,

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1 Barofsky 474
2 Gellert 357
many government agencies that dwell in the realm of healthcare, including specific programs through Medicare and Medicaid, are collecting QOL data in order to ensure that services are being provided in an effective manner. However, in order to effectively assess QOL in patients or agency clients, it is first essential to define what constitutes QOL and how specific variables may affect QOL. Treurniet, Essink-Bot, Machenbach, and Van Der Maas define quality of life as “patients’ physical, psychological and social functioning.” Therefore, there is a view that quantifies quality of life with actual biological functioning. An alternative school of thinking concerning quality of life is proposed by Barofsky, as he determines that quality of life is rooted in the ‘affirmation of living, rather than a concession to the adverse circumstances created” by a person’s specific condition or ailment. This theory assesses that the provision of health care should facilitate an affirmation of living amidst recipients. In order to define ‘affirmation of life,’ three general theories have been developed: the hedonist theory, the theory of preference satisfaction, and the theory of normative ideals.

The hedonist theory pertaining to the definition of affirmation of life is rooted in the assumption that outcomes play a particularly important role in one’s quality of life. The hedonist approach to determining quality of life hinges on the experiences of pleasure, happiness, and/or satisfaction by an individual, and emphasizes a ‘cognitive state’ in reference to specific affects. The term ‘cognitive state’ as applied in this realm simply refers to the knowledge that an outcome is indeed possible to achieve. Within his work, Brock uses the rearing of children as an example to explain what is meant by ‘cognitive state.’ Brock asserts that one may raise children with the knowledge that he/she may not live to see the child grow into an adult. However, the knowledge that raising the child has contributed to its growth serves in itself as an outcome. Barofsky emphasizes that ‘knowing that you [one] have acted in a certain way is a sufficient condition to feel that you have lived a good life and have achieved a high quality of life.’

The second theory pertaining to the definition of quality of life is the theory of preference satisfaction. This theory lies in the belief that an individual requires a means in which to change preferences as life is lived. Therefore, a person, in order to have a positive quality of life, needs to be able to obtain that which is desired.

The third and final theory that defines quality of life is the normative ideals theory. Barofsky writes that:

The [normative] ideal theory argues that there are constraints upon and limits to what an individual’s pursuit of happiness or preference satisfaction can achieve and that other, community-based (normative) standards have to be referenced to provide an adequate definition of a good life. This

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3 Treurniet, Essink-Bot, Machenbach, Van Der Maas 364
4 Barofsky 476
5 Brock
6 Barofsky 476, Brock
7 Barofsky 476
issue is of particular importance, since a healthy person may not consider what a medically ill person would consider normative in defining a preferred quality of life.\textsuperscript{8}

In summary, this theory poses that a good quality of life is defined by normative standards observed within society. Also, as Barofsky notes, healthy and ill people may differ in their opinions concerning what is normal in their specific community. Normative standards provide limitations from which to gain a perspective on what exactly can be defined as quality of life. That is, quality of life may differ across cultures and societies due to what may be deemed as ‘normative’ standards of living in a particular area.

Within their respective works, both Brock and Amartya Sen propose that each of the three perspectives may act as independent variables in determining quality of life.\textsuperscript{9} That is to say that both the hedonistic and preference satisfaction methods of measuring quality of life are “intra-subjective” forms of measurement, or that they rely on an individual’s ‘self-reporting’ in order to track changes in QOL.\textsuperscript{10} Thus, the theory of normative ideal is an inter-subjective theory, and requires standards set by society. Sen and Brock argue that the three theories can be combined to effectively define quality of life in a ‘three-dimensional’ fashion that takes into account multiple factors, as well as different forms of measurement.\textsuperscript{11}

Within “Assessing Quality of Life: Moral Implications for Clinical Practice,” Raden and Leplege contest that the ‘interest in quantifying quality of life can no doubt be traced to a contemporary reexamination of the ends of medicine and societal values generally,’ and argue that ‘even a cursory look at the various literatures and contexts in which quality of life is evoked reveals that there is no agreement as to what quality of life is or how it should be defined.’\textsuperscript{12} Essentially, the authors attribute the rise in popularity concerning quality of life data to the examination of societal values in terms of ethics, and how best to provide ethical medical care, and further state that despite a concentration on the area, that the concept of quality of life is hard to define. Raden and Leplege lay out two concepts, biological life and cognitive comprehension of self awareness, that are considered essential for determining quality of life within an individual.\textsuperscript{13} In summary, in order to be assessed in terms of quality of life, an individual first must be alive, and second must have the mental capacity to comprehend life, or at least to understand changes that may occur within his/her quality of life. Raden and Leplege also determine that there are differences in ‘what links such states as being loved or being in pain,’ and assess that what is crucial in determining quality of life is ‘their [in reference to the differing states of love and pain] impact on the ability of persons to pursue their own life plans.’\textsuperscript{14} Essentially, Raden and Leplege’s work attests to the fact that differing variables may affect the interpretation of quality of life among

\begin{thebibliography}{10}
\bibitem{Barofsky} Barofsky 476
\bibitem{Brock, Amartya Sen} Brock, Amartya Sen
\bibitem{Barofsky} Barofsky 476
\bibitem{Brock, Amartya Sen} Brock, Amartya Sen
\bibitem{Faden and Leplege} Faden and Leplege 167
\bibitem{Faden and Leplege} Faden and Leplege 168
\end{thebibliography}
individuals. This is evident in their concluding point concerning the definition of quality of life, as they state that there are ‘many factors determining a person’s quality of life,’ such as ‘the potential effects of social relationships, work, environmental conditions, housing, cultural opportunities, and so on.’ The authors summarize their views concerning quality of life as they write that ‘quality of life is a multidimensional concept that can be approached empirically.’ In summary, quality of life is a combination of a multitude of variables that can be collected in a variety of methods. This concluding point lies within the same vein of Brock and Sen’s three dimensional view of quality of life assessment.

**Approaches to integrating QOL data in Health Services Provision**

Integrating quality of life data into the provision of health related services is a complex process, and the relationship between QOL data and the allocation of services is often not clearly defined. Gellert writes that ‘when epidemiological and quality of life data drive national health care planning, improved approaches to the management of health service delivery may become apparent.’ However, while QOL data may eventually influence the course of public health provision, the role of quality of life data in the realm of health care is not easy to define. For example, Barofsky assesses that when health policy reflects trends in QOL data, policy may reflect ‘what is lost, not achieved.’ For example, in the instance of Hospice for terminally ill patients, an increase in QOL may be the result of the absence or removal of aggressive medical treatment. Therefore, in this instance, a QOL increase may be achieved within a population by the removal of medical treatment. What is clear is that there are specific indicators for the use of QOL data as it pertains to the quality of care, as well as three specific ways in which to evaluate QOL data in order to determine effective health policy.

First, in order to determine a potential relationship between program implementation and QOL outcomes, specific conditions must be established. The following table illustrates the conditions present in order to facilitate health status as an indicator of quality of life (quality of care):

<table>
<thead>
<tr>
<th>Conditions for the Use of Health Status (QOL) As an Indicator of Quality of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Established relationship between the care delivery process and health status outcomes</td>
</tr>
<tr>
<td>2. Availability of health status data to describe variations</td>
</tr>
<tr>
<td>3. Availability of additional data to enable the interpretation of health status variations</td>
</tr>
</tbody>
</table>

As seen through the chart, in order to establish a relationship between the provision of health related services and QOL (health status outcomes), it is necessary to determine a relationship between service provision and

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15 Faden and Laplege 168  
16 Faden and Laplege 169  
17 Gellert  
18 Barofsky 477  
19 Barofsky 477  
20 Treurniet, Essink-Bot, MacKenbach, Van Der Maas 364
quality of life outcomes. Also, quality of life data needs to be collected regularly in order to describe differences in QOL outcomes. Treurniet, Essink-Bot, Mackenbach, and Van der Maas also highlight that it is important to collect data concerning external factors in order to potentially describe QOL outcomes. For instance, in terms of health care, a service provider, where services are provided geographically, and something such as the environment in which health services are provided all can have an effect on QOL outcomes, and variations in results. Therefore, when interpreting QOL data pertaining to the potential effects or program implementation, it is crucial to not simply focus on the individual specifically, but also to focus on aspects of the program itself or, in the case of government sponsored programs through Medicare and Medicaid, government contracted health service providers.

While utilizing quality of life data in order to make policy decisions pertaining to the provision of health services, there are three tiers of decision making that are employed: micro, meso, and macro. The micro level decision refers only to decisions based on the information from an individual. Meso level decisions are made regionally; that is, by health service providers or ‘regional networks.’ It is important to note that meso tier decisions can have an effect on groups of patients. Macro tier decisions refer to decisions made that affect large portions of the population, and are often made by government representatives through legislation or policy. Sutherland and Till write that decisions are made on each level (micro, meso, macro) with the aim of ‘maximizing individual, group and population benefit, respectively.’

Treurniet, Essink-Bot, Machenbach, and Van der Moss build upon Sutherland and Till’s thesis through their work, and have devised the following chart in order to describe the three tiers of decision making and how QOL data can be utilized in program implementation:

<table>
<thead>
<tr>
<th>Level of Monitoring</th>
<th>Unit of Comparison</th>
<th>Type of Registry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-Level</td>
<td>Individual Patient</td>
<td>Medical Records</td>
</tr>
<tr>
<td>Meso-Level</td>
<td>Institution</td>
<td>Registries at Institutional Level</td>
</tr>
<tr>
<td>Macro-Level</td>
<td>Region</td>
<td>National Registry</td>
</tr>
</tbody>
</table>

Thus, as seen through the chart, micro level ‘monitoring’ is reflective of data such as ‘contacts between an individual patient and a health care professional.’ As such, the most efficient way of collecting QOL data is through individual medical records. Subsequently, health provision decisions at this level are only reflective of an individual’s information, and therefore only affect that specific individual. The chart also describes meso level decisions as reflective upon institutional or facility driven data, collected from groups of people with similar health status; that is to say, groups that are similarly afflicted or in similar institutional settings. In

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21 Treurniet, Essink-Bot, Mackenbach, Van Der Maas 364
22 Sutherland and Till
23 Sutherland and Till
24 Sutherland and Till
25 Treurniet, Essink-Bot, Mackenbach, Van Der Maas 365
26 Treurniet, Essink-Bot, Mackenbach, Van Der Maas 365
examining data on the *meso* level as proposed, it is important to also examine ‘patient heterogeneity,’ or similarities within individuals that constitute groups.\textsuperscript{27} Variables that may affect heterogeneity may be factors such as demographic status, QOL pre-program implementation, and medical condition (in reference to disease specificity).\textsuperscript{28} Lastly, *macro* level decisions are usually reflective of studies that can track regional trends, and group large numbers of individuals together for purposes of study.

**Background: Money Follows the Person**

**Development**

Money Follows the Person is a state developed, but federally reimbursed, program created by the Deficit Reduction Act of 2005 with the purpose of transitioning individuals from institutions back into the community while maintaining the level of quality of care found in an institutionalized setting. Essentially, this in theory would help states ‘balance’ the costs long term-care programs, as well as moving current Medicaid eligible individuals into the community via some form of affordable and accessible housing.\textsuperscript{29} The federal government, through the Centers for Medicare & Medicaid Services (CMS), has awarded roughly $1.75 billion dollars in funding to 29 states and the District of Columbia, as well as additional funding provided through the American Recovery and Reinvestment Act of 2009, in order to:

1) Increase the use of HCBS (Home Care Based Service) waivers and reduce the use of institutionally-based services;
2) Eliminate barriers and mechanisms in State law, State Medicaid plans, or State budgets that prevent or restrict the flexible use of Medicaid funds to enable Medicaid-eligible individuals to receive long-term care in the settings of their choice;
3) Strengthen the ability of Medicaid programs to assure continued provision of HCBS to those individuals who choose to transition from institutions; and,
4) Ensure that procedures are in place to provide quality assurance and continuous quality improvements of HCBS\textsuperscript{30}

In order to efficiently accomplish these objectives, the MFP program offers to states a high Federal Medical Assistance Percentage (FMAP) of up to 90%, which defers costs associated with individual transitions. In summary, this means that the federal government will reimburse states up to 90% of funds that are spent on MFP clients for transition services not normally covered by Medicaid.\textsuperscript{31} Also, the federal government also absorbs any administrative costs associated with program implementation.

\textsuperscript{27} Treurniet, Essink-Bot, Mackenbach, Van Der Maas 366
\textsuperscript{28} Treurniet, Essink-Bot, Mackenbach, Van Der Maas 366
\textsuperscript{29} CMS Document
\textsuperscript{30} CMS Document
\textsuperscript{31} CMS Document
In order to analyze QOL data as it pertains to the provision of MFP services, Mathematica Policy Research, Inc. has developed a quality of life survey that each of the 30 MFP participating entities (29 states and the District of Columbia) is federally required to administer. Currently the QOL survey contains 41 questions and 36 sub-questions that are used to elaborate upon answers to specific questions, and therefore 77 possible questions are present pertaining to quality of life. An example of a primary QOL question followed by several ‘sub-questions’ is as follows:

15. Do you ever go without a bath or shower when you need one?

   YES............................................................................. 01
   NO................................................................. 02 ▶ GO TO QUESTION 16
   DON'T KNOW.......................................... D ▶ GO TO QUESTION 16
   REFUSED .................................................. R ▶ GO TO QUESTION 16

   A “bath or shower” includes sponge baths. These questions refer to times the respondent wants to have a bath or shower, but there is no one to help them do so. If respondent replies “Sometimes,” code 15 as “Yes” and 15a as “Sometimes.”

15a. How often do you go without a bath or shower when you need one? Would you say only sometimes or most of the time?

   SOMETIMES................................................. 01
   MOST OF THE TIME........................ 02
   DON'T KNOW...................................... D
   REFUSED ................................................. R

15b. Is this because there is no one there to help you?

   PROBE: Please include any help received by another person, including reminders and staying nearby in case you need help.

   YES.............................................................. 01
   NO.............................................................. 02
   DON'T KNOW............................... D
   REFUSED ............................................... R

The implementation of a standardized survey ensures that uniform data can be collected across participating MFP states. Mathematica states that the purpose of distributing this survey is to collect data pertaining to ‘(1) successful transitions of institutionalized enrollees to the community; and (2) MFP participant outcomes, including health care expenditures, service use, quality of care, and mortality.” As is also seen through the example, questions are designed with a variety of responses in order to ensure that a client’s quality of life can be accurately represented.

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32 CMS Policy Guidance QOL Survey Guidelines
33 Mathematica Research Design Study
34 Questions obtained from Quality of Life Survey distributed by Mathematica Policy Research, Inc. on Behalf of Center for Medicare & Medicaid Services
Money Follows the Person: Kentucky

For transitional purposes, the Kentucky Money Follows the Person program distinguishes four separate demographic groups of individuals eligible for service provision. The groups identified are the elderly, those located in an immediate care facility, individuals with an acquired brain injury, and those that are physically disabled. Individuals located in an immediate care facility are classified in two distinct groups: mentally retarded and developmentally disabled. At the time of this study, there were a total of 184 clients that had received transition services. Currently, the demographic break down for clients that have already received program services appear as such:

![Transition Demographics: Total MFP Transitions to Date](image)

When separated into five distinct groups (physically disabled, mentally retarded, developmentally disabled, elderly, and acquired brain injury), transition numbers are split almost evenly. However, because individuals with mental retardation or developmental disabilities are both categorized as ‘immediate care facility,’ or ICF, clients by the MFP program in Kentucky, it should be noted that the ICF clients make up a large portion of transitions.
At the time of this study, there were 224 individuals currently in the process of receiving transitional services. The demographic data pertaining to currently transitioning individuals is as such:

As seen through the demonstrative chart, the demographic breakdown of individuals currently in the transition process is different than those that have already been transitioned. There is a fairly even distribution of individuals that fall into the physically disabled, ICF, and elderly categories, while the amount of individuals with an acquired brain injury is low in comparison.

**Research Design**

For the purposes of this study, a quality of life survey developed by Mathematica Policy Research, Inc. for use by the Money Follows the Person program was utilized. The number of observations utilized was 189; five of which were duplicates, and only one survey was a second follow up (the second follow up survey is conducted 22-24 months after transitional services have been received). Therefore, the total number of observations statistically analyzed was 183. The surveys were categorized into two distinct groups: first and second round-or baseline and follow up, respectively. Essentially, baseline surveys are administered to potential program participants before the transitioning process, while second round, or follow up, surveys are only administered to individuals having received program services. Follow up surveys are conducted within 11-12 months of the completed transition process. While 154 individuals were represented in this data set, there were 29 individuals within the study that had corresponding first and second round surveys that were
observed for the purposes of statistical analysis. The data was provided by the University of Kentucky, as the university is contracted by the state of Kentucky to aid in the provision of MFP service allocation. For the purposes of this study, differing demographic groups (ICF, elderly, acquired brain injury, and physically disabled) were not distinguished. This study examines micro level QOL data, or data provided by individuals’ self-reporting.

**Determining a Dependent Variable and Defining Quality of Life**

In order to assess the impact of variables on quality of life, the concept of quality of life must be defined for the purposes of this study. Therefore, three questions in the survey were utilized to form the dependent variable, ‘quality of life.’ The three questions used, and the possible answers to the questions, are as follows:

<table>
<thead>
<tr>
<th>Question</th>
<th>Possible Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you like where you live?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
</tr>
<tr>
<td></td>
<td>Don’t Know</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
</tr>
<tr>
<td>Taking everything into consideration, during the past week have you been happy or unhappy with the way you live your life?</td>
<td>Happy</td>
</tr>
<tr>
<td></td>
<td>Unhappy</td>
</tr>
<tr>
<td></td>
<td>Don’t Know</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
</tr>
<tr>
<td>Is there any medical care, such as a medical treatment or doctor’s visits, which you have not received or you could not get to within the past month?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Don’t Know</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
</tr>
</tbody>
</table>

The absence of an answer to the question pertaining to happiness was also used separately as its own variable, therefore creating a total of four variables that constituted quality of life. A factor analysis was then run in order to index and analyze the four variables aforementioned. For the purposes of examination and statistical study, the questions were renamed in order to create variables in STATA, a program used to run statistical analysis. The question, ‘do you like where you live?’ was renamed ‘like_where.’ The question ‘taking everything into consideration, during the past week have you been happy or unhappy with the way you live your life?’ was renamed ‘happy.’ Subsequently, the possibility that the ‘happy’ question was not answered was renamed ‘miss_happy.’ Lastly, the question ‘is there any medical care, such as a medical treatment or doctor’s visits, which you have not received or you could not get to within the past month?’ was renamed ‘mc_recved.’

The results of the factor analysis are as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy</td>
<td>.7083</td>
</tr>
<tr>
<td>Miss_Happy</td>
<td>-.5439</td>
</tr>
<tr>
<td>Like_Where</td>
<td>.4393</td>
</tr>
<tr>
<td>Mc_recved</td>
<td>.1285</td>
</tr>
</tbody>
</table>
In summary, the factor analysis was estimated in order to retain as much variation as possible with one index.\(^{35}\) The index created therefore consists of the four variables as previously indicated. The ‘factor’ level associated with each variable is indicative of the level of variation that the variable holds within the index. Thus, for example, if an individual missed the question pertaining to happiness, the factor level would indicate that this response would account for a negative impact on the index, which would be a negative impact on the quality of life. For the purposes of defining ‘quality of life,’ it was important to utilize more than one question in order to create a three-dimensional interpretation of QOL. The three questions selected are representative of different aspects of a client’s individual life; happiness, environmental setting, and medical care received.

**Independent Variables**

After developing an index defining quality of life, independent questions were selected from the survey in order to study whether or not they had an impact on quality of life. The questions selected, as well as possible answers to these questions, are as follows:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
</tr>
</thead>
</table>
| Did you help pick (this/that) place to live?                              | Yes
|                                                                           | No
|                                                                           | Don’t Know
|                                                                           | Refused                  |
| Do you feel safe living (here/there)?                                     | Yes
|                                                                           | No
|                                                                           | Don’t Know
|                                                                           | Refused                  |
| Can you be by yourself when you want to?                                 | Yes
|                                                                           | No
|                                                                           | Sometimes
|                                                                           | Don’t Know
|                                                                           | Refused                  |
| Do you ever go without a meal when you need one?                          | Yes
|                                                                           | No
|                                                                           | Don’t Know
|                                                                           | Refused                  |
| Do you ever go without taking your medicine when you need it?             | Yes
|                                                                           | No
|                                                                           | Don’t Know
|                                                                           | Refused                  |
| You said that you have people who help you. Do the people who help you    | Yes
| treat you the way you want them to?                                       | No
|                                                                           | Don’t Know
|                                                                           | Refused                  |

\(^{35}\) Dr. J.S. Butler aided in the interpretation of statistical analysis
Because the final three questions included in the chart were optional on the survey, missed responses to any of these questions were also included as independent variables. These questions were then run in a regression to determine their effect on quality of life among program service recipients.

Of the 154 individuals that completed a baseline survey used in this study, 29 completed a follow up survey based on transition services received. In order to address the concern pertaining to whether or not the 29 individuals that had completed both a baseline and follow up survey were systematically different than the other 125 individuals, a t-test was run in order to compare QOL assessments for both groups. The result of the t-test indicated that the mean QOL score is extremely close for both groups, with a t-value of 0.56 (p>50%). Therefore, systematic bias is not present in the selection of individuals that provided follow-up surveys. In summation, the 29 individuals that had filled out both the baseline and the follow up surveys were representative of the entire population of 154 in terms of QOL.36

Finally, Kernel density estimates were composed to show QOL trends among program participants, and the effects of program implementation on those who had received services. Also, a Kernel density estimate was composed in order to show the change in QOL caused by program implementation.

**Limitations of Study**

There are several limitations to this study that need to be explored before expanding upon study findings and results. First, this study does not distinguish between demographic differences within the sample population (i.e. ICF residents, developmentally disabled, physically disabled, elderly, or those that have acquired a brain injury). That being stated, it is important to comprehend that individuals in different demographic populations may have a different normative standard pertaining to quality of life. For example, an elderly but otherwise medically sound individual may define ‘quality of life’ differently than someone that has an acquired brain injury.

36 Dr. J.S. Butler aided in the analysis of t-test comprehension.
brain injury. In summary, perceptions of ‘quality of life’ may differ among demographic populations. It could also be argued that the heterogeneity is not similar among different demographics of clients provided services by the program. All individuals in the study are not afflicted with the same condition, and it is also important to note that QOL could be impacted by variations in long term care institutions in which individuals are located.

It is also crucial to note that some individuals utilized assistance from a third party in order to complete the survey. Those with limited cognitive comprehension may have used a proxy to complete the survey. Therefore, in some instances, survey answers are speculated upon by a third party, and answers may not necessarily reflect an individual’s own quality of life assessment. Furthermore, proxies may have included family members, nurses, or aids in an institutional setting. Who had assisted the program beneficiary in answering survey questions may have had an effect on survey answers.

**Findings**

In order to determine a correlation between specific questions and quality of life among program participants, a regression was run. The regression includes the QOL findings for the 154 individuals that completed a baseline survey. Therefore, the regression is based on 154 total observations. The results of the regression are as follows:

<table>
<thead>
<tr>
<th>Question (Variable)</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Value</th>
<th>P&gt;T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you help pick (this/that) place to live?</td>
<td>.0347</td>
<td>.1425</td>
<td>.24</td>
<td>.808</td>
</tr>
<tr>
<td>Do you feel safe living (here/there)?</td>
<td>.2939</td>
<td>.1340</td>
<td>2.19</td>
<td>.030*</td>
</tr>
<tr>
<td>Can you be by yourself when you want to?</td>
<td>.4818</td>
<td>.1199</td>
<td>4.02</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Do you ever go without a meal when you need one?</td>
<td>.2</td>
<td>.2715</td>
<td>.74</td>
<td>.462</td>
</tr>
<tr>
<td>Do you ever go without taking your medicine when you need it?</td>
<td>.1083</td>
<td>.1789</td>
<td>.61</td>
<td>.546</td>
</tr>
<tr>
<td>You said that you have people who help you. Do the people who help you treat you the way you want them to?</td>
<td>.0065</td>
<td>.1391</td>
<td>.05</td>
<td>.962</td>
</tr>
<tr>
<td>[Optional] Have you ever been physically hurt by any of the people who help you now?</td>
<td>.0354</td>
<td>.2736</td>
<td>.13</td>
<td>.897</td>
</tr>
<tr>
<td>[Optional] Are any of the people who help you now mean to you or do they yell at you?</td>
<td>-.51</td>
<td>.21</td>
<td>-2.42</td>
<td>.017*</td>
</tr>
<tr>
<td>[Optional] Have any of</td>
<td>.0486</td>
<td>.151</td>
<td>.32</td>
<td>.748</td>
</tr>
</tbody>
</table>
As can be seen through the regression, an individual’s safety is statistically significant, and therefore is correlated with their quality of life. Thus, if an individual responded that he/she does feel safe in his/her current environment, that individual is more likely to have a positive quality of life. Subsequently, time alone is statistically significant, and a positive response to this question also corresponds positively with an increased quality of life. Conversely, the question pertaining to whether or not institutional help (i.e. nurses, institutional staff) is mean is correlated with quality of life, and those who answer that the people that are there to help them are mean to them are likely to have a negative quality of life. Therefore, meanness stemming from institutional aids would have a negative impact on quality of life. In the same vein, whether or not an individual answered the question pertaining to meanness can indicate a negative quality of life, and could also be indicative of abuse. For example, if individuals failed to answer the question pertaining to meanness, they were much more likely to have a negative quality of life. The variable of missing the question concerning meanness was very statistically significant. This could point to the possibility that individuals that did not choose to answer that question were either afraid to answer the question, or potentially that someone was monitoring how the question was answered. The correlation between this variable and QOL is very strong, and it is recommended that Money Follows the Person looks further into the correlation between these findings and potential abuse.

In order to show the effect that MFP program implementation had on quality of life among individuals receiving services, kernel density graphs were constructed. In essence, the kernel density graph provides a snapshot of the quality of life of program participants, separated by round. Therefore, the graphs express a difference in quality of life due to service provision among individuals both before and after transition. For purposes of this study, 30 transitioned individuals were examined. The results of the kernel density examination are as follows:
Quality of life before MFP program implementation (29 individuals that had completed both baseline and follow up surveys):

![Kernel density estimate before MFP program implementation](image1)

Quality of life of the same individuals after program implementation:

![Kernel density estimate after MFP program implementation](image2)

For interpretive purposes, the horizontal axes of both estimates are representative of quality of life among individuals. Because there is no quantitative method of measurement associated with quality of life, the...
estimate has assigned values of -1.5 to 1. The number 1 is representative of a high quality of life. Conversely, -1.5 is representative of a low quality of life. The vertical axes shown in the estimates are representative of the number of individuals. The pre-program implementation group constitutes a bimodal estimate, which is to say that some program participants have a good quality of life before program implementation, while other individuals are not as happy with their quality of life.

A t-test was then run in order to show the change in QOL responses between those individuals that have received MFP services and have completed both baseline and follow up surveys. The result of the t-test yielded a mean increase of .5782 between the baseline and follow up surveys, indicating that the program, on average, improved QOL among clients. The change is represented by the Kernel density estimate that follows:

Change between baseline and follow up QOL survey responses:

![Kernel density estimate](image)

Again, numbers on the horizontal axis are representative in changes in QOL from baseline to follow up survey responses, where 3 would be representative of the highest available quality of life and -2 would be indicative of a very low quality of life. The vertical axis indicates program participants. On average, program implementation seemed to improve the QOL of individuals receiving services.

As seen through the Kernel density estimates, program implementation is clearly having an effect on the quality of life of individuals that are provided services, and that MFP program implementation tends to have an improving effect on quality of life among program participants.
In order to highlight differences in survey responses between baseline and follow up rounds, specifically for questions that yielded statistically significant results, tables were constructed.

*It is important to note that within these tables, the one client that had corresponding baseline, follow up, and second follow-up surveys was included, therefore bringing the number of individuals examined within the table to 30. This individual was excluded from other findings due to the fact that he/she was the only client with corresponding baseline, follow up, and second follow up surveys.*

First, a table was constructed to express the difference in responses pertaining to the question ‘do you feel safe living here/there?’ The results are as follows:

<table>
<thead>
<tr>
<th>Responses to Question</th>
<th>Baseline</th>
<th>Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>29</td>
</tr>
</tbody>
</table>

It can be seen that more clients felt safe after transitional services were provided. Therefore, transitional services provided clients with an increase perception in the area of safety.

A table was also constructed in order to express the difference in round responses for the question ‘can you be by yourself when you want to?’ The results are as follows:

<table>
<thead>
<tr>
<th>Responses to Question</th>
<th>Baseline</th>
<th>Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Sometimes</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>13</td>
<td>24</td>
</tr>
</tbody>
</table>

It can be concluded through the results of this chart that transitional services tend to increase a client’s ability to spend time by his/herself.

Because a response to the question ‘are any of the people who help you now mean to you or do they yell at you?’, was optional, answers were not provided in all 30 corresponding baseline and follow up surveys. However, it should be noted that 4 individuals that had received transition services answered ‘yes’ to that question, while only 1 still answered ‘yes’ after the follow up was conducted.
**Recommendations**

Based on the findings of this study, several things can be recommended in order to improve the provision of services through the Money Follows the Person program in the state of Kentucky. Recommendations are as follows:

1. Because safety and alone time were statistically significant in the regression model, it can be concluded that safety and alone time are important factors contributing to a positive quality of life among individuals eligible for MFP program services. Therefore, in order to continue improving the lives of program participants, these factors can be emphasized and used in the implementation process.

2. There was a strong correlation between a missed answer to the question pertaining to meanness stemming from workers that may help MFP clients in an institutional setting and a negative quality of life. This correlation could potentially be indicative of instances of abuse. Money Follows the Person staff should be aware of this correlation, and should potentially look into the situations of individuals that do not answer this question.
Works Cited


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