Developmental Center Closure Study

April 20, 2015

Staff Research Report No. 152

Ohio Legislative Service Commission

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INTRODUCTION

When the Governor announces the closure of a developmental center operated by the Ohio Department of Developmental Disabilities (ODODD), Revised Code section 5123.032 requires the Legislative Service Commission (LSC) to conduct an independent study that addresses 13 specified criteria and factors relating to the developmental centers (DCs) and ODODD's operation of them. On written notice to the General Assembly of the Governor's official closure announcement, LSC has 60 days to complete the study. On February 20, 2015, the General Assembly was officially notified that Montgomery and Youngstown developmental centers are to be closed.[1] This report is prepared to fulfill the requirement of R.C. 5123.032.[2]

The report starts with an "**Overview**" that provides background information on issues related to the operation and closure of developmental centers, including system funding, deinstitutionalization of individuals with developmental disabilities, intermediate care facilities for individuals with intellectual disabilities (ICFs), and community programs operated under waivers of federal Medicaid regulations. After the "**Overview**," the report is divided into 13 sections to address the 13 criteria and factors specified in R.C. 5123.032 as follows:

- **Section 1**: examines the manner in which the closure of developmental centers in general and specifically the closure of Montgomery and Youngstown developmental centers would affect the safety, health, well-being, and lifestyle of the centers' residents and their family members and would affect public safety;
- **Section 2**: covers the availability of alternate facilities;
- **Section 3**: discusses the cost effectiveness of Montgomery and Youngstown developmental centers;
- **Section 4**: compares the cost of residing at Montgomery or Youngstown developmental centers and the cost of new living arrangements;
- **Section 5**: identifies the geographic factors associated with each facility and its proximity to similar facilities;
- **Section 6**: considers the impact of collective bargaining on facility operations;
- **Section 7**: discusses the utilization and maximization of resources;

[1] See "**Appendix I-1**" for letter of notification.

[2] LSC staff would like to express their appreciation for the prompt assistance provided by ODODD staff.

- **Section 8**: investigates the continuity of the staff and ability to serve the facility population;
- **Section 9**: identifies the continuing costs following the closure of a facility;
- **Section 10**: discusses the impact of the closure on the local economy;
- **Section 11**: identifies alternatives and opportunities for consolidation with other facilities;
- **Section 12**: discusses how the closing of Montgomery and Youngstown developmental centers relates to ODODD's plans for the future of developmental centers in this state;
- **Section 13**: examines the effect of the closure of developmental centers in general on the state's fiscal resources and the specific effect of the closure of Montgomery and Youngstown centers.

APPENDIX I-1

Ohio | Department of Developmental Disabilities

Office of the Director

John R. Kasich, Governor
John L. Martin, Director

February 20, 2015

Mark Flanders, Director, Ohio Legislative Service Commission
77 South High Street, 9th Floor
Columbus, Ohio 43215

Dear Director Flanders,

I write to notify you that this letter serves as the Department's official public announcement regarding the Department's decision to close Montgomery Developmental Center and the Youngstown Developmental Center. Today, the Department will begin the process to close the above mentioned centers no later than June 30, 2017.

Ohio's eight other state-operated Developmental Centers will remain open and continue to provide quality care to its residents, as well as technical assistance and short-term stabilization services to their region. This decision was not easy, and was made only after the most careful considerations.

As you may be aware, in recent years, the number of residents living at our state-operated Developmental Centers has reduced substantially. At the beginning of my tenure, there were approximately 1,600 residents living at our ten centers; today, that number is approximately 900, representing a decline of more than 40 percent. Because of this drop in census, it is no longer efficient to continue operating ten Developmental Centers.

I look forward to discussing the Department's decision to close these centers in greater detail with you and your colleagues.

Sincerely,

John L. Martin, Director
Ohio Department of Developmental Disabilities

JLM/zrh

Cc: Speaker Clifford Rosenberger, Senate President Keith Faber, House Minority Leader Fred Strahorn, Senate Minority Leader Joe Schiavoni

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OVERVIEW

Ohio's system of services and supports for individuals with developmental disabilities (DD) mainly consists of the Ohio Department of Developmental Disabilities (ODODD) and 88 county DD boards. Whereas ODODD provides general oversight of the system and distributes subsidies to county DD boards, the 88 boards facilitate the service delivery at the local level. Currently, about 900 individuals with DD reside at the ten regional developmental centers (DCs) operated by ODODD. Another 35,000 individuals with DD are served through four home and community-based Medicaid service waiver programs (HCBS) administered by ODODD: Individual Options (IO), Level One (L1), Self-Empowerment Life Funding (SELF), and Transitions DD.[3] Over 91,000 individuals with DD receive a variety of community-based services, including residential support, early intervention and family support, and adult vocational and employment services, through various programs provided by the 88 county DD boards. Furthermore, about 5,500 individuals with DD who are eligible for Medicaid are currently served by the licensed, privately run intermediate care facilities for individuals with intellectual disabilities (ICFs). ODODD is responsible for administering Medicaid payments for those ICFs.

System Funding

Services for Ohioans with DD are funded by a mix of federal, state, and local (primarily property tax levy) dollars. The federal government reimburses the state at the federal medical assistance participation (FMAP) rate for state and local dollars spent for HCBS Medicaid waivers. For federal fiscal year 2015, Ohio's FMAP rate is about 63%. That is, for every $1 spent on services allowable under Medicaid, the federal government reimburses the state approximately $0.63. The Centers for Medicare and Medicaid Services (CMS) in the United States Department of Health and Human Services annually sets the FMAP rate for each state.

Federal dollars, mainly federal reimbursements for HCBS waiver programs, account for over 55% of the ODODD budget. The state General Revenue Fund money contributes another 21%. About 88% of ODODD's budget is expended as subsidies, which include payments for HCBS waiver services, services provided in developmental centers, payments to private ICFs, as well as general county DD board subsidies.[4] County DD boards also rely on local property tax levy dollars. Local moneys constitute

[3] There are currently over 46,000 Ohioans with DD on county board waiting lists for Medicaid waiver services.

[4] For more information on ODODD's funding and programs, please see the LSC Redbook for ODODD (http://www.lsc.ohio.gov/fiscal/redbooks131/ddd.pdf).

33% of Ohio's total spending on community services for individuals with DD.[5] Most state funds allocated to county boards and local tax levy dollars are used to match federal dollars to fund the programs provided by county DD boards.

Deinstitutionalization in the United States

Prior to the 1960s, the common placement for individuals with DD was large, institutional facilities segregated from the public. In 1961, President John F. Kennedy appointed the President's Panel on Mental Retardation. The Panel released 95 recommendations, including expanding community services for individuals with DD and downsizing large institutional facilities. The 88th Congress of the United States enacted many of the Panel's recommendations (Pub. L. 88-156 and 88-164), including mandating that states develop comprehensive residential, community, and protective services for individuals with DD.[6] The enactment of these federal laws represented the beginning of the deinstitutionalization movement. "Deinstitutionalization" commonly refers to the process of moving individuals from large, institutional settings into smaller, community settings.

Despite new federal regulations mandating deinstitutionalization, average daily populations in state DD institutions continually rose, peaking at 194,650 in 1967.[7] However, with the enactment of the ICF Program and other federal legislation, coupled with numerous court decisions mandating community treatment options for individuals with DD, state institutional populations began to decrease.[8] By the end of 2011, the national average daily population in state DD institutions was 29,809, an 81.8% decrease since 1960 (see Table 1). Currently, 13 states plus the District of Columbia[9] have closed all large public DD institutions and serve most individuals with DD in community-based settings.

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[5] Braddock, D., et al. (2014). Coleman Institute and Department of Psychiatry: The University of Colorado. Available at: http://www.stateofthestates.org/documents/Ohio.pdf.

[6] Braddock, D. (2002). **Disability at the Dawn of the 21st Century and the State of the States**. American Association on Mental Retardation: Washington D.C.

[7] Ericsson, K. & Mansell, J. (1996). *Introduction: towards deinstitutionalization*. In Jim Mansell & Kent Ericsson (Eds.), **Deinstitutionalization and Community Living: Intellectual disability services in Britain, Scandinavia, and the USA**. Chapman & Hall: London.

[8] Braddock, D. (2002). **Disability at the Dawn of the 21st Century and the State of the States**. American Association on Mental Retardation: Washington D.C. and Bradley, V.J. (1978). **Deinstitutionalization of Developmentally Disabled Persons: A Conceptual Analysis and Guide**. University Park Press: Baltimore.

[9] Alabama, Alaska, Hawaii, Indiana, Maine, Michigan, Minnesota, New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, and West Virginia, and Washington, D.C. no longer operate large public DD institutions.

Table 1. Average Daily Population of Individuals with DD in U.S. Institutions 1960-2011						
1960	1970	1980	1990	2000	2010	2011
163,730	186,743	131,345	84,239	47,872	30,602	29,809

Source: Larson, S., et al. (2013). **Residential Services for Persons with Intellectual or Developmental Disabilities: Status and Trends through 2011**. University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration: Minneapolis.

Between 1960 and 2011, states operated 354 large DD institutions. During the same time period, 43 states and Washington, D.C. closed a total of 209 DD institutions, leaving 145 institutions operating as of 2011.[10]

Deinstitutionalization in Ohio

In 1965, Ohio's population in state DD institutions (developmental centers) peaked at 10,113. The population in state DD institutions has significantly decreased since then. Between 1965 and 1985, Ohio's DD institutional population decreased to 2,817, a 72.1% decrease. In the following 20 years, the decrease in the institutional population slowed somewhat. In 2005, the number of residents of developmental centers was 1,663, a 41.0% decrease from 1985 (see Table 2). In the past ten years, the population has decreased 44.8% to approximately 918 in February 2015. Overall, the population has decreased by 90.9% since 1965.

Table 2. Ohio Developmental Center Population 1960-2015											
1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
7,855	10,113	9,501	7,902	5,193	2,817	2,573	2,113	2,001	1,663	1,335	918*

*As of February 20, 2015

Source: Ohio Department of Developmental Disabilities

Past Closures

In the last 30 years, Ohio has closed five developmental centers: Orient in 1984, Cleveland in 1988, Broadview in 1992, Springview in 2005, and Apple Creek in 2006. The Orient, Cleveland, and Broadview developmental centers had quality of care issues. Springview and Apple Creek were closed due to the declining developmental center population and Ohio's efforts to deinstitutionalize.

[10] Larson, S., et al. (2013). **Residential Services for Persons with Intellectual or Developmental Disabilities: Status and Trends through 2011**. University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration: Minneapolis.

Closure of Orient, Cleveland, and Broadview

The conditions at Orient led to the class action lawsuit *Barbara C., et al. vs. Rudy Magnone, et al.* This case was originally filed to address poor conditions at Orient and sought residential alternatives to the state-run facility.[11] With the closure, residents were moved to other developmental centers or to community settings. Over half of the residents of Orient at the time of the closure were originally from Hamilton County. This forced the Hamilton County DD Board to establish residential supports that did not previously exist.

Before its closure, Cleveland Developmental Center had lost its ICF certification and the federal portion of funding. The developmental center had also been investigated by the United States Department of Justice under the Civil Rights of Institutionalized Persons Act for patient abuse.

Broadview Developmental Center was also scrutinized for the quality of care provided to its residents. As with Cleveland Developmental Center, the federal government had initiated procedures to strip Broadview of its ICF certification. Broadview was able to maintain the certification to make the relocation process more manageable. Many Broadview residents were from Cuyahoga County. The Cuyahoga County DD Board developed residential supports for those residents.

Closure of Springview and Apple Creek

On February 5, 2003, ODODD began taking steps to close Springview and Apple Creek developmental centers at the end of FY 2005 and FY 2006, respectively. Individuals residing in Springview or Apple Creek were able to move (1) to another developmental center, (2) to a private ICF, or (3) into the community or back with their families with the support of a Medicaid waiver. Of the 261 residents of Springview and Apple Creek, 133 now live in another developmental center, 63 are in a private ICF, 43 live in the community on a Medicaid waiver, and one lives in a skilled nursing facility. Twenty-one of the residents are deceased.

The Springview Developmental Center buildings were transferred to Clark County and are used as the East District Office of Clark County. The Apple Creek Developmental Center was originally sold to East Union Township and Apple Creek Village, but was not used, with the exception of the baseball diamond. It was sold again in March 2014 to FB Leasing, though the current use or plans for future development of the site are unknown.

Intermediate Care Facilities for Individuals with Developmental Disabilities

ICF services are an optional Medicaid benefit. Section 1905(d) of the Social Security Act created this benefit for people with developmental disabilities. Ohio's state

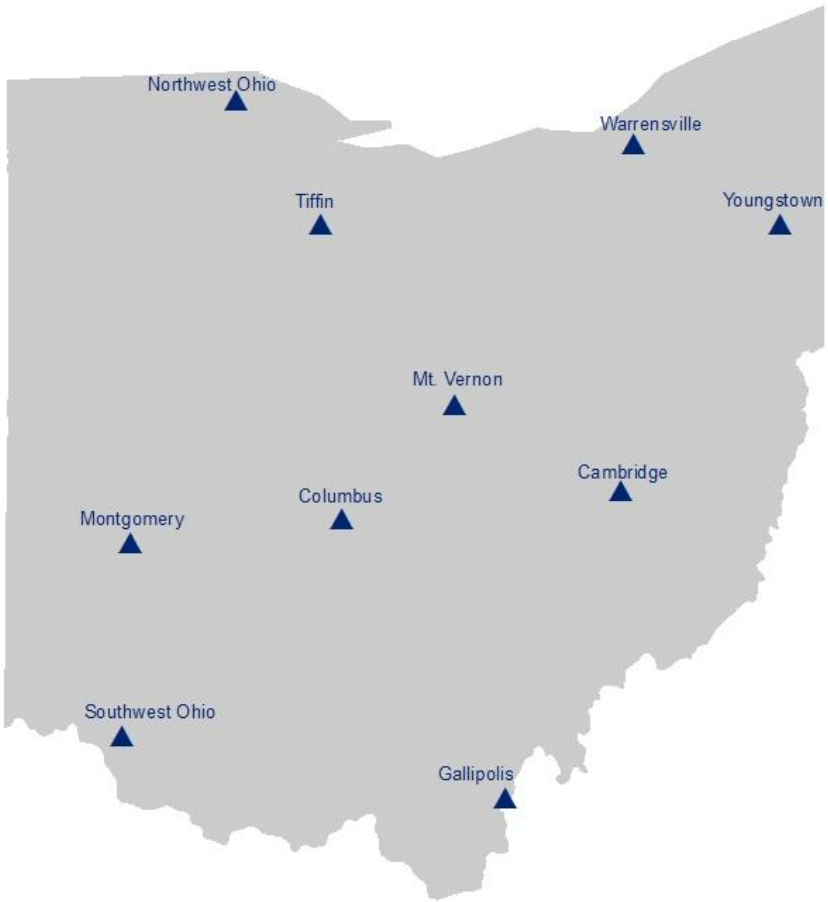
[11] After the closing of Orient, each developmental center was required to meet Medicaid ICF standards.

Medicaid plan covers ICF services, which allows Ohio to receive federal matching funds for services provided in certified ICFs. To qualify for Medicaid reimbursement, ICFs must be certified by the Centers for Medicare and Medicaid Services and comply with federal standards in eight areas, including management, client protections, facility staffing, active treatment services, client behavior and facility practices, health care services, physical environment, and dietetic services.

Public ICFs (Developmental Centers)

ODODD currently operates ten state developmental centers across the state (see Map 1). As of February 20, 2015, these ten centers served approximately 918 individuals with DD (see Table 3). Individuals served in the developmental centers require comprehensive program, medical, and residential services including skills development, behavior support, and therapy. Each developmental center is Medicaid-certified as an ICF, which signifies compliance with federal standards. Some counties operate ICFs. For the purposes of this report, those facilities are treated as private ICFs.

Map 1: Location of Developmental Centers



Source: Ohio Department of Developmental Disabilities

Table 3. Developmental Centers Populations			
Developmental Center (County)	**Census as of February 2011**	**Census as of January 2013**	**Census as of February 2015**
Cambridge (Guernsey)	99	92	91
Columbus (Franklin)	107	94	100
Gallipolis (Gallia)	193	155	81
Montgomery (Montgomery)	102	94	91
Mount Vernon (Knox)	162	116	100
Northwest Ohio (Lucas)	127	117	92
Southwest Ohio (Clermont)	117	100	91
Tiffin (Seneca)	129	110	100
Warrensville (Cuyahoga)	114	95	87
Youngstown (Mahoning)	108	102	85
Total	**1,258**	**1,075**	**918**

Private ICFs

There are approximately 420 licensed private ICFs in Ohio, serving approximately 5,500 individuals with DD. Individuals served in private ICFs receive program, medical, and residential services similar to those in state developmental centers. Each private ICF is also Medicaid-certified. According to ODODD, the occupancy rate for private ICFs, based on the 2013 cost report, was 98.34%.[12]

Community Medicaid Waivers

ODODD and county DD boards also provide community-based services to approximately 35,000 people through four HCBS Medicaid waivers: Individual Options (IO), Level One (L1), Self-Empowerment Life Funding (SELF), and Transitions DD. County DD boards are designated as local Medicaid administrative authorities. They recommend approval or denial of waiver services, approve individual service plans, provide assistance finding qualified providers, contract with providers, monitor quality assurance, and protect the health and safety of clients.

Individuals leaving a developmental center for a community setting will enroll on an HCBS Medicaid waiver. HCBS waivers allow the institutional requirements of the Medicaid Program to be waived and states to collect federal reimbursement for services provided to individuals living in community-based settings. An individual may enroll on an HCBS waiver as long as the individual is Medicaid-eligible and the cost of serving the individual, on average, does not exceed the cost of care in an ICF.

[12] The occupancy rate = inpatient days/bed days available.

Individual Options Waiver

The IO waiver provides federal reimbursement for certain Medicaid services for eligible persons residing in noninstitutional settings. The IO waiver's cost cap equals the average cost of care in an ICF. In FY 2014, this waiver provided services to approximately 18,003 individuals with DD. The average annual per enrollee cost of the waiver was $64,032 in FY 2014. Services covered under the IO waiver include supported employment, adaptive/assistive equipment, environmental modifications, home-delivered meals, personal care, and transportation. The individual pays costs associated with room and board. ODODD anticipates most individuals who choose a waiver option to choose the IO waiver. H.B. 64 of the 131st General Assembly, As Introduced, provides a rate increase of $2.08 per hour for one year to help with the transition from a developmental center to the IO waiver. According to ODODD, the cost of an individual transitioning from a developmental center to an IO waiver in FY 2014 was $104,271.

Level One Waiver

The L1 waiver provides federal financial reimbursement for certain Medicaid services to keep individuals in their homes. Individuals on this waiver must have a network of friends, neighbors, or family members that can safely and effectively provide the necessary care. The L1 waiver was implemented on April 28, 2003. It served approximately 13,096 individuals in FY 2014. The cost caps for the L1 waiver are: $5,000 per year for homemaker/personal care, institutional respite, informal respite, and transportation; $7,500 over three years for personal emergency response systems, specialized medical equipment and supplies, and environmental modifications; and $8,000 over three years for emergency assistance. The average annual per enrollee cost of the waiver was $11,909 in FY 2014.

SELF

The SELF waiver is designed to serve individuals under 22 years old with intensive behavioral needs and individuals 22 and over with developmental disabilities to help them live in the community. Authorized services include support brokerage, functional behavioral assessment, psychological services, remote monitoring and equipment, respite services, adult day services, participant/family stability assistance, community inclusion, and participant-directed goods and services. The cost caps are $25,000 per year for those under 22 and $40,000 per year for those 22 and over. In FY 2014, the SELF waiver served approximately 248 individuals. The average annual cost per enrollee was $9,634 in FY 2014.

Transitions DD

The Transitions DD waiver is designed for individuals who are first eligible for the Ohio Home Care waiver[13] but then are later determined to have a greater need for services (i.e., an ICF level of care and at least one skilled nursing service every day). Authorized services include waiver nursing services, personal care aides, out-of-home respite, supplemental transportation, adult day health, emergency response, home modifications, supplemental assistive and adaptive devices, and home-delivered meals. This waiver was previously administered by the Ohio Department of Job and Family Services (ODJFS) and was moved to ODODD in FY 2013. In FY 2014, the Transitions DD waiver had a monthly average caseload of 2,960 with an average cost per enrollee of $21,310. During the FY 2016-FY 2017 biennium, ODODD plans to phase out this waiver and transfer its enrollees to other waivers.

[13] A waiver administered by the Ohio Department of Medicaid that provides adult day health center services, personal care aide, emergency response services, home care attendant, home delivered meals, home modifications, out-of-home respite, supplemental adaptive and assistive device services, supplemental transportation, and waiver nursing services for individuals with physical disabilities who are 59 years of age or younger.

SECTION 1. THE MANNER IN WHICH THE CLOSURE OF DEVELOPMENTAL CENTERS IN GENERAL AND SPECIFICALLY THE CLOSURE OF MONTGOMERY AND YOUNGSTOWN DEVELOPMENTAL CENTERS WOULD AFFECT THE SAFETY, HEALTH, WELL-BEING, AND LIFESTYLE OF THE DEVELOPMENTAL CENTER'S RESIDENTS AND THEIR FAMILY MEMBERS AND WOULD AFFECT PUBLIC SAFETY

Methodology

LSC staff obtained satisfaction survey results for individuals who had moved from a developmental center to a different living arrangement from January 1, 2011 through February 20, 2015. LSC staff also reviewed major unusual incidents (MUI) data for individuals living in developmental centers and those who live in ICFs or in the community through a waiver. MUI tracking, reporting, and investigation are the main tools used by ODODD to ensure the health and safety of its clients. Finally, LSC staff reviewed literature on the impact of moving individuals from large, congregate care institutions to smaller, community settings.

Individuals Discharged from a Developmental Center

Overview

The information presented below about individuals who left developmental centers should be treated as case studies. Each individual is different and may react to relocation in different ways. Consequently, LSC staff cannot specifically determine the impact the closure of Montgomery and Youngstown developmental centers will have on each resident and his or her family members.

Generally, studies show that residents of closing public institutions and their family members may experience stress from the closure process, and the stress may result in emotional, behavioral, or mental and physical health changes. The overall health of some family members may be affected by the stress associated with the closure process. Frequency of family contact may be affected by the new location of the former resident.[14]

Satisfaction Surveys

LSC staff obtained information on 1,474 individuals who have moved from a developmental center to an ICF or into the community through a waiver. ODODD surveyed individuals discharged from developmental centers from January 1, 2011 through February 20, 2015 after they moved regarding their satisfaction with their new homes and the services provided to them. Specifically, the survey asked the individual

[14] For further discussion, see "**Literature Review**" at the end of this section.

or his or her guardian about their satisfaction with their new home, day services, individual safety, daily routine, degree of independence, and provider services. Each question asked the individual to rank satisfaction with a particular service or support as one of the following: highly satisfied, satisfied, neither, dissatisfied, or highly dissatisfied.

Tables 4 through 9 below show the responses from 1,462 of the 1,474 individuals surveyed. There were 12 individuals for whom information was not available. As shown in Table 4, approximately 77% of individuals reported either being highly satisfied or satisfied with their new home, 22% reported neither, while less than 1% reported being either dissatisfied or highly dissatisfied.

Table 4. Satisfaction Survey Results: New Home

Developmental Center	Highly Satisfied	Satisfied	Neither	Dissatisfied	Highly Dissatisfied
Cambridge	30	29	23	1	0
Columbus	47	67	31	1	0
Gallipolis	88	143	22	2	0
Montgomery	16	29	29	0	0
Mount Vernon	40	44	25	1	0
Northwest	35	95	38	1	1
Southwest	77	139	45	3	1
Tiffin	26	31	36	0	0
Warrensville	43	54	48	0	0
Youngstown	40	55	26	0	0
Total	**442**	**686**	**323**	**9**	**2**

Table 5 below shows the responses regarding satisfaction with day services after moving from a developmental center. Approximately 68% of individuals reported either being highly satisfied or satisfied with their day services, 31% reported neither, while less than 1% reported being either dissatisfied or highly dissatisfied.

Table 5. Satisfaction Survey Results: Day Services

Developmental Center	Highly Satisfied	Satisfied	Neither	Dissatisfied	Highly Dissatisfied
Cambridge	21	30	32	0	0
Columbus	44	52	50	0	0
Gallipolis	62	126	67	0	0
Montgomery	12	38	24	0	0
Mount Vernon	23	59	28	0	0
Northwest	24	95	51	0	0
Southwest	51	141	71	1	1

Table 5. Satisfaction Survey Results: Day Services					
Developmental Center	**Highly Satisfied**	**Satisfied**	**Neither**	**Dissatisfied**	**Highly Dissatisfied**
Tiffin	21	34	38	0	0
Warrensville	34	50	61	0	0
Youngstown	28	54	39	0	0
Total	**320**	**679**	**461**	**1**	**1**

Table 6 below shows the responses regarding satisfaction with individual safety after moving from a developmental center. Approximately 76% of individuals reported either being highly satisfied or satisfied with their level of individual safety, 23% reported neither, while less than 1% reported being either dissatisfied or highly dissatisfied.

Table 6. Satisfaction Survey Results: Individual Safety					
Developmental Center	**Highly Satisfied**	**Satisfied**	**Neither**	**Dissatisfied**	**Highly Dissatisfied**
Cambridge	23	34	26	0	0
Columbus	45	67	33	1	0
Gallipolis	75	150	29	1	0
Montgomery	14	34	24	1	1
Mount Vernon	33	58	18	1	0
Northwest	23	105	40	1	1
Southwest	58	154	50	2	1
Tiffin	16	39	38	0	0
Warrensville	32	63	50	0	0
Youngstown	28	64	29	0	0
Total	**347**	**768**	**337**	**7**	**3**

Table 7 below shows the responses regarding satisfaction with an individual's daily routine after moving from a developmental center. Approximately 75% of individuals reported either being highly satisfied or satisfied with their daily routine, 24% reported neither, while less than 1% reported being either dissatisfied or highly dissatisfied.

Table 7. Satisfaction Survey Results: Daily Routine					
Developmental Center	**Highly Satisfied**	**Satisfied**	**Neither**	**Dissatisfied**	**Highly Dissatisfied**
Cambridge	26	27	29	1	0
Columbus	45	63	38	0	0
Gallipolis	60	162	33	0	0
Montgomery	13	32	28	1	0
Mount Vernon	32	52	25	1	0
Northwest	32	97	40	0	1
Southwest	52	159	52	1	1
Tiffin	16	41	36	0	0
Warrensville	37	62	46	0	0
Youngstown	31	60	30	0	0
Total	**344**	**755**	**357**	**4**	**2**

Table 8 below shows the responses regarding satisfaction with an individual's degree of independence after moving from a developmental center. Approximately 72% of individuals reported either being highly satisfied or satisfied with their degree of independence, 27% reported neither, while less than 1% reported being either dissatisfied or highly dissatisfied.

Table 8. Satisfaction Survey Results: Degree of Independence					
Developmental Center	**Highly Satisfied**	**Satisfied**	**Neither**	**Dissatisfied**	**Highly Dissatisfied**
Cambridge	21	35	27	0	0
Columbus	39	67	39	1	0
Gallipolis	46	166	41	2	0
Montgomery	9	40	25	0	0
Mount Vernon	26	56	28	0	0
Northwest	30	98	41	0	1
Southwest	37	165	59	2	2
Tiffin	15	40	37	1	0
Warrensville	27	66	52	0	0
Youngstown	32	47	42	0	0
Total	**282**	**780**	**391**	**6**	**3**

Table 9 below shows the responses regarding satisfaction with an individual's provider services after moving from a developmental center. Approximately 74% of individuals reported either being highly satisfied or satisfied with their degree of independence, 24% reported neither, while less than 1% reported being either dissatisfied or highly dissatisfied.

Table 9. Satisfaction Survey Results: Provider Services					
Developmental Center	**Highly Satisfied**	**Satisfied**	**Neither**	**Dissatisfied**	**Highly Dissatisfied**
Cambridge	27	22	33	1	0
Columbus	51	62	32	1	0
Gallipolis	89	139	27	0	0
Montgomery	14	28	30	2	0
Mount Vernon	36	52	21	1	0
Northwest	35	95	38	1	1
Southwest	71	141	50	2	1
Tiffin	24	28	40	0	1
Warrensville	35	59	51	0	0
Youngstown	41	48	32	0	0
Total	**423**	**674**	**354**	**8**	**3**

Major Unusual Incidents

The main method used by ODODD to ensure the health and safety of its clients is through the tracking, reporting, and investigation of MUIs. As defined in Ohio Administrative Code section 5123:2-17-02, an MUI is an alleged, suspected, or actual occurrence of an incident that adversely affects the health and safety of an individual, including acts committed or allegedly committed by one individual against another. There are 19 types of MUIs, including all of the following: accidental or suspicious death, exploitation, failure to report, misappropriation, neglect, peer-to-peer act, physical abuse, prohibited sexual activity, rights code, sexual abuse, verbal abuse, attempted suicide, medical emergency, missing individual, death other than accidental or suspicious, significant injury, law enforcement incidents, unscheduled hospitalizations, and unapproved behavior supports (see "**Appendix 1-1**" for MUI rule and associated definitions).

Providers of services are required to document and report all MUIs no later than three p.m. the next working day. Incidents can occur in any setting and include any event that is inconsistent with the individual's normal routine. Incidents are reported to the appropriate county DD board, which is required to investigate the incident and report its findings to ODODD.

On notification of an MUI, a county board must ensure that notification has been made to the jurisdiction's law enforcement agency, the local public children services agency (if the individual is under age 21), the individual's guardian, the service and support administrator, and, if the MUI occurs at a county board program or county board contracting entity, the licensed provider of residential services of the place in which the individual resides. The county board must also ensure that notification has been made to the staff or family living at the individual's residence and the support

broker for an individual enrolled in the SELF waiver. ODODD may conduct separate review or investigation of any MUI if necessary.

Results – MUIs

ODODD provided LSC staff with MUI data on individuals living in developmental centers as compared to individuals living in nondevelopmental center settings from 2011 through 2014. After a careful examination, however, LSC staff is unable to conclude whether MUIs will occur more or less often as a result of a new living situation. Because MUI data has limitations, it is impossible to reach such conclusions. First, the aggregate number of MUIs per person is not as important as the type of MUI. For example, new occurrences of injury MUIs after relocation may be an indicator of a health or safety issue, while hospital admissions may be related to an individual's overall health status rather than the residential setting. Second, MUI reporting is not consistent among residential settings. Developmental centers and private ICFs tend to report more MUIs because of Medicaid regulations. In the community, some providers report more MUIs than others.

Deaths at Developmental Centers

Any death of an individual in a developmental center or who is receiving county board services is reported as an MUI. Table 10 shows the number of deaths at Montgomery and Youngstown since 2010.

Table 10. Deaths at Developmental Centers by Calendar Year

	2010	2011	2012	2013	2014	2015*
Montgomery	1	3	2	3	0	0
Youngstown	3	2	2	3	3	2

*As of March 18, 2015

ODODD investigates every death according to statutory guidelines. Studies show individuals with developmental disabilities are naturally predisposed to higher mortality risks because of the nature of their disability. Consequently, mortality rates are very volatile and may vary on a year-to-year basis.[15]

Public Safety

To look at the effect the closure would have on public safety, LSC staff reviewed the MUIs that have occurred since calendar year 2011 by developmental center and county in which they were reported. The MUI categories that would likely have the most significant impact on public safety are alleged cases of physical and sexual abuse,

[15] O'Brien, K.F. & Zaharia, E.S. (1998). *Is it Life Threatening to Live in the Community? Commentary*. **Mental Retardation**, 36(5), pp. 408-409.

law enforcement incidents, and misappropriation (see "**Appendix 1-1**" for MUI rule with definitions).

"Alleged physical abuse" refers to the use of physical force that results in physical or serious physical harm, and includes hitting, slapping, pushing, or throwing objects at an individual. "Alleged sexual abuse" refers to allegations of unlawful sexual acts or conduct. "Law enforcement" is any incident in which an individual is charged, incarcerated, or arrested. "Misappropriation," or "theft," refers to depriving, defrauding, or otherwise obtaining the property of an individual.

MUIs for alleged cases of physical abuse and sexual abuse are filed when someone believes abuse has taken place. The proper authorities are then required to investigate the allegation. Alleged cases of physical and sexual abuse are subject to the preponderance of the evidence standard. This means that for a case to be substantiated, the allegation must be 50% administratively substantiated. Thus, an MUI alleging physical or sexual abuse does not necessarily mean that the alleged abuse took place. The fact that a case is administratively substantiated as having occurred does not mean that there is enough evidence to justify prosecution.

Table 11 shows the rate and number of substantiated MUIs at developmental centers during calendar years 2011 through 2014 by the four types identified to be the most relevant to public safety. With the exception of law enforcement, the following MUI data does not take into account whether the individual with DD was the offender or the victim.

Table 11. MUI Rates and Numbers (per 1,000) by Type: Developmental Centers

	2011		2012		2013		2014	
Census	1,185		1,076		953		922	
	Rate	Number	Rate	Number	Rate	Number	Rate	Number
Physical Abuse	11.81	14	7.43	8	12.59	12	5.42	5
Sexual Abuse	0	0	1.86	2	0	0	0	0
Law Enforcement	2.53	3	2.79	3	4.20	4	4.34	4
Misappropriation	5.91	7	12.08	13	5.25	5	2.17	2

Table 12 shows the rate and number of substantiated MUIs that took place in nondevelopmental center settings during calendar years 2011 through 2014 by each of the above-mentioned types of MUIs related to public safety. The following MUI data does not take into account whether the individual with DD was the offender or the victim.

Table 12. MUI Rates and Numbers (per 1,000) by Type: Nondevelopmental Center Settings								
	2011		2012		2013		2014	
Census	90,237		90,576		88,031		90,161	
	Rate	Number	Rate	Number	Rate	Number	Rate	Number
Physical Abuse	3.91	353	4.03	365	4.45	392	4.28	386
Sexual Abuse	0.74	67	0.83	75	1.0	88	0.83	75
Law Enforcement	4.91	443	4.65	421	6.93	610	10.71	966
Misappropriation	9.93	896	8.27	749	21.52	1,894	9.48	855

Table 13 shows the rate and number of substantiated MUIs at developmental centers during calendar years 2011 through 2014 where the individual with DD was the victim and provider staff was the offender.

Table 13. MUI Rates and Numbers (per 1,000) by Type: Developmental Centers – Staff Only								
	2011		2012		2013		2014	
Census	1,185		1,076		953		922	
	Rate	Number	Rate	Number	Rate	Number	Rate	Number
Physical Abuse	11.81	14	7.43	8	11.54	11	5.42	5
Sexual Abuse	0	0	0.93	1	0	0	0	0
Misappropriation	5.91	7	12.08	13	5.25	5	2.17	2

Table 14 shows the rate and number of substantiated MUIs that took place in nondevelopmental center settings during calendar years 2011 through 2014 where the individual with DD was the victim and provider staff was the offender.

Table 14. MUI Rates and Numbers (per 1,000) by Type: Nondevelopmental Center Settings – Staff Only								
	2011		2012		2013		2014	
Census	90,237		90,576		88,031		90,161	
	Rate	Number	Rate	Number	Rate	Number	Rate	Number
Physical Abuse	1.07	97	1.09	99	1.11	98	1.04	94
Sexual Abuse	0.04	4	0.13	12	0.14	12	0.03	3
Misappropriation	2.43	219	1.74	158	1.99	175	2.03	183

There are cautions that should be considered when looking at these MUI numbers. First, the total number of MUIs is not necessarily an indication of health and safety because of the difference in the number of individuals served in each setting. For example, the census in the developmental centers was 918 in February 2015. In comparison, the number of individuals in county programs was approximately 90,000

in FY 2014. Thus, by virtue of serving more individuals, significantly larger MUI totals in county programs would be expected.

Second, it is virtually impossible to make comparisons between community and developmental center MUIs. Although the definitions are the same, the frequency of reporting varies significantly. Developmental centers and private ICFs report significantly more MUIs per person because of Medicaid regulations. Certain categories of MUIs are reported more in the community than in developmental centers because of the differences in environment. For example, law enforcement MUIs (when an individual is charged, arrested, or incarcerated) are virtually nonexistent in developmental centers because staff are trained to intervene in difficult situations. Consequently, a law enforcement MUI would not need to be filed. In contrast, community providers are trained to call local police in difficult situations. If an individual has contact with the criminal justice system, it is reported as a law enforcement MUI.

Because of the limitations of the data, LSC staff is unable to draw any conclusions as to the effects a developmental center closure will have on public safety. Generally, individuals who move into the community will be in less structured environments and will have lower levels of supervision. Since 1999, most of the intake into developmental centers has been individuals who are dually diagnosed (mental health and developmental disability), have significant aggressive behavioral problems, or pose a significant risk to their own health and safety.

Lifestyle

The lifestyle of individuals moving from Montgomery and Youngstown will change. Individuals moving to another developmental center or to a private ICF will not experience much change in the nature of services and supports but will experience other changes in lifestyle. The services provided in developmental centers and private ICFs are Medicaid-certified. Both types of entity offer the same services and supports offered at Montgomery and Youngstown. Staff members will be different, however, as will the physical environment. The individuals will also have new roommates and live with a different group of people. These changes will likely result in stress for the affected individuals although the amount and duration of the stress may vary significantly.

Compared to those moving from one developmental center to another, individuals moving from a developmental center to the community will likely see more change in lifestyle. These individuals will be moving to a less restrictive environment. Developmental centers are largely self-contained. Most services a resident may need are available on the campus. He or she lives in a structured lifestyle. In a community setting, individuals may have to travel to receive services, have more control over their

own environment, and are more extensively involved in lifestyle choices, such as roommates, types of living arrangement, and service providers.

Literature Review

LSC staff reviewed literature on the impact of moving individuals from large, congregate care institutions to smaller, community settings. It is clear from this literature that the process of moving an individual with DD to a different residential setting is a stressful experience for both the individual and the family members. Relocation stress affects emotional, behavioral, mental, and physical health and should therefore be approached deliberately.[16] In general, the available research indicates that outcomes for individuals with DD are better in community settings than in institutions, but only when community supports and access to effective healthcare and treatment are available.[17]

Most of the studies discussed in the following sections relied on interviews and surveys of individuals with DD before and after a move into the community. However, when dealing with individuals with DD, interviewing can be difficult. These individuals may be nonverbal or have multiple disabilities that complicate or inhibit effective communication. Further, the interviewer can never be certain that those who speak for an individual adequately represent the individual's opinions.[18] Consequently, many authors question the feasibility and accuracy of interview methods.[19]

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[16] Lemay, R.A. (2009). *Deinstitutionalization of People with Developmental Disabilities: A Review of the Literature*. **Canadian Journal of Community Mental Health**, 28(1), p. 184. Braddock, D. & Heller, T. (1985). *The Closure of Mental Retardation Institutions II: Implications*. **Mental Retardation**, 23(5), pp. 222-229.

[17] Beadle-Brown, J., Mansell, J., & Kozma, A. (2007). *Deinstitutionalization in Intellectual Disabilities*, **Current Opinion in Psychiatry**, 20(5), pp. 437-442.

[18] Conroy, J.W. & Bradley, V.J. (1985). **The Pennhurst Longitudinal Study: A report of five years of research and analysis**. Philadelphia: Temple University Developmental Disabilities Center. Boston: Human Services Research Institute.

[19] Sigelman, C.K. et al. (1981). *Issues in Interviewing Mentally Retarded Persons: An Empirical Study.* In Robert H. Bruininks et al. (Eds.), **Deinstitutionalization and Community Adjustment of Mentally Retarded People**. American Association on Mental Deficiency: Washington D.C.; Heal, L.W. & Sigelman, C.K. (1990). *Methodological Issues in Measuring the Quality of Life of Individuals with Mental Retardation.* In Robert L. Schalock (Ed.), **Quality of Life: Perspectives and Issues**. American Association on Mental Retardation: Washington D.C.; McGrew, K.S. & Bruininks, R.H. (1994). *A Multidimensional Approach to the Measurement of Community Adjustment.* In Mary F. Hayden and Brian H. Abery (Eds.), **Challenges for a Service System in Transition: Ensuring Quality Community Experiences for Persons with Developmental Disabilities**. Paul H. Brookes Publishing Co.: Baltimore; and Matikka, L. and Vesala, H. (1997). *Acquiescence in quality of life: Interviews with adults who have mental retardation.* **Mental Retardation**, 35(2), pp. 75-82.

Many studies have looked at the general effect of deinstitutionalization on an individual's safety, health, and well-being. However, relatively few have used consistent methods to measure each category. Researchers, instead, have increasingly focused on measuring an individual's overall "quality of life." Quality of life has been conceptualized by some authors as having five domains: (1) physical well-being (including physical health and safety), (2) material well-being (including finances and quality of living environment), (3) social well-being (including social networks and physical and social integration), (4) development and activity (including competence, choice, and activity), and (5) emotional well-being (including mood and self-esteem).[20]

This literature review discusses studies that have examined various impacts of deinstitutionalization including (1) physical health and medical needs, (2) health care access and utilization, (3) transition effects, (4) mortality rates, (5) client satisfaction, (6) adaptive behavior, (7) challenging behavior, (8) family attitudes about moving, and (9) impact on family contact.

Physical Health and Medical Needs

Studies have compared the overall health of individuals in institutions versus community settings. Rimmer et al. studied body composition, lipoprotein levels, and health behaviors among ambulatory adults in both institutional and community settings. The authors found distinct differences in the health behaviors and characteristics among the different residential settings, with individuals living in institutions having the best health risk profile. Individuals in institutions had lower body mass index ratings and body fat levels, consumed less alcohol and cigarettes, and had a better lipoprotein profile than their community counterparts. Rimmer et al. hypothesized that more controlled living arrangements, such as institutions, might be related to improved health characteristics and behaviors.[21]

Likewise, Janicki et al., in a study of the health status of 1,371 adults over 40 years of age living in group homes, observed that individuals had low rates of exercise and exhibited high rates of health problems associated with an insufficient diet. Half of the individuals studied were classified as obese according to their body mass index. The authors reported that behavioral or health practices deficiencies exhibited by the individuals are likely the result of questionable personal care, diet, and physical conditioning and not the individuals' disabilities. The authors also reported that during the previous year 10% of the individuals had experienced a fall that resulted in tissue

[20] Dagan, D., Ruddick, L., & Jones, J. (1998). *A longitudinal study of the quality of life of older people with intellectual disability after leaving hospital*. **Journal of Intellectual Disability Research**, 43(2), pp. 112-121.

[21] Rimmer, J.H., Braddock, D., & Marks, B. (1995). *Health characteristics and behavior of adults with mental retardation residing in three living arrangements*. **Research in Developmental Disabilities**, 16, pp. 489-499.

damage. Janicki et al. also found that 30% of the individuals studied had been to the emergency room. The authors noted, "Although it has been customary in the USA to use ERs for ad hoc treatment of psychiatric and other emergencies for this population, the relationship to accidental injury or undiagnosed medical concerns for this high level of ER usage deserves further investigation."[22]

Robertson et al. had similar findings. The authors, using multivariate regression analysis to identify the key predictors of health risk behaviors for individuals with DD, found that individuals living in the least restrictive environments were more likely to smoke, eat fatty foods, and be obese than adults living in more restrictive environments.[23] These findings align with much of the research reviewed by Kozma et al. They found multiple studies showing those who live in less restrictive arrangements have an increased probability of smoking, poor diet, and obesity. However, the authors noted that residents of community settings tend to have a decreased likelihood of inactivity.[24] Stancliffe et al. noted that while institution residents had the lowest obesity prevalence and individuals with DD living in their own home had the highest, among individuals with severe DD, there were no significant differences between living arrangements in obesity prevalence.[25]

Hayden and Kim, however, reviewing studies conducted over several decades that analyzed the health care needs of people with DD and the extent to which such individuals are or could be receiving services in community settings, found that the overall health of individuals who moved from an institution to the community either improved or remained the same.[26] Heinlein and Fortune reported similar results in their study of 133 deinstitutionalized individuals in Wyoming. Of the 133 individuals, only five returned to institutions. The authors concluded that, "[T]hese results, supporting no differences between those who left . . . and those who remain, allow the conclusion that

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[22] Janicki, M.P. et al. (2002). *Health characteristics and health services utilization in older adults with intellectual disability living in community residences*. **Journal of Intellectual Disability Research**, 46(4), p. 296.

[23] Robertson, J. et al. (2000). *Lifestyle related risk factors for poor health in residential settings for people with intellectual disabilities*. **Research in Developmental Disabilities**, 22, pp. 487-502.

[24] Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review.* 114(3), p. 209.

[25] Stancliffe, R.J., Lakin, K.C., Larson, S.A., Engler, J., Bershadsky, J., Taub, S., Fortune, J., & Ticha, R. (2011). *Overweight and Obesity Among Adults with Intellectual Disabilities who use ID/DD Services in 20 U.S. States*, **American Journal of Intellectual and Developmental Disabilities**, 116(6), pp. 401-418.

[26] Hayden, M.F. & Kim, S.H. (2002). *Health Status, Health Care Utilization Patterns, and Health Care Outcomes of Persons with Intellectual Disabilities: A Review of the Literature*. **Policy Research Brief**, University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration: Minneapolis, 13(1), p. 8.

individuals with a broad array of handicapping conditions can be served in community-based programs, even in a rural state."[27]

Studies have also examined medication use by individuals with DD in institutional and community settings. Spreat and Conroy, in their study of psychotropic medications used by persons in Oklahoma who transferred from institutions to the community, found the number of persons receiving psychotropic medications after community placement remained essentially the same.[28] Widrick et al. reported similar results, finding medication rates for deinstitutionalized individuals in Vermont to be stable.[29] Kozma et al. also found evidence suggesting that the use of psychotropic medication for people with intellectual disabilities either decreased or changed insignificantly as they moved to community settings.[30]

In contrast, Conroy et al. found a marked increase in the use of antipsychotic medications for deinstitutionalized individuals in California.[31] Janicki et al. noted similar findings, reporting that individuals living in group homes in New York had relatively high rates of behavioral disturbances and psychopathology.[32]

Matson et al. found psychotropic medications were overused in both institutional and community settings. The authors conducted a ten-year literature review (1990-1999) of studies pertaining to the use of psychotropic medications for individuals with DD. The authors found that a large number of prescriptions for various psychological and behavioral disorder medications were not scientifically based or evaluated properly and, for the most part, did not follow the best practices for

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[27] Heinlein, K.B. & Fortune, J. (1995). *Who Stays, Who Goes? Downsizing the Institution in America's Most Rural State*. **Research in Developmental Disabilities**, 16(3), p. 175.

[28] Spreat, S. & Conroy, J. (September 1999). *Use of Psychotropic Medications by People Who Transfer from Institutions to Community Programs.* Report Number 11 in the Oklahoma Outcomes Series. Submitted to: Oklahoma Department of Human Services, Developmental Disabilities Services Division. Rosemont, PA: Center for Outcome Analysis.

[29] Widrick, G.C., Bramley, J.A., & Frawley, P.J. (1997). *Psychopathology in Adults with Mental Retardation Before and After Deinstitutionalization*. **Journal of Developmental and Physical Disabilities**, 9(3), pp. 223-242.

[30] Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review.* 114(3), p. 209.

[31] Conroy, J., Seiders, J., & Yuskauskas, A. (April 1998). *Patterns of Community Placement IV: The Fourth Annual Report on the Outcomes of Implementing the Coffelt Settlement Agreement*. Report Number 17 of the five-year Coffelt Quality Tracking Project. Submitted to: California Department of Developmental Services. Sacramento, CA: Center for Outcome Analysis.

[32] Janicki, M.P. et al. (2002). *Health characteristics and health services utilization in older adults with intellectual disability living in community residences*. **Journal of Intellectual Disability Research**, 46(4), pp. 287-298.

individuals with DD. These results applied to both institutions and community placements. Based on scientific literature, only 10% to 20% of individuals with DD should be receiving psychotropic medications. According to the authors, very few institutions or community agencies have comparable or lower psychotropic medication prescription rates.[33] In fact, nearly 30% of individuals with DD receive at least one type of psychotropic medication despite not having a dual diagnosis of a mood or anxiety disorder or mental illness.[34]

Health Care Access and Utilization

The shift from institutionalization to home and community-based services brings attendant challenges in ensuring that individuals with DD are able to access and utilize health care services. Studies have shown that some individuals living in community settings have had trouble accessing or have failed to utilize health care services.[35] Hayden and Kim, in their literature review of 18 studies on health care needs and access for individuals with DD, found that unmet medical needs and access to community-based services impeded success for some individuals.[36] Similarly, Conroy found that over 12% of the deinstitutionalized individuals in his study had unmet medical needs after transitioning to the community from an institution.[37]

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[33] Matson, J.L. et al. (2000). *Psychopharmacology and mental retardation: a 10 year review (1990-1999)*. **Research in Developmental Disabilities**, 21, pp. 263-296.

[34] National Association of State Directors of Developmental Disabilities Services and Human Services Research Institute (2011). *What does NCI Tell Us About People With Dual Diagnosis*. Issue 2.

[35] Bershadsky, J., Taub, S., Engler, J., Moseley, C.R., Lakin, K.C., Stancliff, R., Larson, S., Ticha, R., Bailey, C., & Bradley, V. (2012). *Place of Residence and Preventive Health Care for Intellectual and Developmental Disabilities Services Recipients in 20 States.* **Public Health Reports**, 127, pp. 475-485. Bershadsky, J. & Kane, R.L. (2010). *Place of Residence Affects Routine Dental Care in the Intellectually and Developmentally Disabled Adult Population on Medicaid*. **Health Serv Res**, 45(5), Pt. 1. pp. 1376-1389. Krahn, G.L., Hammond, L., & Tuerner, A. (2006). *A Cascade of Disparities: Health and Health Care Access for People with Disabilities*. **Ment Retard Dev Disab Res Rev**, 12, pp. 70-82.

[36] Hayden, M.F. & Kim, S.H. (2002). *Health Status, Health Care Utilization Patterns, and Health Care Outcomes of Persons with Intellectual Disabilities: A Review of the Literature*. **Policy Research Brief**, University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration: Minneapolis, 13(1).

[37] Spreat, S., & Conroy, J. (February 2000). *Community Placement for Persons with Significant Cognitive Challenges: An Outcome Analysis.* Brief Report Number 13 of the Oklahoma Outcomes Series. Submitted to the Oklahoma Department of Human Services, Developmental Disabilities Services Division. Rosemont, PA: Center for Outcome Analysis.

Authors have looked at the extent to which health care services are utilized in community settings. Hayden and DePaepe conducted a literature review of studies on the health care needs of people with DD and possible barriers to integration in the community. They reported that individuals with significant medical conditions are effectively living in the community and are being provided adequate medical supports. However, the authors did find that some individuals had unmet medical needs while others had difficulty accessing available health services.[38] The literature review led the authors to agree with previous research that, "the delivery of good health care to developmentally disabled people is a medical, not a residential issue."[39]

Hayden and Kim updated the previous literature review by adding 18 studies conducted between 1989 and 2001, noting that individuals rated their medical services in the community as either better or the same as those services in institutions and that access to these services increased following the move from an institution to the community. The authors concluded that, "there is evidence to indicate that (a) there are individuals with varying degrees of intellectual disabilities and medical care needs living in the community, (b) people with significant medical conditions can be placed and maintained in more normalized community settings, and (c) medical supports can be and are being provided to people with intellectual disabilities and allied medical conditions to enable them to live in the community."[40]

However, other studies have noted that deinstitutionalization presents "issues of access to mainstream health services, lack of training for health care professionals and problems of coordination between healthcare professions."[41] Bershadsky et al. found multiple studies reporting "that people living in the community are less likely to receive

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[38] Hayden, M.F. & DePaepe, P.A. (1991). *Medical conditions, level of care needs, and health related outcomes of persons with mental retardation: A review.* **Journal of the Association of Persons with Severe Handicaps**, 16(4), pp. 188-206.

[39] Bruininks, R.H., Hill, B.K., Lakin, K.C., & White, C. (1985). *Residential services for adults with developmental disabilities*. Logan: Utah State University, Developmental Center for Handicapped Persons, as quoted in Hayden, M.F. & DePaepe, P.A. (1991). *Medical conditions, level of care needs, and health related outcomes of persons with mental retardation: A review.* **Journal of the Association of Persons with Severe Handicaps**, 16(4), pp. 188-206.

[40] Hayden, M.F. & Kim, S.H. (2002). *Health Status, Health Care Utilization Patterns, and Health Care Outcomes of Persons with Intellectual Disabilities: A Review of the Literature*. **Policy Research Brief**, University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration: Minneapolis, 13(1), p. 8.

[41] Beadle-Brown, J., Mansell, J., & Kozma, A. (2007). *Deinstitutionalization in Intellectual Disabilities.* **Current Opinion in Psychiatry**, 20, pp. 437-442.

preventive health-care services than people in institutional environments."[42] This was particularly true for vaccinations, hearing and vision exams, dental care, and cancer screenings (such as Pap tests, mammograms, and PSA tests).[43] In their review, the authors found that people living in institutions were slightly more likely to receive preventive care than people living in community-based group residences. They suggested that greater utilization of preventive care exists in institutions because of the institutions' centralized care and regulatory structure requiring the provision of the services. However, the authors pointed out that place of residence is not the only factor affecting whether an individual receives preventive care; personal characteristics, such as age, level of disability, and mobility, also affect the likelihood that an individual will receive preventive care.[44] Chowdhury and Benson similarly found "some evidence suggesting that healthcare needs might not be met as satisfactorily in the community as in institutions."[45]

Transition Effects

Authors have looked at the transition effects associated with moving from an institution to a community setting. Some authors have found signs of relocation syndrome[46] and transition shock[47] where stress from moving caused behaviors

[42] Bershadsky, J., Taub, S., Engler, J., Moseley, C., Lakin, K.C., Stancliffe, R., Larson, S., Ticha, R., Bailey, C., & Bradley, V. (2012). *Place of Residence and Preventive Health Care for Intellectual and Developmental Disabilities Services Recipients in 20 States.* **Public Health Reports**, 127, p. 476.

[43] *See also* Lakin, K.C., Doljanac, R., Byun, S.Y., Stancliffe, R., Taub, S., & Chiri, G. (2006). *Final Report for the Centers for Medicare and Medicaid Services Medicaid Home and Community-Based Services for Persons with Intellectual and Developmental Disabilities: Background and Findings from Consumer Interviews and the Medicaid Statistical Information Systems.* The University of Minnesota Research and Training Center on Community Living, pp. 68-69.

[44] Bershadsky, J., Taub, S., Engler, J., Moseley, C., Lakin, K.C., Stancliffe, R., Larson, S., Ticha, R., Bailey, C., & Bradley, V. (2012). *Place of Residence and Preventive Health Care for Intellectual and Developmental Disabilities Services Recipients in 20 States.* **Public Health Reports**, 127, p. 476.

[45] Chowdhury, M. & Benson, B. (2011). *Deinstitutionalization and Quality of Life of Individuals with Intellectual Disability: A Review of the International Literature.* **Journal of Policy and Practice in Intellectual Disabilities**, 8(4), p. 262.

[46] Cochran, W.E., Sran, P.K., & Varano, G.A. (1977). *The relocation syndrome in mentally retarded individuals*. **Mental Retardation**, 15, pp. 10-12, as quoted in Widrick, G.C., Bramley, J.A., & Frawley, P.J. (1997). *Psychopathology in Adults with Mental Retardation Before and After Deinstitutionalization*. **Journal of Developmental and Physical Disabilities**, 9(3), pp. 223-242.

[47] Coffman, T.L. & Harris, M.C. (1980). *Transition shock and adjustments of mentally retarded persons*. **Mental Retardation**, 18, pp. 3-6, as quoted in Widrick, G.C., Bramley, J.A., & Frawley, P.J. (1997). *Psychopathology in Adults with Mental Retardation Before and After Deinstitutionalization*. **Journal of Developmental and Physical Disabilities**, 9(3), pp. 223-242.

consistent with psychopathology.[48] However, more recently, Kozma et al. reported that most of the research has found no evidence of associated negative effects on residents' mental health, such as transfer trauma, transition shock, or an increase in mental health problems.[49]

Mortality Rates

Authors have also studied changes in mortality rates following deinstitutionalization. Research on mortality rates following deinstitutionalization has been mixed. Early studies found that mortality rates were higher in institutions and lower in community settings, even when the level of disability had been controlled.[50] Conroy and Adler, in their study of deinstitutionalization in Pennsylvania, reported mortality rates among deinstitutionalized individuals to be lower than what would be expected in Pennsylvania or national institutions.[51] Similarly, O'Brien and Zaharia, who studied mortality rates in deinstitutionalized individuals in California, found no increased risk of death associated with a move to the community. Although the authors found statistically significant increases in mortality rates in 1991 and 1992, beginning in 1993 mortality rates for deinstitutionalized individuals were lower or equivalent to those in institutions.[52]

In comparison, in a study of 1,878 deinstitutionalized individuals, Strauss et al. found higher than normal mortality rates in individuals with DD who moved from institutions to community settings.[53] After adjusting for risk factors, the authors found that individuals who moved to the community had a 51% increased mortality rate (67% if cancer deaths were excluded).[54] These results add to earlier findings by Strauss and

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[48] Widrick, G.C., Bramley, J.A., & Frawley, P.J. (1997). *Psychopathology in Adults with Mental Retardation Before and After Deinstitutionalization*. **Journal of Developmental and Physical Disabilities**, 9(3), pp. 223-242.

[49] Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review.* 114(3), p. 209.

[50] Hayden, M.F. (1998). *Mortality Among People With Mental Retardation Living in the United States: Research Review and Policy Application*. **Mental Retardation**, 36(5), pp. 345-359.

[51] Conroy, J.W. & Adler, M. (1998). *Mortality Among Pennhurst Class Members, 1978 to 1989: A Brief Report*. **Mental Retardation**, 36(5), pp. 380-385.

[52] O'Brien, K.F. & Zaharia, E.S. (1998). *Recent Mortality Patterns in California*. **Mental Retardation**, 36(5), pp. 372-379.

[53] Hayden, M.F. (1998). *Mortality Among People With Mental Retardation Living in the United States: Research Review and Policy Application*. **Mental Retardation**, 36(5), pp. 345-359.

[54] Strauss, D. et al. (1998). *Mortality in Persons With Developmental Disabilities After Transfer Into Community Care.* **American Journal on Mental Retardation**, 102(6), pp. 569-581.

Kastner, who reported a 72% risk-adjusted increase in mortality rates for deinstitutionalized individuals in California community settings.[55] However, these studies were controversial, and their methodology has been challenged.[56]

Recent literature reviews on mortality rates for deinstitutionalized individuals have also found that the results of studies are inconsistent. Lemay reviewed some studies showing that individuals living in community settings have higher mortality rates than those living in institutions, some studies showing improved mortality rates for those in the community, and still others showing no difference. Lemay noted that people are more susceptible to disease and death after significant life changes, which may explain why some studies show higher mortality rates for deinstitutionalized individuals. He concluded that "such findings do not support institutionalization but rather the necessity of implementing deinstitutionalization with great care."[57]

Kozma et al. similarly found the results were mixed; some studies reviewed found an increase in mortality, others found a decrease, and others found no change. This led the authors to suggest that mortality is related, not to relocation, but rather to access to health care and specific risk variables in the individuals included in the studies.[58]

Critiques of mortality research indicate that comparing mortality rates between residential settings is problematic and should be viewed with caution.[59] Hayden, who examined 24 mortality studies on individuals with DD, found that the most common predictors of mortality included age, level of retardation, ambulation, secondary medical conditions, etiology of mental retardation, presence of a feeding tube, and level of motor skills. The type of residential setting had little predictive value on an individual's mortality risk. As Hayden notes, "Mortality among people with mental retardation increases as the severity of their mental retardation and the incidence of disabling conditions increase, regardless of where they live."[60]

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[55] Strauss, D.J. & Kastner, T.A. (1996). *Comparative mortality of people with mental retardation in institutions and the community*. **American Journal on Mental Retardation**, 101, pp. 26-40, as cited in *Ibid*.

[56] Lemay, R.A. (2009). *Deinstitutionalization of People with Developmental Disabilities: A Review of the Literature.* **Canadian Journal of Community Mental Health**, 28(1), p. 184.

[57] *Ibid.*

[58] Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review.* **American Journal of Intellectual and Developmental Disabilities**, 114(3), p. 209.

[59] Sutherland, G., Couch, M.A., & Iacono, T. (2002). *Health issues for adults with developmental disability*. **Research in Developmental Disabilities**, 23, pp. 422-445.

[60] Hayden, M.F. (1998). *Mortality Among People With Mental Retardation Living in the United States: Research Review and Policy Application*. **Mental Retardation**, 36(5), p. 356.

Sutherland et al. also identified problems with mortality research that make generalizing to other populations very difficult. First, old studies may not reflect the current situation. Second, methodological problems exist and the results of such studies are likely to be influenced by the characteristics of the population studied. Lastly, the comparison between institutions and community in itself is vague because neither assumes certain conditions. Sutherland et al. concludes:

> Particular settings, by way of their structural, environmental, and social dimensions may directly or indirectly influence the health of an individual, and as a consequence play some role in mortality risk. But living in either the community or in an institution is not a cause of death. Categorization of participants based on whether they live in the community or not may preclude the consideration of more notable influences on mortality risk of people with developmental disability, such as available and accessibility of services in particular communities.[61]

Satisfaction

Authors have studied the effect relocation to community settings has on an individual's life satisfaction. In 1985, Conroy and Bradley conducted one of the first in-depth longitudinal analyses on the effects of deinstitutionalization. The authors studied the impact of the court-ordered deinstitutionalization of Pennhurst State School and Hospital in Pennsylvania. Conroy and Bradley found statistically significant results showing individuals with DD who moved to community settings expressed increased satisfaction with their lives. Individuals still living at Pennhurst showed no significant change in their satisfaction with their living arrangement.[62]

Conroy reported similar results in 569 deinstitutionalized individuals with DD in Connecticut. Conroy found improvements in almost every category measured, leading him to conclude, "the evidence from five years of study, using three different research approaches, was very clear and consistent . . . is that people who moved from

[61] Sutherland, G., Couch, M.A., & Iacono, T. (2002). *Health issues for adults with developmental disability*. **Research in Developmental Disabilities**, 23, pp. 426-427.

[62] Conroy, J.W. & Bradley, V.J. (1985). **The Pennhurst Longitudinal Study: A report of five years of research and analysis**. Philadelphia: Temple University Developmental Disabilities Center. Boston: Human Services Research Institute.

institutions to community settings were, on average, much better off in almost every way we measured."[63]

A number of more recent studies have found similar results. In their review of deinstitutionalization studies, Walsh et al. found consistent evidence that individuals report greater personal satisfaction in community-based settings.[64] Kozma et al. also found that studies consistently show that individuals who move to a community setting report high satisfaction with their new living arrangements. Furthermore, "[m]overs were critical about institutions and did not want to return – even if they missed certain things, such as people and some activities."[65]

Similarly, studies have found a significant difference in loneliness by residence size, with larger settings associated with more loneliness.[66] Stancliffe et al. found increased satisfaction and sense of well-being among residents of smaller settings. They concluded, "[o]verall, the self-reported well-being and satisfaction findings examined here document the benefits of residential support provided in very small settings, with choice of where and with whom to live and to individuals living with family."[67]

Adaptive Behavior

Larson et al. reviewed more than 30 years of research on changes in adaptive behavior associated with moving from institutional to community settings and concluded that there is "strong and consistent evidence that people who move from institutions to community settings have experiences that help them to improve their adaptive behavior skills."[68]

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[63] Conroy, J. (1996). *Results of deinstitutionalization in Connecticut*. In Jim Mansell and Ken Ericsson (Eds.), **Deinstitutionalization and Community Living: Intellectual disability services in Britain, Scandinavia, and the USA**. Chapman & Hall: London.

[64] Walsh, P.N., Emerson, E., Lobb, C., Hatton, C., Bradley, V., Schalock, R.L., & Moseley, C. (2010). *Supported Accommodation for People with Intellectual Disabilities and Quality of Life: An Overview*. **Journal of Policy and Practice in Intellectual Disabilities**, 7(2), p. 139.

[65] Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review.* **American Journal of Intellectual and Developmental Disabilities**, 114(3), p. 209.

[66] Stancliffe, R.J., Lakin, K.C., Doljanac, R., Byun, SY., Taub, S., & Chiri, G. (2007). *Loneliness and Living Arrangements*. **Intellectual and Developmental Disabilities**, 45(6), pp. 380-390.

[67] Stancliffe, R.J., Lakin, K.C., Taub, S., Chiri, G., & Byun, S.Y. (2009). *Satisfaction and Sense of Well-being Among Medicaid ICF/MR and HCBS Recipients in Six States*. **Intellectual and Developmental Disabilities**, 47(2), pp. 63-83, 82.

[68] Larson, S., Lakin, K.C., & Hill, S. (2012). *Behavioral outcomes of moving from institutional to community living for people with intellectual and developmental disabilities: U.S. studies from 1997 to 2010.* **Research and Practice for Persons with Severe Disabilities**, 37(4), pp. 235-246, 243.

In 11 contrast studies comparing a group moving from an institutional setting (movers) to a group that remained in an institutional setting (stayers), all of the studies found either statistically significant better outcomes in overall adaptive behavior for the movers or benefits that did not reach statistical significance. Larson et al. found that in studies examining outcomes in adaptive behaviors, in all but five of the comparisons, movers had either statistically significant better outcomes or better outcomes that did not reach statistical significance.[69] The self-care domain of adaptive behavior showed the most consistent statistically significant benefits for movers. Other adaptive behavior domains that showed statistically significant better outcomes for movers in at least half of the comparisons included academic skills, community living skills, and social skills. All together 85% of the comparisons made in the seven most frequently studied areas of daily living skills showed benefits of community living, while only 5% found detriments.[70]

Larson et al. also reviewed 25 longitudinal studies of overall adaptive behavior among movers. Fifteen of the studies reported statistically significant improvements in overall adaptive behavior associated with moving to a community setting, while five reported improvements that were not statistically significant or that were not tested for significance. Three studies reported a statistically significant decline in adaptive behavior for movers, and two studies reported decreases that were not statistically significant.[71]

Thirteen longitudinal studies examined changes in specific domains of adaptive behavior. While the contrast group studies found that the most consistent benefits in moving from institutions to community settings were in self-care and domestic skills, the longitudinal studies found that social skills were the area of most consistent improvement. Five of the six longitudinal studies that measured social skills found statistically significant improvements after movement to the community, and one found improvements that did not reach statistical significance.[72]

Of 11 contrast studies, seven found individuals in the deinstitutionalized sample with statistically significant more positive change in adaptive behavior than the comparison group; the remaining four also found the movers with greater positive changes (although not to a statistically significant degree). Of 26 longitudinal studies of changes in adaptive behavior of individuals leaving institutions, 15 reported

[69] *Ibid*, p. 238.

[70] *Ibid*, p. 244.

[71] *Ibid*, p. 239.

[72] *Ibid*, pp. 240-241.

statistically significant positive changes, and five others reported positive but not statistically significant change. In contrast to the 31 studies showing increased general adaptive behavior following moving from institutions, there were only five that found decreases in adaptive behavior, including three that found statistically significant decreases.[73]

The findings of Larson et al. are consistent with earlier studies. Kleinberg and Galligan found similar increases in adaptive behavior following a move into the community. The authors studied 20 individuals with DD and measured their functional abilities at 0, 4, 8, and 12 months. The results showed consistent improvement in language development, responsibility, domestic activity, and social interaction. The authors hypothesize that the increased functioning can be attributed to a manifestation of behavior that the individual already possessed, but had not expressed in the more restrictive environment. Consequently, the authors conclude that the issue, "is not institution vs. community but custodial vs. therapeutic care . . . if a major goal of deinstitutionalization is increased skill acquisition, simply moving people to community settings is not enough. Programmatic efforts must be made to teach these individuals how to make use of the new environments."[74]

Similarly, Schalock et al., in a study of 166 deinstitutionalized individuals with DD in Nebraska, found positive correlations between success in the community and work skills, social behavior, and education and training received in the institution.[75]

Challenging Behavior

Studies show that individuals with challenging behavior problems are less likely to successfully integrate into the community.[76] Durham, in her experience with deinstitutionalization in Indiana, found many individuals struggled with interpersonal relationships after moving into the community. Several individuals got into fights, had difficulty accepting authority, and had trouble determining appropriate behaviors.[77]

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[73] *Ibid*, p. 243.

[74] Kleinberg, J. & Galligan, B. (1983). *Effects of Deinstitutionalization on Adaptive Behavior of Mentally Retarded Adults*. **American Journal of Mental Deficiency**, 88(1), p. 26.

[75] Schalock, R.L., Harper, R.S., & Genung, T. (1981). *Community Integration of Mentally Retarded Adults: Community Placement and Program Success*. **American Journal of Mental Deficiency**, 85(5), pp. 478-488.

[76] Beadle-Brown, J. & Forrester-Jones, R. (2002). *Social impairment in the "Care in the Community" cohort: the effect of deinstitutionalization and changes over time in the community*. **Research in Developmental Disabilities**, 24, pp. 33-43.

[77] Durham, T.M. (1981). *An Approach to Deinstitutionalization: Our Experience*. In Michael Tracy & Samuel Guskin (Eds.), **Deinstitutionalization: A Reorganization of the Delivery of Services to the Developmentally Disabled**. Indiana University Developmental Training Center: Bloomington.

Similarly, Schalock et al. found the primary reasons for reinstitutionalization of individuals in Nebraska included behavior problems such as physical abuse and property destruction.[78] Haney found similar results in her analysis of empirical studies on successful community integration. She found challenging behavior to be the most likely factor that influenced whether an individual returned to an institution.[79]

Larson et al. found less consistency in outcomes associated with moving to the community related to challenging behavior. In the area of general challenging behavior, of 26 contrast and longitudinal studies reviewed, 14 found positive outcomes associated with the move to the community, but only five were statistically significant. There were ten studies that found negative outcomes, with only three findings statistically significant. Two studies reported no difference.[80]

With regard to the domains of externalized challenging behavior (e.g., aggression, property destruction) and internalized challenging behavior (e.g., withdrawal, self-abuse), patterns remained inconsistent. Of eight studies that included analysis of change in externalized challenging behavior, six reported reductions following the move, but in only two of the studies were the differences statistically significant. Seven studies investigated changes in internalized challenging behavior, with four of these reporting benefits of the move to community settings (but only two had statistical significance). Two studies reported detriments associated with the move (one with statistical significance). One study reported no difference.[81]

Larson et al. reviewed 21 longitudinal studies of changes in challenging behavior following movement to community settings. Eleven of these studies found improvements in challenging behavior after the move, including four studies in which these changes were statistically significant. In contrast, eight studies reported increased levels of challenging behavior after the move, including three studies that reported statistically significant increases. Two studies found no difference.[82]

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[78] Schalock, R.L., Harper, R.S., & Genung, T. (1981). *Community Integration of Mentally Retarded Adults: Community Placement and Program Success*. **American Journal of Mental Deficiency**, 85(5), pp. 478-488.

[79] Haney, J.I. (1988). *Toward Successful Community Residential Placements for Individuals with Mental Retardation*. In Laird Heal et al. (Eds.), **Integration of Developmentally Disabled Individuals into the Community**. Paul H. Brookes Publishing Co.: Baltimore.

[80] Larson, S., Lakin, K.C., & Hill, S. (2012). *Behavioral outcomes of moving from institutional to community living for people with intellectual and developmental disabilities: U.S. studies from 1997 to 2010.* **Research and Practice for Persons with Severe Disabilities**, 37(4), pp. 235-246, 243.

[81] *Ibid*, p. 239.

[82] *Ibid*, p. 239.

Patterns within specific domains of challenging behavior were not predictably associated with movement to the community. Two studies reported significant improvements in internal maladaptive behavior (e.g., withdrawal, self-injurious behavior), but another study found statistically significant deterioration. Among the studies of externalized challenging behavior, four of six studies found improvements, but none of the differences reached statistical significance. Two studies found deterioration that was not statistically significant and one found no difference. Overall, Larson et al. concluded that "community placement alone is not a consistently effective means of reducing challenging behavior."[83]

Family Attitudes About Moving

The process of moving, whether to another institution or to a community setting, can be a stressful experience for family members of individuals with DD. Families with deinstitutionalized relatives report high stress levels and have resisted such moves.[84] Research consistently shows that families with individuals in public institutions are very satisfied with the public institutions.[85] Spreat et al., in a national survey of families of institutionalized people with DD, found strong support for institutional services. The authors also found strong opposition to community alternatives, reporting that 58.2% of the respondents said they would never, under any circumstances, approve a transfer of their family member into the community.[86]

Larson and Lakin found similar results. In a review of 27 studies of parental attitudes on deinstitutionalization, the authors found that 91.1% of parents surveyed during institutional placement were satisfied with their relative's placement. Of parents surveyed during institutional placement, 74.2% had negative reactions to deinstitutionalization.[87]

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[83] *Ibid*, p. 244.

[84] Braddock, D. & Heller, T. (1985). *The Closure of Mental Retardation Institutions II: Implications*. **Mental Retardation**, 23(5), pp. 222-229.

[85] Conroy, J. (September 1999). *Seven Years Later: A Satisfaction Survey of the Families of the Former Residents of Hissom Memorial Center.* Report Number 9 in the Oklahoma Outcomes Series. Submitted to: Oklahoma Department of Human Services, Developmental Disabilities Services Division. Rosemont, PA: Center for Outcome Analysis.

[86] Spreat, S. et al. (1987). *Attitudes Toward Deinstitutionalization: National Survey of Families of Institutionalized Persons with Mental Retardation*. **Mental Retardation**, 25(5), pp. 267-274.

[87] Larson, S. & Lakin, K.C. (1991). *Parent Attitudes About Residential Placement Before and After Deinstitutionalization: A Research Synthesis*. **Journal of the Association of Persons with Severe Handicaps**, 16, pp. 25-38.

Studies also show that family attitudes towards relocation of a family member change over time. Larson and Lakin noted such changes in parental attitudes following deinstitutionalization. Studies that surveyed parents before and after their child was moved into the community, showed that before the move an average of 15.1% of the parents had positive feelings about their child moving into the community. After the move, 61.8% of the parents had positive opinions of the move.[88]

Other authors who reviewed multiple studies found this to be a common trend. Lemay noted that "one common finding is that family members are often initially against deinstitutionalization, but they eventually become reconciled and may even become very supportive of community living."[89] Kozma et al. also found this to be the case and further found that family satisfaction with the change "remained stable over a period of 10 years."[90]

Grimes and Vitello reported similar results in their study of 32 families who had a relative with DD moved from an institution to the community. The authors' results showed families expressed a significant increase in acceptance of the community placement after the move. However, families indicated that they were less satisfied with the services provided in the community.[91] Likewise, Conroy, in his longitudinal studies of deinstitutionalization in Pennsylvania, Connecticut, and Oklahoma, consistently found significant, positive change in family attitudes following community placement.[92]

Conroy also found significant change in parent attitudes following deinstitutionalization in California. Before the move, of 185 families, 42 were strongly against the move, 31 were against the move, 29 were in between, 35 were for the move, and 37 were strongly for the move. However, after four years, four families remained

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[88] *Ibid*.

[89] Lemay, R.A. (2009). *Deinstitutionalization of People with Developmental Disabilities: A Review of the Literature.* **Canadian Journal of Community Mental Health**, 28(1), p. 183.

[90] Kozma, A., Mansel, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review*. **American Journal of Intellectual and Developmental Disabilities**, 114(3), p. 209.

[91] Grimes, S.K. & Vitello, S.J. (1990). *Follow-up Study of Family Attitudes Toward Deinstitutionalization: Three to Seven Years Later*. **Mental Retardation**, 28(4), pp. 219-225.

[92] Conroy, J. (September 1999). *Seven Years Later: A Satisfaction Survey of the Families of the Former Residents of Hissom Memorial Center*. Report Number 9 in the Oklahoma Outcomes Series. Submitted to: Oklahoma Department of Human Services, Developmental Disabilities Services Division. Rosemont, PA: Center for Outcome Analysis.

strongly against the move, five against the move, 20 in between, 54 for the move, and 91 strongly for the move.[93]

The results of the studies, however, should be viewed with some caution. Kozma et al. warned that reliance on these studies should be limited, because researchers use methods "that are likely to distort opinion in favor of current arrangements."[94]

Family Contact

According to some authors, maintaining family involvement and contact is central to the well-being of an individual moved from an institution to the community.[95] Authors have looked at the impact deinstitutionalization has on family contact. However, the results have been mixed. Latib et al. did not find a major difference in the number of family visits after an individual moved from an institution to the community. Before deinstitutionalization, 44% of families reported visiting their family member once a month, 53% reported a monthly visit after the move into the community. The authors also found that 13% reported that their family member came home monthly before deinstitutionalization. After the move, this figure increased modestly to 16%.[96]

In comparison, Grimes and Vitello reported a decrease in family contact following a move into the community, citing problems with distance, work schedules, and arranging visits.[97]

Spreat et al. reported different results. The authors found that deinstitutionalized individuals had more family contact after leaving an institution for the community.[98]

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[93] Conroy, J., Seiders, J., & Yuskauskas, A. (April 1998). *Patterns of Community Placement IV: The Fourth Annual Report on the Outcomes of Implementing the Coffelt Settlement Agreement*. Report Number 17 of the five-year Coffelt Quality Tracking Project. Submitted to: California Department of Developmental Services. Sacramento, CA: Center for Outcome Analysis.

[94] Kozma, A., Mansel, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review*. **American Journal of Intellectual and Developmental Disabilities**, 114(3), pp. 209-210.

[95] Blacher, J. & Baker, B.L. (1992). *Toward Meaningful Family Involvement in Out-of-Home Placement Settings*. **Mental Retardation**, 30(1), pp. 35-43.

[96] Latib, A., Conroy, J., & Hess, C.M. (1984). *Family attitudes toward deinstitutionalization*. **International Review of Research in Mental Retardation**, 12, pp. 67-93, as cited in *Ibid*.

[97] Grimes, S.K. & Vitello, S.J. (1990). *Follow-up Study of Family Attitudes Toward Deinstitutionalization: Three to Seven Years Later*. **Mental Retardation**, 28(4), pp. 219-225.

[98] Spreat, S., Conroy, J.W., & Rice, D.M. (1998). *Improve Quality in Nursing Homes or Institute Community Placement? Implementation of OBRA for Individuals with Mental Retardation.* **Research in Developmental Disabilities**, 19(6), pp. 507-518.

Similarly, Conroy reported an increase in family contact, maintained for at least four years, in individuals moving from institutions to community settings in Oklahoma.[99] Beadle-Brown et al. and Stancliffe et al. also found that family contact increases after an individual moves to a community setting, and it decreases over time for those individuals who remain in institutions.[100]

Kozma et al. found that "[r]esettlement in the community was shown to be an opportunity to re-establish family contact," and large institutions were associated with less family contact. Based on the evidence, however, the authors concluded that family contact was not related to an individual's living arrangement; rather, distance, age, and ability were stronger indicators of form and frequency of family contact.[101]

[99] Spreat, S. & Conroy, J. (September 1999). *The Impact of Deinstitutionalization on Family Contacts*. Report Number 10 in the Oklahoma Outcomes Series. Submitted to: Oklahoma Department of Human Services, Developmental Disabilities Services Division. Rosemont, PA: Center for Outcome Analysis.

[100] Beadle-Brown, J., Mansell, J., & Kozma, A. (2007). *Deinstitutionalization in Intellectual Disabilities.* **Current Opinion in Psychiatry**, 20, pp. 437-442. Stancliffe, R.J., Lakin, K.C., & Taylor, S.J. (2006). *Longitudinal Frequency and Stability of Family Contact in Institutional and Community Living*. **Mental Retardation**, 44(6), pp. 418-429.

[101] Kozma, A., Mansell, J., & Beadle-Brown, J. (2009). *Outcomes in Different Residential Settings for People with Intellectual Disability: A Systematic Review.* **American Journal of Intellectual and Developmental Disabilities**, 114(3), pp. 193-222.

APPENDIX 1-1

5123:2-17-02 Addressing major unusual incidents and unusual incidents to ensure health, welfare, and continuous quality improvement.

(A) Purpose

This rule establishes the requirements for addressing major unusual incidents and unusual incidents and implements a continuous quality improvement process in order to prevent or reduce the risk of harm to individuals.

(B) Scope

This rule applies to county boards, developmental centers, and providers.

(C) Definitions

(1) "Administrative investigation" means the gathering and analysis of information related to a major unusual incident so that appropriate action can be taken to address any harm or risk of harm and prevent recurrence. There are three administrative investigation procedures (category A, category B, and category C) that correspond to the three categories of major unusual incidents.

(2) "Agency provider" means a provider, certified or licensed by the department or a provider approved by the Ohio department of medicaid to provide services under the transitions developmental disabilities waiver, that employs staff to deliver services to individuals and who may subcontract the delivery of services. "Agency provider" includes a county board while providing specialized services.

(3) "At-risk individual" means an individual whose health or welfare is adversely affected or whose health or welfare may reasonably be considered to be in danger of being adversely affected.

(4) "County board" means a county board of developmental disabilities as established under Chapter 5126. of the Revised Code or a regional council of governments as established under Chapter 167. of the Revised Code when it includes at least one county board.

(5) "Department" means the Ohio department of developmental disabilities.

(6) "Developmental center" means an intermediate care facility under the managing responsibility of the department.

(7) "Developmental disabilities employee" means any of the following:

(a) An employee of the department;

(b) An employee of a county board;

(c) An employee of an agency provider in a position that includes providing specialized services to an individual; or

(d) An independent provider.

(8) "Incident report" means documentation that contains details about a major unusual incident or an unusual incident and shall include, but is not limited to:

(a) Individual's name;

(b) Individual's address;

(c) Date of incident;

(d) Location of incident;

(e) Description of incident;

(f) Type and location of injuries;

(g) Immediate actions taken to ensure health and welfare of individual involved and any at-risk individuals;

(h) Name of primary person involved and his or her relationship to the individual;

(i) Names of witnesses;

(j) Statements completed by persons who witnessed or have personal knowledge of the incident;

(k) Notifications with name, title, and time and date of notice;

(l) Further medical follow-up; and

(m) Name of signature of person completing the incident report.

(9) "Incident tracking system" means the department's web-based system for reporting major unusual incidents.

(10) "Independent provider" means a self-employed person who provides services for which he or she must be certified under rule 5123:2-2-01 of the Administrative Code or a self-employed person approved by the Ohio department of medicaid to provide services under the transitions developmental disabilities waiver and does not employ, either directly or through contract, anyone else to provide the services.

(11) "Individual" means a person with a developmental disability.

(12) "Individual served" means an individual who receives specialized services.

(13) "Intermediate care facility" means an intermediate care facility for individuals with intellectual disabilities as defined in rule 5123:2-7-01 of the Administrative Code.

(14) "Investigative agent" means an employee of a county board or a person under contract with a county board who is certified by the department to conduct administrative investigations of major unusual incidents.

(15) "Major unusual incident" means the alleged, suspected, or actual occurrence of an incident when there is reason to believe the health or welfare of an individual may be adversely affected or an individual may be placed at a likely risk of harm, if such individual is receiving services through the developmental disabilities service delivery system or will be receiving such services as a result of the incident. There are three categories of major unusual incidents that correspond to three administrative investigation procedures delineated in appendix A, appendix B, and appendix C to this rule:

(a) Category A

(i) Accidental or suspicious death. "Accidental or suspicious death" means the death of an individual resulting from an accident or suspicious circumstances.

(ii) Exploitation. "Exploitation" means the unlawful or improper act of using an individual or an individual's resources for monetary or personal benefit, profit, or gain.

(iii) Failure to report. "Failure to report" means that a person, who is required to report pursuant to section 5123.61 of the Revised Code, has reason to believe that an individual has suffered or faces a substantial risk of suffering any wound, injury, disability, or condition of such a nature as to reasonably indicate abuse, misappropriation, or exploitation that results in a risk to health and welfare or neglect of that individual, and such person does not immediately report such information to a law enforcement agency, a county board, or, in the case of an individual living in a developmental center, either to law enforcement or the department. Pursuant to division (C)(1) of section 5123.61 of the Revised Code, such report shall be made to the department and the county board when the incident involves an act or omission of an employee of a county board.

(iv) Misappropriation. "Misappropriation" means depriving, defrauding, or otherwise obtaining the real or personal property of an individual by any means prohibited by the Revised Code, including Chapters 2911. and 2913. of the Revised Code.

(v) Neglect. "Neglect" means when there is a duty to do so, failing to provide an individual with any treatment, care, goods, supervision, or services necessary to maintain the health or welfare of the individual.

(vi) Peer-to-peer act. "Peer-to-peer act" means one of the following incidents involving two individuals served:

(a) Exploitation which means the unlawful or improper act of using an individual or an individual's resources for monetary or personal benefit, profit, or gain.

(b) Theft which means intentionally depriving another individual of real or personal property valued at twenty dollars or more or property of significant personal value to the individual.

(c) Physical act that occurs when an individual is targeting, or firmly fixed on another individual such that the act is not accidental or random and the act results in an injury that is treated by a physician, physician assistant, or nurse practitioner. Allegations of one individual choking another or any head or neck injuries such as a bloody nose, a bloody lip, a black eye, or other injury to the eye, shall be considered major unusual incidents. Minor injuries such as scratches or reddened areas not involving the head or neck shall be considered unusual incidents and shall require immediate action, a review to uncover possible cause/contributing factors, and prevention measures.

(d) Sexual act which means sexual conduct and/or contact for the purposes of sexual gratification without the consent of the other individual.

(e) Verbal act which means the use of words, gestures, or other communicative means to purposefully threaten, coerce, or intimidate the other individual when there is the opportunity and ability to carry out the threat.

(vii) Physical abuse. "Physical abuse" means the use of physical force that can reasonably be expected to result in physical harm or serious physical harm as those terms are defined in section 2901.01 of the Revised Code. Such force may include, but is not limited to, hitting, slapping, pushing, or throwing objects at an individual.

(viii) Prohibited sexual relations. "Prohibited sexual relations" means a developmental disabilities employee engaging in consensual sexual conduct or having consensual sexual contact with an individual who is not the employee's spouse, and for whom the developmental disabilities employee was employed or under contract to provide care or supervise the provision of care at the time of the incident.

(ix) Rights code violation. "Rights code violation" means any violation of the rights enumerated in section 5123.62 of the Revised Code that creates a likely risk of harm to the health or welfare of an individual.

(x) Sexual abuse. "Sexual abuse" means unlawful sexual conduct or sexual contact as those terms are defined in section 2907.01 of the Revised Code and the commission of any act prohibited by Chapter 2907. of the Revised Code (e.g., public indecency, importuning, and voyeurism).

(xi) Verbal abuse. "Verbal abuse" means the use of words, gestures, or other communicative means to purposefully threaten, coerce, intimidate, harass, or humiliate an individual.

(b) Category B

(i) Attempted suicide. "Attempted suicide" means a physical attempt by an individual that results in emergency room treatment, in-patient observation, or hospital admission.

(ii) Death other than accidental or suspicious death. "Death other than accidental or suspicious death" means the death of an individual by natural cause without suspicious circumstances.

(iii) Medical emergency. "Medical emergency" means an incident where emergency medical intervention is required to save an individual's life (e.g., choking relief techniques such as back blows or cardiopulmonary resuscitation, epinephrine auto injector usage, or intravenous for dehydration).

(iv) Missing individual. "Missing individual" means an incident that is not considered neglect and an individual's whereabouts, after immediate measures taken, are unknown and the individual is believed to be at or pose an imminent risk of harm to self or others. An incident when an individual's whereabouts are unknown for longer than the period of time specified in the individual service plan that does not result in imminent risk of harm to self or others shall be investigated as an unusual incident.

(v) Significant injury. "Significant injury" means an injury of known or unknown cause that is not considered abuse or neglect and that results in concussion, broken bone, dislocation, second or third degree burns or that requires immobilization, casting, or five or more sutures. Significant injuries shall be designated in the incident tracking system as either known or unknown cause.

(c) Category C

(i) Law enforcement. "Law enforcement" means any incident that results in the individual served being arrested, charged, or incarcerated.

(ii) Unapproved behavior support. "Unapproved behavior support" means the use of an aversive strategy or intervention prohibited by paragraph (J) of rule 5123:2-1-02 of the Administrative Code or an aversive strategy implemented without approval by the human rights committee or behavior support committee or without informed consent, that results in a likely risk to the individual's health and welfare. An aversive strategy or intervention prohibited by paragraph (J) of rule 5123:2-1-02 of the Administrative Code that does not pose a likely risk to health and welfare shall be investigated as an unusual incident.

(iii) Unscheduled hospitalization. "Unscheduled hospitalization" means any hospital admission that is not scheduled unless the hospital admission is due to a pre-existing condition that is specified in the individual service plan indicating the specific symptoms and criteria that require hospitalization.

(16) "Primary person involved" means the person alleged to have committed or to have been responsible for the accidental or suspicious death, exploitation, failure to report, misappropriation, neglect, physical abuse, prohibited sexual relations, rights code violation, sexual abuse, or verbal abuse.

(17) "Provider" means an agency provider or independent provider that provides specialized services.

(18) "Qualified intellectual disability professional" has the same meaning as in 42 C.F.R. 483.430 (October 1, 2012).

(19) "Specialized services" means any program or service designed and operated to serve primarily individuals, including a program or service provided by an entity licensed or certified by the department.

(20) "Unusual incident" means an event or occurrence involving an individual that is not consistent with routine operations, policies and procedures, or the individual's care or individual service plan, but is not a major unusual incident. Unusual incident includes, but is not limited to, dental injuries; falls; an injury that is not a significant injury; medication errors without a likely risk to heath and welfare; overnight relocation of an individual due to a fire, natural disaster, or mechanical failure; an incident involving two individuals served that is not a peer-to-peer act major unusual incident; and rights code violations or unapproved behavior supports without a likely risk to health and welfare.

(21) "Working day" means Monday, Tuesday, Wednesday, Thursday, or Friday except when that day is a holiday as defined in section 1.14 of the Revised Code.

(D) Reporting requirements for major unusual incidents

(1) Reports regarding all major unusual incidents involving an individual who resides in an intermediate care facility or who receives round-the-clock waiver services shall be filed and the requirements of this rule followed regardless of where the incident occurred.

(2) Reports regarding the following major unusual incidents shall be filed and the requirements of this rule followed regardless of where the incident occurred:

(a) Accidental or suspicious death;

(b) Attempted suicide;

(c) Death other than accidental or suspicious death;

(d) Exploitation;

(e) Failure to report;

(f) Law enforcement;

(g) Misappropriation;

(h) Missing individual;

(i) Neglect;

(j) Peer-to-peer act;

(k) Physical abuse;

(l) Prohibited sexual relations;

(m) Sexual abuse; and

(n) Verbal abuse.

(3) Reports regarding the following major unusual incidents shall be filed and the requirements of this rule followed only when the incident occurs in a program operated by a county board or when the individual is being served by a licensed or certified provider:

(a) Medical emergency;

(b) Rights code violation;

(c) Significant injury;

(d) Unapproved behavior support; and

(e) Unscheduled hospitalization.

(4) Immediately upon identification or notification of a major unusual incident, the provider shall take all reasonable measures to ensure the health and welfare of at-risk individuals. The provider and county board shall discuss any disagreements regarding reasonable measures in order to resolve them. If the provider and county board are unable to agree on reasonable measures to ensure the health and welfare of at-risk individuals, the department shall make the determination. Such measures shall include:

(a) Immediate and ongoing medical attention, as appropriate;

(b) Removal of an employee from direct contact with any at-risk individual when the employee is alleged to have been involved in abuse or neglect until such time as the provider has reasonably determined that such removal is no longer necessary; and

(c) Other necessary measures to protect the health and welfare of at-risk individuals.

(5) Immediately upon receipt of a report or notification of an allegation, the county board shall:

(a) Ensure that all reasonable measures necessary to protect the health and welfare of at-risk individuals have been taken;

(b) Determine if additional measures are needed; and

(c) Notify the department if the circumstances in paragraph (I)(1) of this rule that require a department-directed administrative investigation are present. Such notification shall take place on the first working day the county board becomes aware of the incident.

(6) The provider shall immediately, but no later than four hours after discovery of the incident, notify the county board through means identified by the county board of the following incidents or allegations:

(a) Accidental or suspicious death;

(b) Exploitation;

(c) Misappropriation;

(d) Neglect;

(e) Peer-to-peer act;

(f) Physical abuse;

(g) Sexual abuse;

(h) Verbal abuse; and

(i) When the provider has received an inquiry from the media regarding a major unusual incident.

(7) For all major unusual incidents, all providers shall submit a written incident report to the county board contact or designee no later than three p.m. the next working day following initial knowledge of a potential or determined major unusual incident. The report shall be submitted in a format prescribed by the department.

(8) The county board shall enter preliminary information regarding the incident in the incident tracking system and in the manner prescribed by the department by three p.m. on the working day following notification by the provider or of becoming aware of the major unusual incident.

(9) When a provider has placed an employee on leave or otherwise taken protective action pending the outcome of the administrative investigation, the county board or department, as applicable, shall keep the provider apprised of the status of the administrative investigation so that the provider can resume normal operations as soon as possible consistent with the health and welfare of at-risk individuals. The

provider shall notify the county board or department, as applicable, of any changes regarding the protective action.

(10) If the provider is a developmental center, all reports required by this rule shall be made directly to the department.

(11) The county board shall have a system that is available twenty-four hours a day, seven days a week, to receive and respond to all reports required by this rule. The county board shall communicate this system in writing to all providers in the county and to the department.

(E) Reporting of alleged criminal acts

(1) Nothing in this rule relieves mandatory reporters of the responsibility to immediately report to the intermediate care facility administrator or administrator designee, allegations of mistreatment, neglect, or abuse and injuries of unknown source when the source of the injury was not witnessed by any person and the source of the injury could not be explained by the individuals and the injury raises suspicions of possible abuse or neglect because of the extent of the injury or the location of the injury or the number of injuries observed at one particular point in time or the incidences of injuries over time pursuant to 42 C.F.R. 483.420 (October 1, 2012).

(2) The provider shall immediately report to the law enforcement entity having jurisdiction of the location where the incident occurred, any allegation of exploitation, failure to report, misappropriation, neglect, peer-to-peer act, physical abuse, sexual abuse, or verbal abuse which may constitute a criminal act. The provider shall document the time, date, and name of person notified of the alleged criminal act. The county board shall ensure that the notification has been made.

(3) The department shall immediately report to the Ohio state highway patrol, any allegation of exploitation, failure to report, misappropriation, neglect, peer-to-peer act, physical abuse, sexual abuse, or verbal abuse occurring at a developmental center which may constitute a criminal act. The department shall document the time, date, and name of person notified of the alleged criminal act.

(F) Abused or neglected children

All allegations of abuse or neglect as defined in sections 2151.03 and 2151.031 of the Revised Code of an individual under the age of twenty-one years shall be immediately reported to the local public children's services agency. The notification may be made by the provider or the county board. The county board shall ensure that the notification has been made.

(G) Notification requirements for major unusual incidents

(1) The provider shall make the following notifications, as applicable, when the major unusual incident or discovery of the major unusual incident occurs when such provider has responsibility for the individual. The notification shall be made on the

same day the major unusual incident or discovery of the major unusual incident occurs and include immediate actions taken.

(a) Guardian or other person whom the individual has identified.

(b) Service and support administrator serving the individual.

(c) Licensed or certified residential provider.

(d) Staff or family living at the individual's residence who have responsibility for the individual's care.

(e) Support broker for an individual enrolled in the self-empowered life funding waiver.

(2) All notifications or efforts to notify shall be documented. The county board shall ensure that all required notifications have been made.

(3) Notification shall not be made if the person to be notified is the primary person involved, the spouse of the primary person involved, or the significant other of the primary person involved.

(4) Notification shall be made to the individuals, individuals' guardians, and other persons whom the individuals have identified in a peer-to-peer act unless such notification could jeopardize the health and welfare of an individual involved.

(5) Notification to a person is not required when the report comes from such person or in the case of a death when the family is already aware of the death.

(6) In any case where law enforcement has been notified of an alleged crime, the department may provide notification of the incident to any other provider, developmental center, or county board for whom the primary person involved works, for the purpose of ensuring the health and welfare of any at-risk individual. The notified provider or county board shall take such steps necessary to address the health and welfare needs of any at-risk individual and may consult the department in this regard. The department shall inform any notified entity as to whether the incident is substantiated. Providers, developmental centers, or county boards employing a primary person involved shall notify the department when they are aware that the primary person involved works for another provider.

(H) General administrative investigation requirements

(1) Each county board shall employ at least one investigative agent or contract with a person or governmental entity for the services of an investigative agent. An investigative agent shall be certified by the department in accordance with rule 5123:2-5-07 of the Administrative Code. Developmental center investigators are considered certified investigative agents for the purpose of this rule.

(2) All major unusual incidents require an administrative investigation meeting the applicable administrative investigation procedure in appendix A, appendix B, or

appendix C to this rule unless it is not possible or relevant to the administrative investigation to meet a requirement under this rule, in which case the reason shall be documented. Administrative investigations shall be conducted and reviewed by investigative agents.

(a) The department or county board may elect to follow the administrative investigation procedure for category A major unusual incidents for any major unusual incident.

(b) Based on the facts discovered during administrative investigation of the major unusual incident, the category may change. If a major unusual incident changes category, the reason for the change shall be documented and the new applicable category administrative investigation procedure shall be followed to investigate the major unusual incident.

(c) Major unusual incidents that involve an active criminal investigation may be closed as soon as the county board ensures that the major unusual incident is properly coded, the history of the primary person involved has been reviewed, cause and contributing factors are determined, a finding is made, and prevention measures implemented. Information needed for closure of the major unusual incident may be obtained from the criminal investigation.

(3) County board staff may assist the investigative agent by gathering documents, entering information into the incident tracking system, fulfilling category C administrative investigation requirements, or performing other administrative or clerical duties that are not specific to the investigative agent role.

(4) Except when law enforcement or the public children's services agency is conducting the investigation, the investigative agent shall conduct all interviews for major unusual incidents unless the investigative agent determines the need for assistance with interviewing an individual. For a major unusual incident occurring at an intermediate care facility, the investigative agent may utilize interviews conducted by the intermediate care facility or conduct his or her own interviews. If the investigative agent determines the information is reliable, the investigative agent may utilize other information received from law enforcement, the public children's services agency, or providers in order to meet the requirements of this rule.

(5) Except when law enforcement or the public children's services agency has been notified and is considering conducting an investigation, the county board shall commence an administrative investigation. If law enforcement or the public children's services agency notifies the county board that it has declined to investigate, the county board shall commence the administrative investigation within a reasonable amount of time based on the initial information received or obtained and consistent with the health and welfare of all at-risk individuals, but no later than twenty-four hours for a major unusual incident in category A or no later than three working days for a major unusual incident in category B or category C.

(6) An intermediate care facility shall conduct an investigation that complies with applicable federal regulations, including 42 C.F.R. 483.420 (October 1, 2012), for any unusual incident or major unusual incident involving a resident of the intermediate care facility, regardless of where the unusual incident or major unusual incident occurs. The intermediate care facility shall provide a copy of its full report of an administrative investigation of a major unusual incident to the county board. The investigative agent may utilize information from the intermediate care facility's administrative investigation to meet the requirements of this rule or conduct a separate administrative investigation. The county board shall provide a copy of its full report of the administrative investigation to the intermediate care facility. The department shall resolve any conflicts that arise.

(7) When an agency provider, excluding an intermediate care facility, conducts an internal review of an incident for which a major unusual incident has been filed, the agency provider shall submit the results of its internal review of the incident, including statements and documents, to the county board within fourteen calendar days of the agency provider becoming aware of the incident.

(8) All developmental disabilities employees shall cooperate with administrative investigations conducted by entities authorized to conduct investigations. Providers and county boards shall respond to requests for information within the time frame requested. The time frames identified shall be reasonable.

(9) The investigative agent shall complete a report of the administrative investigation and submit it for closure in the incident tracking system within thirty working days unless the county board requests and the department grants an extension for good cause. If an extension is granted, the department may require submission of interim reports and may identify alternative actions to assist with the timely conclusion of the report.

(10) The report shall follow the format prescribed by the department. The investigative agent shall include the initial allegation, a list of persons interviewed and documents reviewed, a summary of each interview and document reviewed, and a findings and conclusions section which shall include the cause and contributing factors to the incident and the facts that support the findings and conclusions.

(I) Department-directed administrative investigations of major unusual incidents

(1) The department shall conduct the administrative investigation when the major unusual incident includes an allegation against:

(a) The superintendent of a county board or developmental center;

(b) The executive director or equivalent of a regional council of governments;

(c) A management employee who reports directly to the superintendent of the county board, the superintendent of a developmental center, or executive director or equivalent of a regional council of governments;

(d) An investigative agent;

(e) A service and support administrator;

(f) A major unusual incident contact or designee employed by a county board;

(g) A current member of a county board;

(h) A person having any known relationship with any of the persons specified in paragraphs (I)(1)(a) to (I)(1)(g) of this rule when such relationship may present a conflict of interest or the appearance of a conflict of interest; or

(i) An employee of a county board when it is alleged that the employee is responsible for an individual's death, has committed sexual abuse, engaged in prohibited sexual activity, or committed physical abuse or neglect resulting in emergency room treatment or hospitalization.

(2) A department-directed administrative investigation or administrative investigation review may be conducted following the receipt of a request from a county board, developmental center, provider, individual, or guardian if the department determines that there is a reasonable basis for the request.

(3) The department may conduct a review or administrative investigation of any major unusual incident or may request that a review or administrative investigation be conducted by another county board, a regional council of governments, or any other governmental entity authorized to conduct an investigation.

(J) Written summaries of major unusual incidents

(1) No later than five working days following the county board's, developmental center's, or department's recommendation via the incident tracking system that the report be closed, the county board, developmental center, or department shall provide a written summary of the administrative investigation of each category A or category B major unusual incident, including the allegations, the facts and findings, including as applicable, whether the case was substantiated or unsubstantiated, and preventive measures implemented in response to the major unusual incident to the following unless the information in the written summary has already been communicated:

(a) The individual, individual's guardian, or other person whom the individual has identified, as applicable; in the case of a peer-to-peer act, both individuals, individuals' guardians, or other persons whom the individuals have identified, as applicable, shall receive the written summary;

(b) The licensed or certified provider and provider at the time of the major unusual incident; and

(c) The individual's service and support administrator and support broker, as applicable.

(2) In the case of an individual's death, the written summary shall be provided to the individual's family only upon request by the individual's family.

(3) The written summary shall not be provided to the primary person involved, the spouse of the primary person involved, or the significant other of the primary person involved. No later than five working days following the closure of a case, the county board shall make a reasonable attempt to notify the primary person involved as to whether the major unusual incident has been substantiated, unsubstantiated/insufficient evidence, or unsubstantiated/unfounded.

(4) If a service and support administrator is not assigned, a county board designee shall be responsible for ensuring the preventive measures are implemented based upon the written summary.

(5) An individual, individual's guardian, other person whom the individual has identified, or provider may dispute the findings by submitting a letter of dispute and supporting documentation to the county board superintendent, or to the director of the department if the department conducted the administrative investigation, within fifteen calendar days following receipt of the findings. An individual may receive assistance from any person selected by the individual to prepare a letter of dispute and provide supporting documentation.

(6) The county board superintendent or his or her designee or the director or his or her designee, as applicable, shall consider the letter of dispute, the supporting documentation, and any other relevant information and issue a determination within thirty calendar days of such submission and take action consistent with such determination, including confirming or modifying the findings or directing that more information be gathered and the findings be reconsidered.

(7) In cases where the letter of dispute has been filed with the county board, the disputant may dispute the final findings made by the county board by filing those findings and any documentation contesting such findings as are disputed with the director of the department within fifteen calendar days of the county board determination. The director shall issue a decision within thirty calendar days.

(K) Review, prevention, and closure of major unusual incidents

(1) County boards and agency providers shall implement a written procedure for the internal review of all major unusual incidents and shall be responsible for taking all reasonable steps necessary to prevent the recurrence of major unusual incidents.

(2) The individual's team, including the county board and provider, shall collaborate on the development of preventive measures to address the causes and contributing factors to the major unusual incident. The team members shall jointly determine what constitutes reasonable steps necessary to prevent the recurrence of major unusual incidents. If there is no service and support administrator, individual team, qualified intellectual disability professional, or agency provider involved with the individual, a county board designee shall ensure that preventive measures as are reasonably possible are fully implemented.

(3) The department may review reports submitted by a county board or developmental center. The department may obtain additional information necessary to consider the report, including copies of all administrative investigation reports that have been prepared. Such additional information shall be provided within the time period specified by the department.

(4) The department shall review and close reports regarding the following major unusual incidents:

(a) Accidental or suspicious death;

(b) Exploitation;

(c) Failure to report;

(d) Misappropriation;

(e) Missing individual;

(f) Neglect;

(g) Peer-to-peer act;

(h) Physical abuse;

(i) Prohibited sexual relations;

(j) Rights code violation;

(k) Sexual abuse;

(l) Significant injury when cause is unknown;

(m) Unapproved behavior support;

(n) Verbal abuse;

(o) Any major unusual incident that is the subject of a director's alert; and

(p) Any major unusual incident investigated by the department.

(5) The county board shall review and close reports regarding the following major unusual incidents:

(a) Attempted suicide;

(b) Death other than accidental or suspicious death;

(c) Law enforcement;

(d) Medical emergency;

(e) Significant injury when cause is known; and

(f) Unscheduled hospitalization.

(6) The department may review any case to ensure it has been properly closed and shall conduct sample reviews to ensure proper closure by the county board. The department may reopen any administrative investigation that does not meet the requirements of this rule. The county board shall provide any information deemed necessary by the department to close the case.

(7) The department and the county board shall consider the following criteria when determining whether to close a case:

(a) Whether sufficient reasonable measures have been taken to ensure the health and welfare of any at-risk individual;

(b) Whether a thorough administrative investigation has been conducted consistent with the standards set forth in this rule;

(c) Whether the team, including the county board and provider, collaborated on developing preventive measures to address the causes and contributing factors;

(d) Whether the county board has ensured that preventive measures have been implemented to prevent recurrence;

(e) Whether the incident is part of a pattern or trend as flagged through the incident tracking system requiring some additional action; and

(f) Whether all requirements set forth in statute or rule have been satisfied.

(L) Analysis of major unusual incident trends and patterns

(1) Providers shall produce a semi-annual and annual report regarding major unusual incident trends and patterns which shall be sent to the county board. The county board shall semi-annually review providers' reports. The semi-annual review shall be cumulative for January first through June thirtieth of each year and include an in-depth analysis. The annual review shall be cumulative for January first through December thirty-first of each year and include an in-depth analysis.

(2) All reviews and analyses shall be completed within thirty calendar days following the end of the review period. The semi-annual and annual reports shall contain the following elements:

(a) Date of review;

(b) Name of person completing review;

(c) Time period of review;

(d) Comparison of data for previous three years;

(e) Explanation of data;

(f) Data for review by major unusual incident category type;

(g) Specific individuals involved in established trends and patterns (i.e., five major unusual incidents of any kind within six months, ten major unusual incidents of any kind within a year, or other pattern identified by the individual's team);

(h) Specific trends by residence, region, or program;

(i) Previously identified trends and patterns; and

(j) Action plans and preventive measures to address noted trends and patterns.

(3) County boards shall conduct the analysis and implement follow-up actions for all programs operated by county boards such as workshops, schools, and transportation. The county board shall send its analysis and follow-up actions to the department by August thirty-first of each year for the semi-annual review and by February twenty-eighth of each year for the annual review. The department shall review the analysis to ensure that all issues have been reasonably addressed to prevent recurrence.

(4) Providers shall conduct the analysis, implement follow-up actions, and send the analysis and follow-up actions to the county board for all programs operated in the county by August thirty-first of each year for the semi-annual review and by February twenty-eighth of each year for the annual review. The county board shall review the analysis to ensure that all issues have been reasonably addressed to prevent recurrence. The county board shall keep the analyses and follow-up actions on file and make them available to the department upon request.

(5) The county board shall ensure that trends and patterns of major unusual incidents are included and addressed in the individual service plan of each individual affected.

6) Each county board or as applicable, each council of governments to which county boards belong, shall have a committee that reviews trends and patterns of major unusual incidents. The committee shall be made up of a reasonable representation of the county board(s), providers, individuals who receive services and their families, and other stakeholders deemed appropriate by the committee.

(a) The role of the committee shall be to review and share the county or council of governments aggregate data prepared by the county board or council of governments to identify trends, patterns, or areas for improving the quality of life for individuals served in the county or counties.

(b) The committee shall meet each September to review and analyze data for the first six months of the calendar year and each March to review and analyze data for the preceding calendar year. The county board or council of governments shall send the aggregate data prepared for the meeting to all participants at least ten calendar days in advance of the meeting.

(c) The county board or council of governments shall record and maintain minutes of each meeting, distribute the minutes to members of the committee, and make the minutes available to any person upon request.

(d) The county board shall ensure follow-up actions identified by the committee have been implemented.

(7) The department shall prepare a report on trends and patterns identified through the process of reviewing major unusual incidents. The department shall periodically, but at least semi-annually, review this report with a committee appointed by the director of the department which shall consist of at least six members who represent various stakeholder groups, including disability rights Ohio and the Ohio department of medicaid. The committee shall make recommendations to the department regarding whether appropriate actions to ensure the health and welfare of individuals served have been taken. The committee may request that the department obtain additional information as may be necessary to make recommendations.

(M) Requirements for unusual incidents

(1) Unusual incidents shall be reported and investigated by the provider.

(2) Each agency provider shall develop and implement a written unusual incident policy and procedure that:

(a) Identifies what is to be reported as an unusual incident which shall include unusual incidents as defined in this rule;

(b) Requires an employee who becomes aware of an unusual incident to report it to the person designated by the agency provider who can initiate proper action;

(c) Requires the report to be made no later than twenty-four hours after the occurrence of the unusual incident; and

(d) Requires the agency provider to investigate unusual incidents, identify the cause and contributing factors when applicable, and develop preventive measures to protect the health and welfare of any at-risk individuals.

(3) The agency provider shall ensure that all staff are trained and knowledgeable regarding the unusual incident policy and procedure.

(4) If the unusual incident occurs at a site operated by the county board or at a site operated by an entity with which the county board contracts, the county board or contract entity shall notify the licensed provider or staff, guardian, or other person whom the individual has identified, as applicable, at the individual's residence. The notification shall be made on the same day the unusual incident is discovered.

(5) Independent providers shall complete an incident report, notify the individual's guardian or other person whom the individual has identified, as applicable, and forward the incident report to the service and support administrator or county board designee on the same day the unusual incident is discovered.

(6) Each agency provider and independent provider shall review all unusual incidents as necessary, but no less than monthly, to ensure appropriate preventive measures have been implemented and trends and patterns identified and addressed as appropriate.

(7) The unusual incident reports, documentation of identified trends and patterns, and corrective action shall be made available to the county board and department upon request.

(8) Each agency provider and independent provider shall maintain a log of all unusual incidents. The log shall include, but is not limited to, the name of the individual, a brief description of the unusual incident, any injuries, time, date, location, and preventive measures.

(9) The agency provider and the county board shall ensure that trends and patterns of unusual incidents are included and addressed in the individual service plan of each individual affected.

(N) Oversight

(1) The county board shall review, on at least a quarterly basis, a representative sample of provider logs, including logs where the county board is a provider, to ensure that major unusual incidents have been reported, preventive measures have been implemented, and that trends and patterns have been identified and addressed in accordance with this rule. The sample shall be made available to the department for review upon request.

(2) When the county board is a provider, the department shall review, on a monthly basis, a representative sample of county board logs to ensure that major unusual incidents have been reported, preventive measures have been implemented, and that trends and patterns have been identified and addressed in accordance with this rule. The county board shall submit the specified logs to the department upon request.

(3) The department shall conduct reviews of county boards and providers as necessary to ensure the health and welfare of individuals and compliance with this rule. Failure to comply with this rule may be considered by the department in any regulatory capacity, including certification, licensure, and accreditation.

(O) Access to records

(1) Reports made under section 5123.61 of the Revised Code and this rule are not public records as defined in section 149.43 of the Revised Code. Records may be provided to parties authorized to receive them in accordance with sections 5123.613 and 5126.044 of the Revised Code, to any governmental entity authorized to investigate the circumstances of the alleged abuse, neglect, misappropriation, or exploitation and to any party to the extent that release of a record is necessary for the health or welfare of an individual.

(2) A county board or the department shall not review, copy, or include in any report required by this rule a provider's personnel records that are confidential under state

or federal statutes or rules, including medical and insurance records, workers' compensation records, employment eligibility verification (I-9) forms, and social security numbers. The provider shall redact any confidential information contained in a record before copies are provided to the county board or the department. A provider shall make all other records available upon request by a county board or the department.

(3) Any party entitled to receive a report required by this rule may waive receipt of the report. Any waiver of receipt of a report shall be made in writing.

(P) Training

(1) Agency providers and county boards shall ensure staff employed in direct services positions are trained on the requirements of this rule prior to direct contact with any individual. Thereafter, staff employed in direct services positions shall receive annual training on the requirements of this rule including a review of health and welfare alerts issued by the department since the previous year's training.

(2) Agency providers and county boards shall ensure staff employed in positions other than direct services positions are trained on the requirements of this rule no later than ninety days from date of hire. Thereafter, staff employed in positions other than direct services positions shall receive annual training on the requirements of this rule including a review of health and welfare alerts issued by the department since the previous year's training.

(3) Independent providers shall be trained on the requirements of this rule prior to application for initial certification in accordance with rule 5123:2-2-01 of the Administrative Code and shall receive annual training on the requirements of this rule including a review of health and welfare alerts issued by the department since the previous year's training.

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CERTIFIED ELECTRONICALLY

Certification

07/15/2013

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SECTION 2. THE AVAILABILITY OF ALTERNATE FACILITIES

Alternate facilities to accommodate the residents of Montgomery and Youngstown developmental centers include other state-operated developmental centers, private ICFs, including county-operated facilities, and community residential facilities.[102] The licensed capacity and number of vacancies in each type of facility is provided below.

Developmental Centers

Ohio's ten developmental centers have a licensed capacity of 1,018. Table 15 shows the licensed capacity at each developmental center, excluding Montgomery and Youngstown, and the number of vacancies at each center. The total licensed capacity of the eight developmental centers not identified for closure is 825 beds. Columbus has the highest licensed capacity with 114 beds. Cambridge has the lowest licensed capacity with 99.

As Table 15 shows, all eight developmental centers not identified for closure have open beds. The total of the open beds is 83. Gallipolis has the highest available capacity with 19 open beds. Mount Vernon and Tiffin have the lowest available capacity with five open beds each. There are no persons on waiting lists for any of Ohio's developmental centers.

Table 15. Licensed Capacity and Open Beds*

Developmental Center	Licensed Capacity	Open Beds
Cambridge	99	8
Columbus	114	14
Gallipolis	100	19
Mount Vernon	105	5
Northwest	102	10
Southwest	100	9
Tiffin	105	5
Warrensville	100	13
Total	**825**	**83**

*As of February 20, 2015

[102] Community residential facilities refer to licensed residential facilities that are funded through a Medicaid waiver.

Number and Capacity of Private ICFs and Community Residential Facilities

Table 16 shows the total number of private ICFs and community residential facilities and capacity by county. Ohio has 1,070 licensed private ICFs and community residential facilities in 77 counties with a total of 8,435 beds. Eleven counties have no private ICFs or community residential facilities. The numbers of facilities and beds range considerably from county to county. Cuyahoga, Hamilton, and Franklin, the three largest counties in the state, together account for 36.9% (395) of the total facilities and 28.8% (2,427) of the total beds.

Table 16. Total Number and Capacity of Private ICFs and Community Residential Facilities by County

County	Number of Facilities	Number of Beds	County	Number of Facilities	Number of Beds
Adams	0	0	Licking	10	50
Allen	12	88	Logan	6	30
Ashland	2	37	Lorain	29	287
Ashtabula	12	148	Lucas	49	444
Athens	2	44	Madison	2	21
Auglaize	2	41	Mahoning	25	172
Belmont	17	105	Marion	8	57
Brown	5	25	Medina	22	151
Butler	9	144	Meigs	2	4
Carroll	9	91	Mercer	1	8
Champaign	5	45	Miami	8	28
Clark	11	118	Monroe	0	0
Clermont	24	161	Montgomery	33	355
Clinton	0	0	Morgan	0	0
Columbiana	11	89	Morrow	7	40
Coshocton	9	104	Muskingham	6	33
Crawford	4	17	Noble	0	0
Cuyahoga	194	958	Ottawa	2	133
Darke	1	50	Paulding	0	0
Defiance	0	0	Perry	7	97
Delaware	0	0	Pickaway	0	0
Erie	6	19	Pike	7	65
Fairfield	11	57	Portage	9	179
Fayette	0	0	Preble	5	94
Franklin	96	855	Putnam	2	20
Fulton	3	16	Richland	12	114
Gallia	3	48	Ross	11	53
Geauga	1	26	Sandusky	11	55

Table 16. Total Number and Capacity of Private ICFs and Community Residential Facilities by County					
County	**Number of Facilities**	**Number of Beds**	**County**	**Number of Facilities**	**Number of Beds**
Green	7	33	Scioto	14	57
Guernsey	8	34	Seneca	8	70
Hamilton	105	614	Shelby	1	10
Hancock	2	28	Stark	39	362
Hardin	3	15	Summit	22	117
Harrison	1	10	Trumbull	4	157
Henry	2	64	Tuscarawas	11	60
Highland	6	50	Union	3	6
Hocking	3	22	Vinton	0	0
Holmes	1	12	Warren	14	200
Huron	2	8	Washington	3	24
Jackson	1	8	Wayne	10	51
Jefferson	9	68	Williams	2	16
Knox	18	108	Wood	15	95
Lake	23	305	Wyandot	7	27
Lawrence	2	20	Van Wert	1	8
	Total:	**1,070 Facilities**		**8,435 Beds**	

Reported Vacancies in Private ICFs

Private ICFs are not required to report to the state the number of openings available at those facilities; however, some facilities voluntarily make those numbers available through the Private ICF Vacancy Registry on ODODD's website.[103] Table 17 shows reported vacancies in private ICFs by county with the reported number of facilities and vacancies for each county. On March 24, 2015, there were 49 reported vacancies in 41 private ICFs across 24 counties.

[103] An updated reported vacancy list is available at https://fvr.prodapps.dodd.ohio.gov/FVR.aspx.

Table 17. Reported Vacancies in Private ICFs by County (As of March 24, 2015)					
County	**Number of Facilities Reporting**	**Total Number of Vacancies**	**County**	**Number of Facilities Reporting**	**Total Number of Vacancies**
Ashland	1	1	Knox	1	1
Ashtabula	2	2	Lake	2	2
Butler	2	3	Lorain	1	2
Clark	1	1	Mahoning	1	1
Coshocton	1	1	Marion	1	1
Cuyahoga	2	2	Medina	1	1
Darke	1	1	Montgomery	3	5
Fairfield	2	3	Richland	2	2
Franklin	2	2	Seneca	1	1
Gallia	1	1	Stark	3	5
Hamilton	4	4	Tuscarawas	2	2
Highland	2	2	Warren	2	3
			Total	**41**	**49**

Reported Vacancies in Community Residential Facilities

Table 18 shows the distribution of the 143 reported community residential facility vacancies by county. On March 24, 2015, a total of 105 community residential facilities across 33 counties had vacancies.

Table 18. Reported Vacancies in Community Residential Facilities by County (As of March 24, 2015)					
County	**Number of Facilities Reporting**	**Total Number of Vacancies**	**County**	**Number of Facilities Reporting**	**Total Number of Vacancies**
Brown	2	5	Lucas	4	5
Carroll	2	3	Mahoning	2	7
Clark	1	1	Montgomery	2	2
Clermont	4	6	Morrow	2	2
Crawford	2	2	Muskingum	3	3
Cuyahoga	1	2	Perry	2	4
Erie	1	1	Pike	2	2
Fairfield	3	4	Preble	1	1
Franklin	12	13	Ross	2	3
Hamilton	21	31	Sandusky	1	2
Hardin	1	1	Scioto	9	11
Highland	1	1	Seneca	1	1

Table 18. Reported Vacancies in Community Residential Facilities by County (As of March 24, 2015)					
County	**Number of Facilities Reporting**	**Total Number of Vacancies**	**County**	**Number of Facilities Reporting**	**Total Number of Vacancies**
Jefferson	5	7	Stark	4	6
Knox	1	1	Tuscarawas	1	1
Lake	5	5	Wayne	3	3
Licking	1	2	Wyandot	2	3
Lorain	1	2	**Total**	**105**	**143**

SECTION 3. THE COST EFFECTIVENESS OF MONTGOMERY AND YOUNGSTOWN DEVELOPMENTAL CENTERS

This section considers the cost effectiveness of Montgomery and Youngstown developmental centers relative to the cost effectiveness of other developmental centers and community settings. Because of the difficulties of comparing cost effectiveness, especially between developmental centers and community settings, and the short time period permitted for this study, LSC staff is taking two different approaches to estimating cost effectiveness. The method for determining the cost effectiveness of Montgomery and Youngstown relative to other developmental centers is a regression analysis. For comparing the cost effectiveness of community settings versus developmental centers, the method is a literature review of studies on costs of institutional and community care.

Cost Effectiveness of Montgomery and Youngstown Relative to Other Developmental Centers

For developmental centers, cost effectiveness is the ability to provide the necessary services at the lowest possible cost. ODODD provided LSC staff with data on the costs of operating each developmental center, together with counts of resident populations at each center. To estimate the cost effectiveness of providing services to developmental center residents, there are two essential components: services and costs. In this analysis, the costs involved in providing services are restricted to operating (variable) costs, or those costs that can be changed in a short time period. These costs are personnel, administration, operational (overhead), and maintenance. Capital (fixed) costs, or costs that do not change in a short period of time, are not included, because they do not directly affect the cost effectiveness of a developmental center's daily operations. The data are for CY 2014, the most recent year prior to the initial announcement of closures in February 2015.

Table 19 displays the results of LSC staff calculations of variable cost per resident at each of the developmental centers.

Table 19. Variable Cost Per Resident

Developmental Center	Cost
Gallipolis	$259,144
Warrensville	$229,129
Northwest	$209,348
Mount Vernon	$201,622
Youngstown	**$199,495**
Columbus	$198,619
Southwest	$186,111
Montgomery	**$181,400**
Tiffin	$180,438
Cambridge	$171,696

Variable costs per resident provide an indication of cost effectiveness, and according to this indicator Montgomery is the third most cost-effective center while Youngstown is the sixth most cost-effective. However, this indicator is likely too simplistic. Actual cost effectiveness is concerned with providing the best services for the least cost. For example, one center may be providing more services than the other developmental centers, thus increasing its per-resident variable costs. Or a center may have a number of residents that require fewer services or less medical attention, thus decreasing its per-resident operating costs compared to other developmental centers.

To account for the possible factors that could explain differences in costs, LSC staff used regression analysis. It should be noted that, with just ten developmental centers, the ability of a regression to detect differences between centers is somewhat limited. Regressions were run employing a number of potential explanatory variables, including: staff turnover rates, number of overtime hours per staff member, percentage of resident population that is ambulatory, percentage of population that is classified as either profoundly or severely disabled, average age of the building, licensed capacity of the center, and number of open beds at the facility. None of the explanatory variables tried showed consistently statistically significant results.

It is difficult to draw any conclusions regarding cost effectiveness from the regression results. While some facilities may be more cost effective than others, the differences were not large enough to be statistically significant. Regression results were unable to detect a justifiable basis for rank ordering the cost effectiveness of the ten facilities.

More detail on how LSC staff attempted to account for the cost differences among the developmental centers using regression analysis can be found in "**Appendix 3-1**."

Literature Review – Cost Effectiveness of Community Settings Versus Developmental Centers

Summary of Findings

A review of the cost effectiveness literature comparing community settings versus developmental centers shows that there are conflicting viewpoints among researchers. Because of these conflicting viewpoints, LSC staff is not able to draw any definitive conclusions about the general cost effectiveness of care at Montgomery and Youngstown compared to a community setting. Although the studies reviewed suggest that it is generally cost effective to move clients from an institution to the community, critical assessment of these studies shows that their methodologies are not without problems, thus making their conclusions suspect. Studies that include quality of life and quality of service measures suggest that community settings are preferable to institutional settings and add further credence to the idea that community settings are

more cost effective. However, these quality measures cannot be reliably valued, so consideration of them further hampers the development of a definitive cost effectiveness comparison.

Discussion of Findings

The cost effectiveness of care in developmental centers cannot be reliably compared to the cost effectiveness of care in a community setting. Walsh et al. discuss the difficulties of such a comparison. The foremost problem is the "intrinsic lack of comparability between institutions and community settings."[104] Other problems include determining the total cost to society of deinstitutionalization and the impact that staffing costs have on the reliability of published results. These difficulties can cause several methodological problems in studies that attempt to compare institution and community setting costs. As Walsh et al. note:

> These problems include (a) the lack of comparability between groups based on biased, nonrandom, or convenience samples; (b) the lack of adequate case-mix controls; (c) differences in data-collection and cost-aggregation methods across groups; (d) the exclusion of critical categories of costs, such as medical expenses, case management, start-up, and capital costs; and (e) extreme variability in costs, cost shifting, and statistical-modeling problems.[105]

LSC staff reviewed several studies that have attempted to compare the costs between institutional and community settings. The focus of this literature review is to note any trends found in the literature and provide the different viewpoints on community versus institutional costs.

Schalock and Fredericks compared the costs of one institution (Fairview) to five group homes in Oregon. The authors found that the community settings were slightly less expensive than the institution. Schalock and Fredericks note that three factors are mainly attributable to the differences in cost: "needs of the population served; differing compensation patterns for similar resources; and economies of scale or efficiency."[106] The authors also note that if salaries are equalized, the community settings become more expensive than the institutional setting.[107]

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[104] Walsh, K.K., Kastner, T.A., & Green, R.G. (2003). *Cost Comparisons of Community and Institutional Residential Settings: Historical Review of Selected Research.* **Mental Retardation**, 41(2), p. 117.

[105] *Ibid.*

[106] Schalock, M. & Fredericks, H.G. (1990). *Comparative Costs for Institutional Services and Services for Selected Populations in the Community*. **Behavioral Residential Treatment**, 5(4), p. 282.

[107] *Ibid.*

The finding that differences in staffing costs affect the results of cost comparison studies is prevalent in the literature. Walsh et al. note, "the apparent cost savings in community settings, to the extent that it is found, is often directly related to staffing costs."[108] Stancliffe et al. write "it should be noted that a primary factor associated with the difference [in community versus institutional costs] is the consistently and substantially lower wages paid to direct support staff employed by community services."[109] Despite the impact staffing costs have on cost studies, there have been many studies that suggest that a community setting is less expensive than an institution (see Walsh et al. or Stancliffe et al. for a list of references); however, these studies focused on the cost of providing services, not necessarily on the quality of the services provided. Knobbe et al. studied 11 individuals with severe disabilities that were moved from an institution into a community setting. The authors found the community-based programs to be slightly less expensive than a state institution and that the community-based programs improved the clients' quality of life. Knobbe et al. concluded that community placement led to an increased social network and greater access to employment and community activities for the individual.[110] Walsh et al. note that start-up costs and capital costs for the community placement were not included in the costs, suggesting that the initial costs of community placement are likely to be higher than placement in an institution.[111]

Hatton et al. compared the cost and quality of services for 40 adults with multiple disabilities in four service settings. The authors found the specialized group home to be the most cost-effective model; however, the authors note that quality and cost were diverse within each setting. Hatton et al. conclude that a community-based setting could lead to better community integration and quality of life, so long as there is skilled staff and a commitment to community living principles.[112]

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[108] Walsh, K.K., Kastner, T.A., & Green, R.G. (2003). *Cost Comparisons of Community and Institutional Residential Settings: Historical Review of Selected Research*. **Mental Retardation**, 41(2), p. 117.

[109] Stancliffe, R.J., Lakin, K.C., Shea, J.R., Prouty, R.W., & Coucouvanis, K. (2005). *The Economics of Deinstitutionalization*. *Chapter 13 in* **Costs and Outcomes of Community Services for People with Intellectual Disabilities**, edited by R. J. Stancliffe and K.C. Lakin (Baltimore, MD: Brookes Publishing).

[110] Knobbe, C.A. et al. (1995). *Benefit-Cost Analysis of Community Residential Versus Institutional Services for Adults With Severe Mental Retardation and Challenging Behaviors*. **American Journal on Mental Retardation**, 99(5), pp. 533-541.

[111] Walsh, K.K., Kastner, T.A., & Green, R.G. (2003). *Cost Comparisons of Community and Institutional Residential Settings: Historical Review of Selected Research*. **Mental Retardation**, 41(2), pp. 103-122.

[112] Hatton, C. et al. (1995). *The Quality and Costs of Residential Services for Adults With Multiple Disabilities: A Comparative Evaluation.* **Research in Developmental Disabilities**, 16(6), pp. 439-460.

Two literature reviews related to the financing, costs, and outcomes of community services for individuals with DD found not only that the cost of institutional living arrangements is consistently higher than the cost of community living, but institutions also consistently achieve poorer outcomes. According to Stancliffe et al., institutions cost 5% to 27% more than community settings, yet community settings have shown "better self-determination, integration, quality of life, challenging behavior, and adaptive behavior outcomes." This led the authors to conclude that community settings are more cost effective than institutional settings. However, they also cautioned that comparing costs is "complicated by differences in characteristics of service recipients and/or the array of services provided."[113] Lemay, in his more recent review, similarly found that community living arrangements are not only more cost effective than institutional settings, but are often also less expensive.[114] Several studies and state cost estimates have consistently found that although community-based services might be more expensive for a small number of people, closing an institution yields cost savings overall.[115] It is important to note, however, that in the short run, costs may increase as community-based services are being developed and developmental centers continue to operate.[116]

Walsh et al. discuss several other international papers that conclude community settings are more expensive than institutional settings. The authors note that these findings may differ from those in the United States because of differences between the methods of funding between countries. Walsh et al. also note that institutional costs could be higher in the United States because of the deinstitutionalization trend.[117]

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[113] Stancliffe, R.J. & Lakin, K.C. (2004). *Costs and Outcomes of Community Services for Persons with Intellectual and Developmental Disabilities.* **Policy Research Brief**, 14(1). Shoultz, B., Walker, P., Taylor, S., Larson, S. (2005). *Status of Institutional Closure Efforts in 2005*, Policy Research Brief 16(1), Research and Training Center on Community Living, Institute on Community Integration, University of Minnesota.

[114] Lemay, R.A. (2009). *Deinstitutionalization of People with Developmental Disabilities: A Review of the Literature.* **Canadian Journal of Community Mental Health**, 28(1), p. 185.

[115] Stancliffe, R.J., Lakin, K.C., Shea, J.R., Prouty, R.W., & Coucouvanis, K. (2005). *The Economics of Deinstitutionalization. Chapter 13 in* **Costs and Outcomes of Community Services for People with Intellectual Disabilities**, edited by R. J. Stancliffe and K.C. Lakin (Baltimore, MD: Brookes Publishing).

[116] Kaye, S. (2009). *Do noninstitutional long-term care services reduce Medicaid spending*? 28 **Health Affairs**, 262. North Carolina Institute of Medicine (2009). *Successful Transitions for People with Developmental Disabilities: A Report of the NCIOM Task Force on Transitions for People with Developmental Disabilities*, p. 78. Cooper, R. & Harkins, D. (2006). *Going Home—Keys to Systems Success in Supporting the Return of People to their Communities from State Facilities.* Madison, WI: A Simpler Way, Inc.

[117] Walsh, K.K., Kastner, T.A., & Green, R.G. (2003). *Cost Comparisons of Community and Institutional Residential Settings: Historical Review of Selected Research.* **Mental Retardation**, 41(2), pp. 103-122.

Stancliffe et al. agree, suggesting that as more residents are moved out of developmental centers, those with greater needs (and thus greater expenses) remain, and the fixed costs of operating the developmental center are divided by a smaller population. This leads to higher per-client costs and could influence institutional and community cost comparisons.[118]

The literature LSC staff reviewed indicates that, on average, the cost of providing services in the United States may be lower in a community setting than in an institution. Furthermore, the studies suggest that community settings allow the client to be more integrated into society and provide better outcomes. Stancliffe et al. note that "Available US studies of both costs and outcomes of deinstitutionalization reveal a consistent pattern across states and over time of better outcomes and lower costs in the community, consistent with US deinstitutionalization literature on outcomes, and with cost comparison research showing US institutional services to be more costly than community services."[119] However, Walsh et al.'s critical review of several cost papers resulted in a different conclusion: "Findings do not support the unqualified position that community settings are less expensive than are institutions and suggest that staffing issues play a major role in any cost differences that are identified."[120] Walsh et al. note that better research needs to be done, especially in terms of accounting for the heterogeneity of needs and services provided among the DD population.[121]

[118] Stancliffe, R.J. et al. (in press). *The Economics of Deinstitutionalization,* in Roger J. Stancliffe and K. Charlie Lakin (Eds.), **Costs and Outcomes of Services for Persons with Intellectual Disabilities**. Baltimore: Paul H. Brookes.

[119] *Ibid*, p. 7.

[120] Walsh, K.K., Kastner, T.A., & Green, R.G. (2003). *Cost Comparisons of Community and Institutional Residential Settings: Historical Review of Selected Research.* **Mental Retardation**, 41(2), p. 103.

[121] *Ibid.*

APPENDIX 3-1

Methodology and Data Collected

Variable cost data for CY 2014 were used in the cost effectiveness analysis because CY 2014 is the latest year prior to the announcement of possible closures in February of 2015. LSC staff collected monthly variable costs for each developmental center. The variable costs consist of payroll, maintenance, contracted services, supplies (including food and pharmaceuticals), and utilities. LSC staff collected occupancy rates and average monthly census data for each developmental center. Full-time equivalent (FTE) employee data were collected for each pay period in the following categories: administration, support, medical, professional, direct care, and other.

LSC staff also gathered other data that might influence the variable costs among the developmental centers. There are four main factors that may account for differing costs among the developmental centers and, thus, the cost effectiveness of providing services: maintenance and upkeep of the facilities, payroll, caseload mix, and quality of care. Therefore, LSC collected data on these four factors for each developmental center.

Building age data were collected from ODODD. LSC staff calculated the average age of the buildings at each developmental center as of CY 2014. Only buildings used for maintenance, residency, habilitation, office space, or services (such as food preparation) were included.

LSC staff collected the Medicaid certification citation data to use as a substitute for quality of services provided. Medicaid certification citations are an imperfect measure of quality because the citations do not distinguish between severe or minor problems. A developmental center with many minor problems will appear to have a lower quality of care than a developmental center with one or two severe problems. Further, this data does not delineate between average care and high quality care.

LSC staff also collected data for the residents at each developmental center on ambulatory ability and severity of mental disability. Only fiscal year averages were available, so LSC staff used the average of FY 2013 and FY 2014 for each developmental center. These data were collected to be used as a substitute to account for different caseload mixes at each developmental center. This substitute is not without limitations, however. For example, some residents may have behavioral problems that require more services and therefore higher costs, even though they have a less severe disability.

The following tables contain the data for the cost effectiveness analysis along with statistical information. This information is provided so that readers can analyze the data for themselves or repeat the regression performed for "**Section 3**."

APPENDIX 3-1: TABLE A

	Cambridge	Columbus	Gallipolis	Montgomery	Mount Vernon	Northwest	Southwest	Tiffin	Warrensville	Youngstown
Operating Costs per Client	$171,696	$198,619	$259,144	$181,400	$201,622	$209,348	$186,111	$180,438	$229,129	$199,495
Total FTE per Client	4.5128	5.5186	6.2217	4.3006	5.3458	4.9547	4.5425	4.8293	6.3176	5.3104
Direct Care FTE per Client	3.3157	4.1484	4.1627	3.1406	3.8200	3.6666	3.1255	3.4037	4.6774	3.4102
Administration FTE per Client	0.3663	0.3215	0.3672	0.3319	0.3579	0.2941	0.4050	0.2972	0.4203	0.4015
Professional FTE per Client	0.0236	0.0505	0.0872	0.0257	0.0182	0.0460	0.0190	0.0580	0.0189	0.4011
Medical FTE per Client	0.4710	0.4193	0.6725	0.4671	0.5870	0.5181	0.5245	0.4456	0.5760	0.4626
Support FTE per Client	0.3362	0.5789	0.9143	0.3354	0.5627	0.4298	0.4581	0.6127	0.6016	0.6350
Other FTE per Client	0.0000	0.0000	0.0177	0.0000	0.0000	0.0000	0.0105	0.0122	0.0234	0.0000
Staff Turnover Rates	0.21	0.12	0.40	0.22	0.18	0.17	0.20	0.07	0.11	0.15
Percent Ambulatory	69.61%	96.02%	73.95%	91.39%	56.37%	97.90%	89.87%	89.62%	89.97%	78.88%
Percent Nonambulatory	30.39%	3.98%	26.05%	8.61%	43.63%	2.10%	10.13%	10.38%	10.03%	21.12%
Percent Profound and Severe Disability	71.83%	31.01%	52.01%	62.37%	83.33%	46.03%	40.97%	62.67%	41.64%	76.55%
Average Building Age	46	39	48	31	51	39	33	77	40	35
Medicaid Citings	5	8	6	2	0	1	1	2	2	7
Percent Profound Disability	52.49%	15.01%	40.82%	34.02%	17.16%	29.84%	19.04%	31.82%	23.87%	18.87%
Percent Severe Disability	19.33%	16.01%	11.19%	28.35%	66.18%	16.19%	21.93%	30.85%	17.77%	57.68%
Percent Moderate Disability	28.17%	68.99%	47.99%	37.63%	16.67%	53.97%	59.03%	37.33%	58.36%	23.45%
Licensed Capacity	99.0000	114.0000	100.0000	98.0000	105.0000	102.0000	100.0000	105.0000	100.0000	95.0000
Open Beds	8.0000	14.0000	19.0000	7.0000	5.0000	10.0000	9.0000	5.0000	13.0000	10.0000
Overtime Hours per Staff	128.4457	264.2115	24.0899	184.7717	201.3200	254.0543	52.6771	79.8283	211.1075	60.0000

APPENDIX 3-1: TABLE B

	Mean	Standard Error	Median	Standard Deviation	Sample Variance	Kurtosis	Skewness	Range	Minimum	Maximum	Sum	Count
Operating Costs per Client	$201,700	$8,255	$199,057	$26,103	$681,379,815	$2	$1	$87,448	$171,696	$259,144	$2,017,001	10
Total FTE per Client	5.1854	0.2195	5.1326	0.6941	0.4818	-0.7513	0.5345	2.0170	4.3006	6.3176	51.8541	10
Direct Care FTE per Client	3.6871	0.1615	3.5384	0.5106	0.2608	-0.2350	0.7758	1.5519	3.1255	4.6774	36.8708	10
Administration FTE per Client	0.3563	0.0141	0.3621	0.0446	0.0020	-1.2723	-0.0485	0.1262	0.2941	0.4203	3.5628	10
Professional FTE per Client	0.0748	0.0369	0.0359	0.1168	0.0136	8.9981	2.9551	0.3829	0.0182	0.4011	0.7483	10
Medical FTE per Client	0.5144	0.0247	0.4946	0.0780	0.0061	0.3019	0.8957	0.2532	0.4193	0.6725	5.1437	10
Support FTE per Client	0.5465	0.0540	0.5708	0.1706	0.0291	1.4742	0.8380	0.5789	0.3354	0.9143	5.4647	10
Other FTE per Client	0.0064	0.0028	0.0000	0.0089	0.0001	-0.4623	1.0005	0.0234	0.0000	0.0234	0.0638	10
Staff Turnover Rates	0.1833	0.0284	0.1760	0.0897	0.0081	3.7366	1.5822	0.3260	0.0740	0.4000	1.8330	10
Percent Ambulatory	83.36%	4.20%	89.74%	13.28%	1.76%	25.02%	-99.26%	41.53%	56.37%	97.90%	833.58%	10
Percent Nonambulatory	16.64%	4.20%	10.26%	13.28%	1.76%	25.02%	99.26%	41.53%	2.10%	43.63%	166.42%	10
Percent Profound and Severe Disability	56.84%	5.45%	57.19%	17.22%	2.97%	-118.43%	10.50%	52.32%	31.01%	83.33%	568.41%	10
Average Building Age	43.9700	4.2577	39.6000	13.4639	181.2779	4.3339	1.8817	46.9000	30.5000	77.4000	439.7000	10
Medicaid Citings	3.4000	0.8969	2.0000	2.8363	8.0444	-1.3731	0.5508	8.0000	0.0000	8.0000	34.0000	10
Percent Profound Disability	28.29%	3.78%	26.85%	11.95%	1.43%	27.75%	89.02%	37.48%	15.01%	52.49%	282.93%	10
Percent Severe Disability	28.55%	5.89%	20.63%	18.64%	3.47%	88.23%	142.89%	54.98%	11.19%	66.18%	285.49%	10
Percent Moderate Disability	43.16%	5.45%	42.81%	17.22%	2.97%	-118.43%	-10.50%	52.32%	16.67%	68.99%	431.59%	10
Licensed Capacity	101.8000	1.6586	100.0000	5.2451	27.5111	2.8130	1.4174	19.0000	95.0000	114.0000	1018.0000	10
Open Beds	10.0000	1.3744	9.5000	4.3461	18.8889	0.7049	0.9034	14.0000	5.0000	19.0000	100.0000	10
Overtime Hours per Staff	146.0506	27.9098	156.6087	88.2587	7789.5909	-1.7066	-0.0302	240.1217	24.0899	264.2115	1460.5061	10

APPENDIX 3-1: TABLE C

	Operating Costs per Client	Total FTE	Direct Care FTE	Administration FTE	Professional FTE	Medical FTE	Support FTE	Other FTE	Staff Turnover Rates	Percent Ambulatory	Percent Nonambulatory	Percent Profound and Severe Disability	Average Building Age	Medicaid Citings	Percent Profound Disability	Percent Severe Disability	Percent Moderate Disability	Licensed Capacity	Open Beds	Overtime Hours per Staff
Operating Costs per Client	1.00																			
Total FTE	0.88	1.00																		
Direct Care FTE	0.75	0.93	1.00																	
Administration FTE	0.25	0.35	0.20	1.00																
Professional FTE	0.08	0.14	-0.14	0.27	1.00															
Medical FTE	0.81	0.61	0.48	0.38	-0.18	1.00														
Support FTE	0.80	0.80	0.57	0.18	0.32	0.57	1.00													
Other FTE	0.59	0.61	0.54	0.42	-0.20	0.56	0.56	1.00												
Staff Turnover Rates	0.52	0.16	0.00	0.14	-0.05	0.66	0.35	0.12	1.00											
Percent Ambulatory	-0.08	-0.13	0.01	-0.31	-0.09	-0.44	-0.20	0.12	-0.36	1.00										
Percent Nonambulatory	0.08	0.13	-0.01	0.31	0.09	0.44	0.20	-0.12	0.36	-1.00	1.00									
Percent Profound & Severe Disability	-0.29	-0.26	-0.41	0.05	0.35	0.01	-0.10	-0.39	0.06	-0.76	0.76	1.00								
Average Building Age	-0.07	0.06	0.04	-0.42	-0.16	-0.01	0.32	0.26	-0.22	-0.22	0.22	0.26	1.00							
Medicaid Citings	0.18	0.30	0.19	0.09	0.53	-0.24	0.38	-0.13	0.18	0.02	-0.02	-0.13	-0.14	1.00						
Percent Profound Disability	-0.04	-0.22	-0.21	-0.16	-0.22	0.12	-0.14	0.07	0.49	-0.19	0.19	0.22	0.23	0.08	1.00					
Percent Severe Disability	-0.25	-0.10	-0.24	0.15	0.47	-0.07	0.00	-0.40	-0.26	-0.58	0.58	0.78	0.10	-0.17	-0.43	1.00				
Percent Moderate Disability	0.29	0.26	0.41	-0.05	-0.35	-0.01	0.10	0.39	-0.06	0.76	-0.76	-1.00	-0.26	0.13	-0.22	-0.78	1.00			
Licensed Capacity	-0.04	0.15	0.35	-0.52	-0.41	-0.25	0.10	-0.13	-0.32	0.20	-0.20	-0.43	0.31	0.14	-0.37	-0.16	0.43	1.00		
Open Beds	0.81	0.72	0.64	0.25	0.11	0.47	0.65	0.45	0.53	0.17	-0.17	-0.57	-0.28	0.59	0.06	-0.57	0.57	0.07	1.00	
Overtime Hours per Staff	-0.09	0.04	0.36	-0.38	-0.40	-0.24	-0.42	-0.34	-0.42	0.29	-0.29	-0.28	-0.23	-0.17	-0.27	-0.08	0.28	0.52	-0.11	1.00

Analysis and Results

LSC staff employed a linear average cost function to estimate the average CY 2014 variable cost of a developmental center. LSC staff ran numerous regressions using all the data collected in an attempt to determine the independent variables that minimize the error between the predicted variable costs of the cost function and the actual variable costs of the developmental centers. While analyzing the results of the regression analyses, LSC staff considered the statistical significance of the variables, the cost effectiveness results for the developmental centers (sensitivity analysis), the correlation of the variables, and the adjusted R-squared value (a "goodness of fit" measure).

The estimated cost functions had CY 2014 variable costs per resident as the dependent variable. A number of independent variables were employed, as represented in the following sample equation:

$$\text{Equation (1)} \quad C(y) = \beta_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

C(y) is the average variable cost per resident of a developmental center for CY 2014, β_1 is the constant term (y intercept), β_2 and β_3 are the coefficient estimates for their respective independent variables, x_2 and x_3 are two explanatory variables chosen from among the variables described above, and ε is the error term. As noted in the main text, though some explanatory variables, most notably the staff turnover rate, were statistically significant in some regression specifications, none of the variables was consistently statistically significant. Taking each regression result on its own merits, none were judged to be a sound basis for rank ordering the cost effectiveness of the developmental centers.

APPENDIX 3-2

LSC staff used the OhioLINK's Electronic Journal Center (EJC) as its primary search site. The EJC contains millions of full-text articles in 10,000 journals. LSC staff also searched certain journals of particular relevance, such as the American Journal on Intellectual and Developmental Disabilities, Journal of Intellectual Disability Research, Intellectual and Developmental Disabilities, Inclusion, and the Journal of Policy and Practice in Intellectual Disabilities.

LSC staff performed Internet-based keyword searches for articles, reports prepared by state and federal agencies, and information from provider and national associations, such as the American Association on Intellectual and Developmental Disabilities, the National Council on Independent Living, the National Disability Rights Network, the ARC, the National Association of State Directors of Developmental Disabilities Services, and the Association of Developmental Disabilities Providers. The Boolean searches conducted included combinations of the following terms: *deinstitutionalization, developmental disabilities, intellectual disabilities, community settings, community services, ICF, institution, residential, turnover, direct support staff, direct care worker, outcomes, quality of life, and mortality*. LSC staff also reviewed resources available on the Internet websites of the University of Minnesota's Institute on Community Integration and the University of Colorado's Coleman Institute for Developmental Disabilities.

Due to the volume of material and the time constraints of the study, LSC staff focused on articles that were literature reviews of studies.

SECTION 4. A COMPARISON OF THE COST OF RESIDING AT MONTGOMERY OR YOUNGSTOWN DEVELOPMENTAL CENTERS AND THE COST OF A NEW LIVING ARRANGEMENT

This section compares the costs of residing at Montgomery or Youngstown developmental centers with the potential cost of a new placement for the residents of those centers. The information is divided into sections based on the three choices available: another developmental center, a private ICF, and community placement through a Medicaid waiver. ODODD is currently meeting with Montgomery and Youngstown residents and their parents or guardians to provide information on what options are available.

Cost of Services at Montgomery and Youngstown

The FY 2014 average per diem (per day) cost for a resident at Montgomery was $515.07 ($188,001 per year). For a resident at Youngstown, the average per diem was $489.88 ($178,806 per year).

Developmental Centers

Table 20 below shows the potential average cost for residents who choose to transfer to another developmental center. The second column shows the current number of vacancies at that developmental center. The third column shows the average per diem at that developmental center for FY 2014. The fourth column shows the average annual cost per resident at that developmental center.

For the purposes of this analysis, LSC staff used average annual cost for each center. Actual costs vary by individual according to that individual's care needs. Moving a resident from one developmental center to another may not necessarily increase the cost to the state even if the new developmental center's average annual costs are higher. A resident of another developmental center may move to the community to create a vacancy for a resident of Montgomery or Youngstown. Moving someone onto a waiver program or to a private ICF to make room for a transferring resident may actually result in a net savings to the state. In addition, some transferring residents may be filling existing vacancies. Moving the resident to a vacant bed may only marginally increase the cost of the new facility.

Table 20. Residents Choosing Another Developmental Center

Developmental Center	Current Vacancies	Average FY 2014 Per Diem	Average FY 2014 Annual Cost of Care
Cambridge	8	$480.81	$175,496
Columbus	14	$579.27	$211,434
Gallipolis	19	$478.13	$174,517
Mount Vernon	5	$523.36	$191,026

Table 20. Residents Choosing Another Developmental Center			
Developmental Center	**Current Vacancies**	**Average FY 2014 Per Diem**	**Average FY 2014 Annual Cost of Care**
Northwest	10	$556.17	$203,002
Southwest	9	$489.16	$178,543
Tiffin	5	$524.86	$191,574
Warrensville	13	$599.30	$218,745

Private ICFs

As stated above, no decisions have been made as to where residents of Montgomery and Youngstown developmental centers will choose to move. Residents will have the option to transfer to a private ICF. Table 21 below shows the estimated average costs for individuals in ICFs in FY 2016 and FY 2017. The ICF per diem rates in the table are proposed in the As Introduced version of H.B. 64, the main operating budget bill of the 131st General Assembly.

Table 21. Average Cost of an Individual in an ICF		
	FY 2016	**FY 2017**
Average Rate (per diem)	$288.99	$289.60
Average Annual Cost	$105,481	$105,704

HCBS Medicaid Waivers for Individuals with DD

Individuals leaving a developmental center for a community setting will enroll under an HCBS Medicaid waiver. As indicated in the "**Overview**" section, an individual may enroll under an HCBS waiver as long as the individual is Medicaid-eligible and the cost of serving the individual does not, on average, exceed the cost in an ICF. There are four Medicaid waiver programs currently operated by ODODD: the IO, L1, SELF, and Transitions DD.[122] Table 22 shows each waiver's enrollees and average cost in FY 2014.

Table 22. Enrollees and Average Costs of HCBS Waivers, FY 2014		
Waiver	**Enrollees***	**Average Cost**
Individual Options	18,003	$64,032
Level One	13,096	$11,909
Self-Empowerment Life Funding	248	$9,634
Transitions DD**	2,960	$21,310

*Total individuals served in FY 2014.

**TDD enrollees represent monthly enrollment and actual expenditures.

[122] During the FY 2016-FY 2017 biennium, ODODD plans to phase out the Transitional DD waiver and transfer its enrollees to the other three waivers.

For these waiver programs, each county board of developmental disabilities is generally responsible for providing the nonfederal share of HCBS waiver costs. County boards may use local dollars as well as their state allocation to provide that share. When an individual transfers from a developmental center to a waiver, ODODD provides county DD boards with the option of either having ODODD pay the nonfederal portion of the waiver for each year the individual is enrolled on the waiver or receive $37,000 each year in state waiver allocation funds, even after the individual leaves the waiver program (unless the individual disenrolls from the waiver within two years of transferring and returns to a developmental center).

Residents opting for a waiver are most likely to enroll in the IO waiver. According to ODODD, the cost of an individual transitioning from a developmental center to an IO waiver in FY 2014 was $104,271. The As Introduced version of H.B. 64 contains several proposed changes to the IO waiver. It provides $1 million in each fiscal year of the next biennium to enable ODODD to provide rental assistance to individuals who leave a developmental center for the IO waiver. Currently, an individual enrolled in a waiver pays costs associated with room and board. H.B. 64, As Introduced, also includes a rate increase for one year of $2.08 per hour for HCBS waiver providers to help with the transition from a developmental center to the IO waiver. Furthermore, ODODD is currently working to gain approval from CMS to add nursing services to the IO waiver.

SECTION 5. THE GEOGRAPHIC FACTORS ASSOCIATED WITH EACH FACILITY AND ITS PROXIMITY TO OTHER SIMILAR FACILITIES

This section presents information concerning the proximity of Montgomery and Youngstown developmental centers to major roads, cities, and other facilities. For a graphic presentation of each developmental center's location and proximity to major roads and other private ICFs, see maps 2, 3, and 4 at the end of this section.

Montgomery

The Montgomery Developmental Center is an 18-acre campus that was first opened in 1980 and currently houses approximately 92 individuals. The center is located in the city of Huber Heights in Montgomery County. Montgomery County had a population of 535,153 according to the 2010 U.S. Census. Dayton is the county seat. Montgomery Developmental Center's proximity to major road systems and other state-operated developmental centers is described below.

Distance to major roads (approximate driving distance according to Google Maps – shortest route distance chosen):

- 1.1 miles to the intersection of State Route 202 and Taylorsville Road; and
- 1.5 miles to the exchange of State Route 202 and Interstate 70.

Distance to cities with a population of over 20,000 (approximate driving distance according to Google Maps – shortest route distance chosen):

- 3.1 miles from Huber Heights (intersection of Rosebury Drive and Moorefield Drive);
- 7.8 miles from Riverside (intersection of Hawkley Lane and Springfield Street);
- 9.1 miles from downtown Dayton (intersection of North Ludlow Street and West 2nd Street);
- 12.9 miles from Trotwood (intersection of North Union Road and East Main Street); and
- 14.7 miles from Beavercreek (intersection of North Fairfield Road and Shakertown Road).

Distance to other state-operated developmental centers (approximate driving distance according to Google Maps – shortest route distance chosen):

- 62 miles from the Columbus Developmental Center;
- 73 miles from the Southwest Developmental Center;
- 111 miles from the Mount Vernon Developmental Center;
- 126 miles from the Tiffin Developmental Center;
- 143 miles from the Gallipolis Developmental Center;

- 144 miles from the Northwest Ohio Developmental Center;
- 147 miles from the Cambridge Developmental Center;
- 207 miles from the Warrensville Developmental Center; and
- 230 miles from the Youngstown Developmental Center.

Numbers of private ICFs in surrounding counties:

As can be seen from Map 3, Montgomery is surrounded by counties with varying numbers of private ICFs. The number of ICFs in each county is as follows:

- 8 in Montgomery County;
- 7 in Warren County;
- 6 in Clark County;
- 5 each in Butler and Greene counties;
- 3 in Preble County;
- 1 in Darke County; and
- 0 in both Clinton and Miami counties.

Youngstown

The Youngstown Developmental Center is a 35-acre campus that was also opened in 1980. It currently houses approximately 84 individuals. The center is located in the city of Mineral Ridge in Mahoning County. Mahoning County had a population of 238,823 according to the 2010 U.S. Census. Youngstown is the county seat. Youngstown Developmental Center's proximity to major road systems and other state-operated developmental centers is shown below.

Distance to major roads (approximate driving distance according to Google Maps – shortest route distance chosen):

- 1.3 miles to the intersection of State Route 46 and East County Line Road; and
- 1.9 miles to the exchange of State Route 46 and Interstate 80.

Distance to cities with a population of over 20,000 (approximate driving distance according to Google Maps – shortest route distance chosen):

- 3.6 miles from Austintown (intersection of State Route 46 and Ohltown Road);
- 8.0 miles from downtown Youngstown (intersection of Federal Plaza Street and Walnut Street);
- 9.8 miles from Warren (intersection of Park Avenue and Market Street); and

- 11.4 miles from Boardman (intersection of State Route 7 and U.S. Route 224).

Distance to other state-operated developmental centers (approximate driving distance according to Google Maps – shortest route distance chosen):

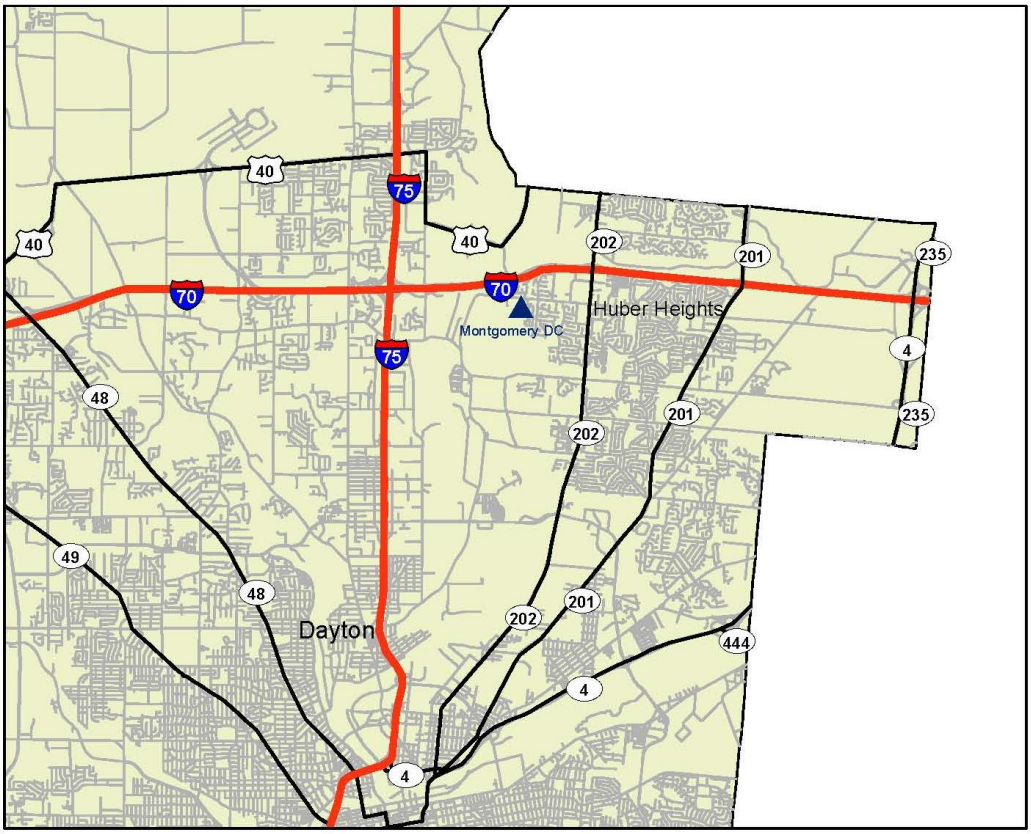
- 56 miles from the Warrensville Developmental Center;
- 109 miles from the Cambridge Developmental Center;
- 119 miles from the Mount Vernon Developmental Center;
- 137 miles from the Tiffin Developmental Center;
- 169 miles from the Northwest Ohio Developmental Center;
- 171 miles from the Columbus Developmental Center;
- 230 miles from the Montgomery Developmental Center;
- 232 miles from the Gallipolis Developmental Center; and
- 278 miles from the Southwest Developmental Center.

Numbers of private ICFs in surrounding counties:

As can be seen from Map 3, Youngstown is surrounded by counties with varying numbers of private ICFs. The number of ICFs in each county is as follows:

- 19 in Stark County;
- 18 in Mahoning County;
- 10 in Columbiana County;
- 7 in Portage County; and
- 4 in Trumbull County.

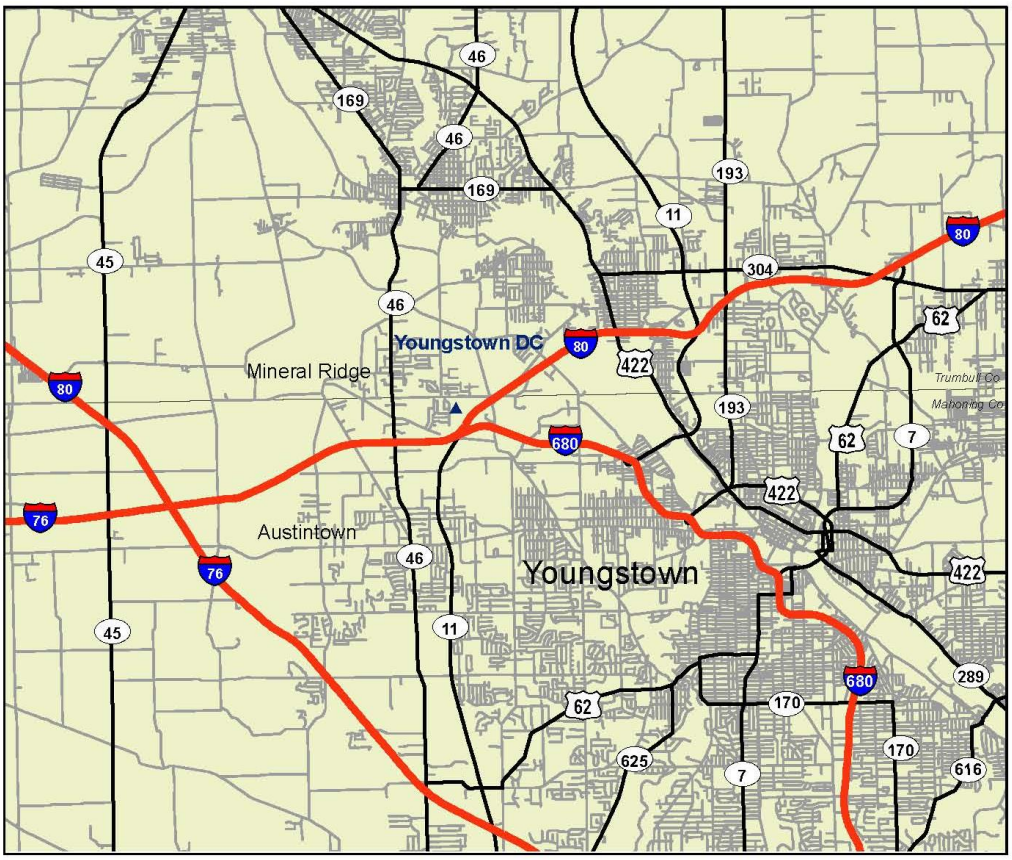
Map 2: Montgomery Developmental Center's Access to Major Roads



Not all county and municipal roads may be shown on this map.

75 U.S. Interstate Highway
40 U.S. Route Highway
202 State Route Highway
Other Roads

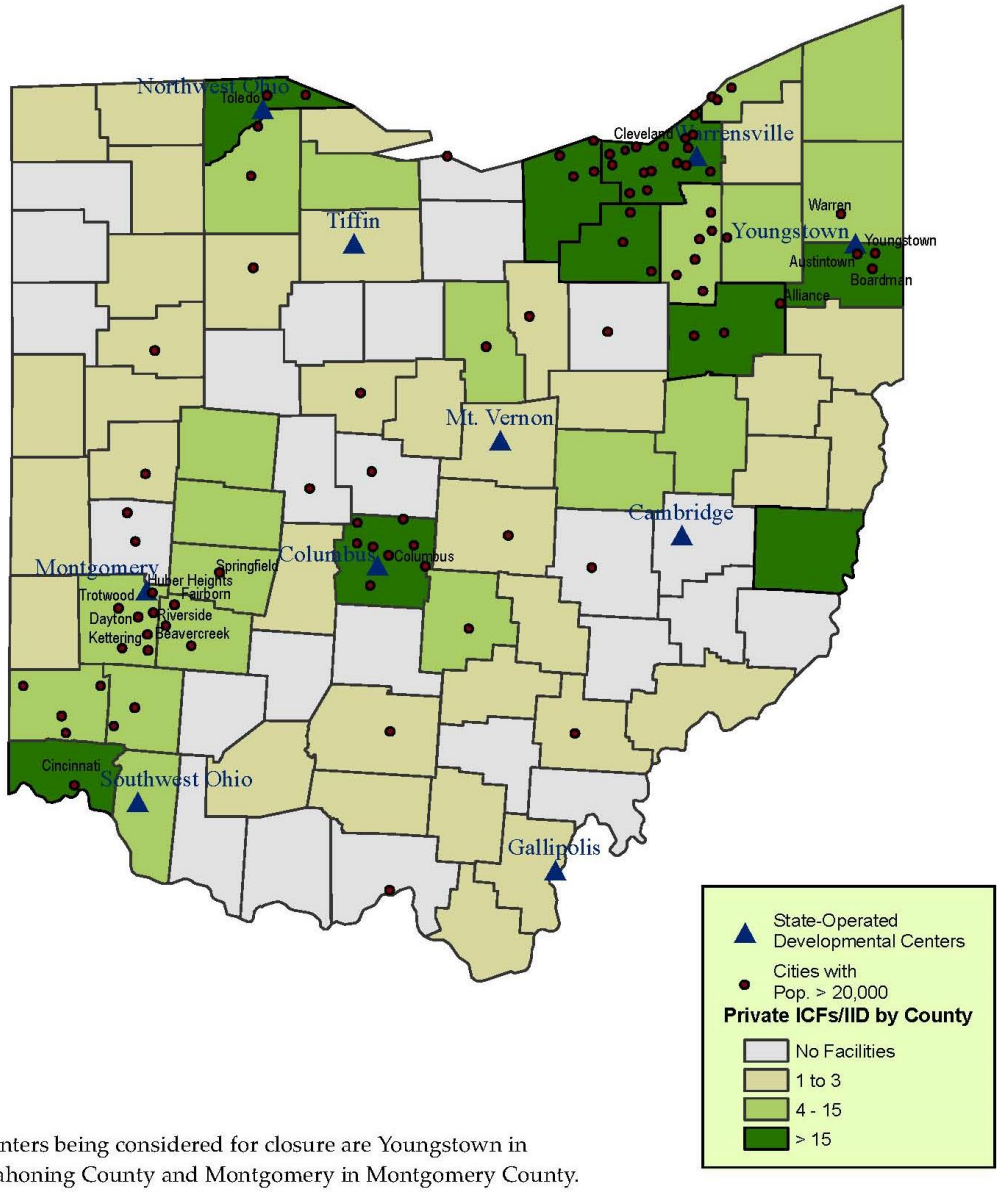
Map 3: Youngstown Developmental Center's Access to Major Roads



Not all county and municipal roads may be shown on this map.

U.S. Interstate Highway
U.S. Route Highway
State Route Highway
Other Roads

Map 4: Number of Private ICFs/IID by County



Centers being considered for closure are Youngstown in Mahoning County and Montgomery in Montgomery County.

SECTION 6. THE IMPACT OF COLLECTIVE BARGAINING ON FACILITY OPERATIONS

The key variable to consider when assessing the impact of collective bargaining on facility operations is higher wage rates at state-operated developmental centers. To study this, LSC staff obtained calendar year 2013 payroll data from ODODD for Montgomery and Youngstown developmental centers and compared the payroll data to a 2013 salary and benefits study done by the Ohio Provider Resources Association (OPRA) for privately operated facilities in Ohio. Although the state appears to offer higher wage scales for bargaining unit employees at developmental centers than do private ICFs for their employees, it is unclear whether this difference can be attributed to bargaining unit representation. Statutes and the terms of the collective bargaining contracts governing employees at these developmental centers influence many of the facility closure procedures ODODD must follow. The provisions with important fiscal implications include an early retirement incentive plan (ERIP) that must be offered under state law, as well as layoff procedures prescribed by collective bargaining agreements.

Background – Collective Bargaining

Ohio's Public Employee Collective Bargaining Act was passed in 1983, allowing state employees to form labor organizations and negotiate wages and conditions of employment. The Office of Collective Bargaining (OCB) was established in the Department of Administrative Services (DAS) in 1984. OCB negotiates the terms of the collective bargaining contracts and represents state agencies in all aspects of collective bargaining, providing a central body of expertise in negotiations and administration of the state's collective bargaining agreements. In addition, OCB assists in representing state agencies in unfair labor practice and representation cases before the State Employment Relations Board (SERB). Overall, there are five state employee unions representing 14 bargaining units, covering over 42,000 state employees.

Unionized employees at state developmental centers are represented by the following three labor organizations: the Ohio Civil Service Employees Association (OCSEA), AFSCME, Local 11, AFL-CIO; the Health Care and Social Service Union, SEIU/District 1199; and the Fraternal Order of Police (FOP), Ohio Labor Council, Inc. Unit 2. Of the 191 state employees at Montgomery (Chart 1), 152 are represented by OCSEA, ten are represented by SEIU/District 1199, one is represented by the FOP, and 28 are exempt. Of the 221 employees who work at Youngstown (Chart 2), 170 are represented by OCSEA, 20 are represented by SEIU/District 1199, one is represented by the FOP, and 30 are exempt.[123]

[123] Employee count as of February 24, 2015 obtained from ODODD.

Exempt employees are those who, by statute, are not included in a bargaining unit. They do, however, have many of the same rights as the union employees because the state has historically granted employees in exempt status the pay ranges and benefits provided in collective bargaining agreements. The so-called "parity provisions" are usually included in legislation enacted soon after the adoption of collective bargaining agreements.

Chart 1: Montgomery Developmental Center
Employees by Bargaining Unit
(191 Total Employees)

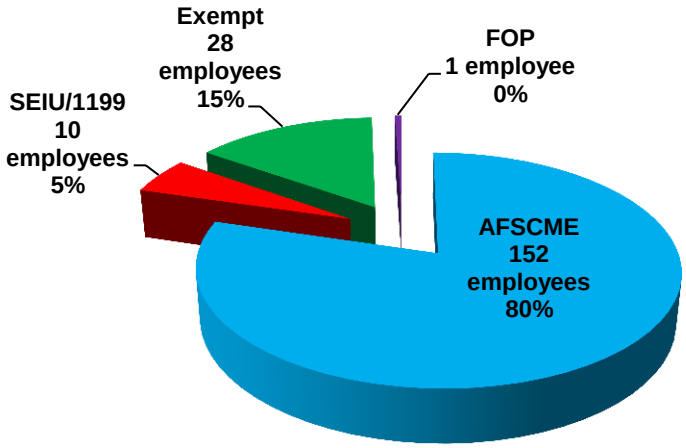
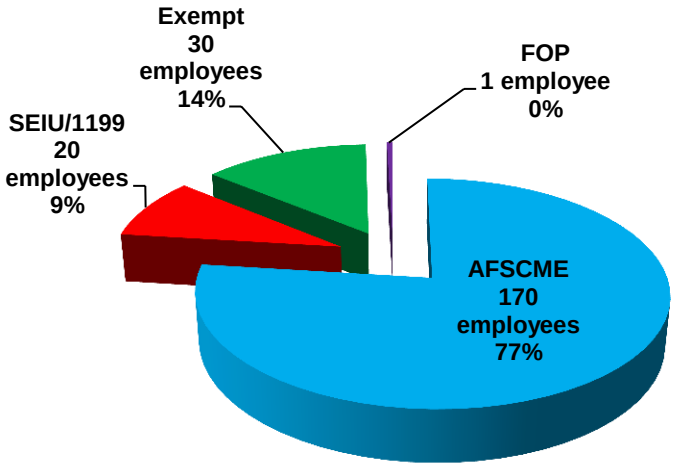


Chart 2: Youngstown Developmental Center
Employees by Bargaining Unit
(221 Total Employees)



Wage Costs at State Developmental Centers Versus Private Facilities

LSC staff studied wage rates for union positions at Montgomery and Youngstown, comparing them to wages for similar positions at private facilities. It is apparent from the initial comparison between the state developmental centers and private facilities that wage and benefit costs are higher in state-operated developmental centers. This conclusion is based on the comparison of CY 2013 payroll data provided by ODODD and a 2013 salary and benefits study done by OPRA, a nonprofit organization that represents community-based providers of services to individuals with DD.[124]

Table 23 displays wage comparisons for four positions commonly found in state developmental centers and private ICFs. Average wages in state developmental centers were determined by taking the average of the average wage rate for each position at Montgomery and Youngstown developmental centers.

Although the state appears to offer higher wage scales for bargaining unit employees at developmental centers than do private ICFs for their employees, it is unclear whether this difference can be attributed to bargaining unit representation.

Table 23. Comparison of Wage Rates in Public vs. Private DD Facilities, CY 2013

	Average Wages in State Developmental Centers	Average Wages for Similar Positions in Private Facilities	% Difference
Therapeutic Program Worker – provides direct care services to residents in DD centers	$16.57	$9.54	73.7%
Resident Care Supervisor 1 – directly supervises program personnel	$22.07	$17.90	23.3%
Licensed Practical Nurse – provides general nursing, direct care, and programming assistance	$21.67	$17.83	21.5%
Qualified DD Professional – coordinates implementation of client-based habilitation programming and leads coordination and delivery of services	$26.73	$17.62	51.7%

Impact of Collective Bargaining on Facility Closures

Layoffs and Bumping Rights

Collective bargaining employees are eligible to bump into other positions through the layoff procedures prescribed in their collective bargaining agreements. However, the ability to bump depends on employee seniority and the availability of positions in other developmental centers within the layoff jurisdictions. The facility

[124] Ohio Provider Resource Association (2013). **The 2013 Compensation and Benefits Survey of the Ohio Provider Resource Association**.

within Montgomery's layoff jurisdiction is Southwest. The facility in Youngstown's layoff jurisdiction is Warrensville.

Layoff procedures begin when an agency submits its rationale for the layoff to the Office of Collective Bargaining in DAS. ODODD plans to file its layoff rationale sometime in CY 2017. Seniority credits are then determined by the agency and the affected unions are notified of the intent to implement a layoff. Once the layoff is announced, depending on the collective bargaining agreement, employees are required to be notified 45 days or 14 days before the layoff. Once notification occurs, the "paper-layoff" begins. This refers to the process in which employees declare their intent, within five days, to bump into positions occupied by employees with less seniority. The process continues until employees affected can no longer bump less senior staff. An employee may file a grievance within 14 to 20 days after the receipt of notice or after the final notice of the layoff, depending on the collective bargaining agreement. An exempt employee is not subject to layoff procedures and bumping rights provided in the collective bargaining agreement.[125]

Early Retirement Incentive Plan

Revised Code section 145.298 requires a state department that is planning to close a state institution or institute a mass layoff to implement an ERIP for employees who are members of the Ohio Public Employees Retirement System (PERS). The plan must provide for purchase, by the department, of PERS service credit for employees who participate. An employee is eligible to participate if the employee is eligible to retire or will be eligible to retire with the service credit purchased under the ERIP.[126] The minimum age and service credit requirements for employees retiring not later than January 7, 2018, are five years of service credit at age 60, 25 years of service credit at age 55, or 30 years of credit at any age.[127]

If ODODD were to establish an ERIP that provides for purchase of one year of service credit for employees of the Montgomery and Youngstown developmental centers, as it did for employees at Springview and Apple Creek, the ERIP would be available to employees with 29 or more years of service, 24 or more years of service at age 55, or four or more years of service at age 60. The cost of a year of service credit is an amount equal to the additional liability to PERS resulting from the purchase of that

[125] Instead, an exempt employee is subject to those procedures and requirements provided in law. Under that law, an exempt employee may be able to bump another employee in the same classification series who has fewer retention points (R.C. 124.321 to 124.327).

[126] R.C. 145.297.

[127] R.C. 145.32.

year of service credit, as determined by an actuary employed by the PERS Board.[128] According to PERS, this will be more than the total of the employee and employer contributions.[129]

Once the rationale for laying off employees is filed, a hiring freeze goes into effect for the developmental centers, as well as their respective layoff jurisdictions. If all employees who are eligible to take advantage of the ERIP choose to retire immediately, it could cause a staffing shortage. At the same time, the hiring freeze could restrict the developmental center's ability to maintain necessary staffing levels to serve the residents. For these reasons, ODODD has decided to proceed cautiously in deciding when to file the layoff rationale with DAS.

As Table 24 shows, 51 Montgomery employees would be eligible for a one-year ERIP, costing an estimated $809,066. Fifty-four Youngstown employees would be eligible, costing an estimated $1,185,332. Assuming that all eligible employees participate in the ERIP, total costs for the one-year ERIP would be $1,994,398. These costs would be far higher if the plan were expanded to provide two or more years of service credit, since more employees would be eligible.

Table 24. One-Year Early Retirement Incentive Plan Cost Estimates

Developmental Center	Any Age, 29 Years Service Credit	Age 55, 24 Years Service Credit	Age 60, 4 Years Service Credit	Eligible Employee Total	Estimated Cost at 100% Participation
Montgomery	16	8	27	51	$809,066
Youngstown	26	9	19	54	$1,185,332

Employee Survey

ODODD has provided an employee interest form to employees of Montgomery and Youngstown developmental centers which lists a weekly inventory of available ODODD and other state agency job vacancies and by which they may express interest in these positions. ODODD also plans to provide a number of other employment services to current employees, including job boards, ODJFS resources (e.g., resume writing, interview skills, and computer skills), and job fairs.

[128] R.C. 145.297.

[129] PERS, "Employers: Early Retirement Incentive," https://www.opers.org/employers/eri/index.shtml (accessed March 11, 2015).

SECTION 7. THE UTILIZATION AND MAXIMIZATION OF RESOURCES

This section discusses how ODODD utilizes and maximizes its resources regarding developmental centers. Included in the subsection on utilization of resources are operating expenditures for the DD system, sources of funding, operating expenditures for each developmental center, and capital expenditures by residential setting and for each developmental center. Included in the subsection on maximization of resources are measures ODODD has implemented to cut costs at developmental centers and maximize federal Medicaid reimbursement.

Utilization of Resources

Sources of Funding

Table 25 shows the appropriation line items and actual expenditures for developmental centers in FY 2014. The two largest sources of funding are federal Medicaid reimbursement (Fund 3A40) and the General Revenue Fund. For a description and funding levels of each line item within the ODODD budget, please see the LSC Redbook for ODODD (http://www.lsc.ohio.gov/fiscal/redbooks131/default.htm).

Table 25. Developmental Center Expenditures FY 2014

Fund	Appropriation Line Item	Appropriation Line Item Name	FY 2014
GRF	653407	Medicaid Services	$69,544,608
1520	653609	DC and Residential Operating Services	$1,733,610
3A40	653605	DC and Residential Services and Support	$115,026,226
4890	653632	DC Direct Care Services	$9,629,891
Total Funding: Developmental Centers			**$195,934,335**

Operating Expenditures – By Developmental Center

Table 26 shows operating expenditures for each developmental center by biennium from FY 2006 to FY 2015. Since the FY 2006-FY 2007 biennium, operating expenses for the developmental centers have decreased 8.6%. Operating expenses for Southwest Developmental Center have grown the most since the FY 2006-FY 2007 biennium, increasing 20.0%. Montgomery's operating expenses have grown the second most, increasing 18.2%. Cambridge and Youngstown grew at the next highest rate, increasing 16.3% and 15.4%, respectively. Mount Vernon's operating expenses have decreased the most at 30.0% since the FY 2006-FY 2007 biennium. Tiffin had the second greatest decrease, decreasing 25.4%.

Table 26. Operating Expenditures by Developmental Center						
	FY 2006-FY 2007	FY 2008-FY 2009	FY 2010-FY 2011	FY 2012-FY 2013	FY 2014-FY 2015	Percent Change FY 2006-FY 2015
Cambridge	$27,318,386	$29,978,449	$30,789,500	$31,839,825	$31,779,547	16.3%
Columbus	$42,429,239	$48,039,001	$44,778,988	$38,631,365	$41,062,621	-3.2%
Gallipolis	$58,307,642	$64,606,111	$62,992,022	$57,431,681	$47,371,638	-18.8%
Montgomery	$28,247,531	$30,994,759	$33,276,557	$33,477,975	$33,392,234	18.2%
Mount Vernon	$58,534,346	$62,749,717	$57,498,244	$47,878,864	$40,938,647	-30.0%
Northwest	$46,128,553	$51,073,920	$51,444,213	$46,619,742	$42,600,929	-7.6%
Southwest	$29,287,138	$32,520,709	$34,670,617	$37,995,333	$35,138,484	20.0%
Tiffin	$47,923,515	$52,129,562	$49,306,107	$41,853,254	$35,762,068	-25.4%
Warrensville	$56,271,130	$54,388,776	$53,875,840	$45,090,914	$45,182,919	-19.3%
Youngstown	$29,861,330	$32,131,585	$34,119,089	$35,445,525	$34,459,004	15.4%
Total	**$424,308,810**	**$458,612,589**	**$452,751,177**	**$416,264,478**	**$387,688,091**	**-8.6%**

Capital Expenditures – By Residential Setting Type

ODODD has increased emphasis on community-based services in the allocation of its capital budget. As shown in Table 27 below, community settings have received larger amounts for capital projects. Allocations to developmental centers increased from the FY 2007-FY 2008 biennium through the FY 2013-FY 2014 biennium. The increase is attributable to the age of the buildings at the developmental centers. The two oldest developmental centers, Tiffin and Mount Vernon, have buildings that have average ages of 77 years and 51 years, respectively. Montgomery's buildings have an average age of 31 years and Youngstown's buildings have an average age of 35 years. For the FY 2015-FY 2016 biennium, developmental center capital appropriations is $5.0 million and community settings represents 75.0% of the allocation for DD capital projects.

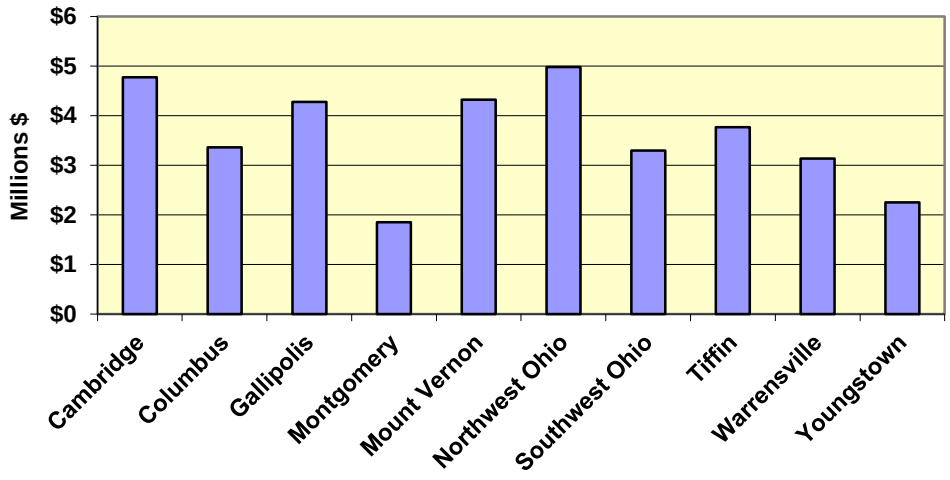
Table 27. Capital Expenditures by Residential Setting					
Biennium	Developmental Centers		Community Settings		Total Capital Appropriation
	Allocation ($)	Allocation (%)	Allocation ($)	Allocation (%)	
2003-2004	$3,959,000	29.5%	$9,441,000	70.5%	**$13,400,000**
2005-2006	$3,257,257	25.6%	$9,475,000	74.4%	**$12,732,257**
2007-2008	$8,477,373	41.0%	$12,200,000	59.0%	**$20,677,373**
2009-2010	$6,894,237	32.4%	$14,406,537	67.6%	**$21,300,774**
2011-2012	$0	N/A	$0	N/A	**$0**
2013-2014	$14,635,000	100.0%	$0	0.0%	**$14,635,000**
2015-2016*	$5,040,000	25.0%	$15,125,000	75.0%	**$20,165,000**

*Appropriations

Capital Expenditures – By Developmental Center

The chart below shows total capital expenditures for completed projects for each developmental center between FY 2005 and FY 2014. Northwest Ohio Developmental Center had the highest capital expenditures in this period, totaling approximately $5.0 million. Mount Vernon and Gallipolis had the second highest capital expenditures, totaling approximately $4.3 million. Montgomery expended $1.8 million in capital money during this period, the lowest amount of any developmental center. For a list of all capital projects completed since 2005 by developmental center, see "**Appendix 7-1**."

Chart 3: Total Capital Expenditures for Completed Projects by Developmental Center FY 2005-FY 2014



Maximization of Resources

Cost-Cutting Measures

ODODD has been decreasing the number of positions at the developmental centers from FY 2011-FY 2014. During this time, there has been a 27.0% decrease in positions due to job attrition and job abolishment. At Montgomery, 25 positions were abolished. At Youngstown, five positions were abolished.

ODODD has decreased the developmental center budgets by 16.0% during this same period. ODODD has utilized increased efficiencies in energy purchasing and consumption, tighter controls on spending, and savings in workers' compensation costs and premiums. Despite these cost savings measures, the Montgomery Developmental Center's budget grew by 5.7% and the Youngstown Developmental Center's budget grew by 8.5%.

Federal Reimbursement

Developmental centers receive federal reimbursement for allowable costs associated with the provision of certain Medicaid-eligible services. The amount allowable for reimbursement is capped at a certain amount per day according to a base reimbursement rate. The base rate takes into account direct, ancillary, capital, and operating costs for the year in which the rate was generated and is indexed for inflation. Warrensville was the only developmental center that exceeded the allowable Medicaid per diem in FY 2014. When costs exceed the allowable Medicaid per diem, ODODD utilizes client resources such as Social Security, railroad pensions, and PERS pensions to fund the difference, as well as private payer sources, royalties, and other miscellaneous internal sources of revenue.

APPENDIX 7-1

Capital Expenditures by Developmental Center, FY 2005-FY 2014

Year	Cambridge	Columbus	Gallipolis	Montgomery	Mount Vernon	Northwest
2005	$258,263	$762,410	$771,829	$72,456	$392,528	$27,502
2006	$321,875	$307,591	$128,352	$48,911	$198,321	$337,920
2007	$1,103	$592,147	$199,760	$0	$875,582	$24,098
2008	$46,810	$40,400	$73,928	$129,825	$90,481	$1,611,100
2009	$862,420	$764,518	$345,115	$473,245	$547,851	$3,459
2010	$602,564	$10,000	$329,527	$392,442	$96,006	$345,793
2011	$445,874	$268,539	$835,780	$18,549	$401,662	$436,216
2012	$146,271	$45,379	$65,730	$20,098	$51,842	$542,116
2013	$41,641	$22,069	$653,168	$279,644	$354,047	$34,831
2014	$2,047,719	$549,775	$878,243	$412,956	$1,318,660	$1,617,613
Total	**$4,774,540**	**$3,362,826**	**$4,281,432**	**$1,848,126**	**$4,326,980**	**$4,980,648**

Year	Southwest	Tiffin	Warrensville	Youngstown
2005	$584,019	$904,969	$114,065	$15,945
2006	$295,930	$120,327	$1,044,837	$387,247
2007	$356,260	$235,320	$237,613	$11,505
2008	$341,071	$180,913	$6,500	$91,129
2009	$74,322	$518,744	$171,796	$175,228
2010	$103,481	$388,392	$207,367	$122,188
2011	$321,161	$680,448	$218,009	$397,003
2012	$1,212,212	$119,857	$282,560	$66,874
2013	$0	$40,517	$212,121	$85,059
2014	$11,488	$579,059	$640,203	$901,681
Total	**$3,299,944**	**$3,768,546**	**$3,135,070**	**$2,253,859**

*These fees were for projects that ODODD did not initiate.

SECTION 8. CONTINUITY OF THE STAFF AND ABILITY TO SERVE THE FACILITY POPULATION

Overview

In this section, LSC staff examines several possible measures of staff coverage and continuity at the state's ten developmental centers and the potential effect of each on the staff's ability to serve the developmental center's population including staff to resident ratios, staff turnover, and overtime worked. The following is a brief discussion of why each of these measures was selected.

All developmental centers must meet Medicaid standards for staff to resident ratios. This section describes the Medicaid standards and includes information on the percentage of times developmental centers met the standards. In addition, data is included on staff to resident ratios for each developmental center, by shift, as well as by facility.

As part of a literature review, LSC staff found a study showing a link between high staff turnover rates and negative consequences to residents.[130] This section contains data on staff turnover at each developmental center. However, this information should be viewed in light of the fact that the literature on this topic is limited to community care settings and LSC staff found no standard defining "high turnover."

LSC staff also found as part of its literature review a study showing a link between amount of overtime and quality of care.[131] This subsection includes data on overtime worked at each developmental center. However, the literature on this topic is limited to community settings. LSC staff found no standard defining what constitutes "a large amount of overtime," and overtime data are aggregated by facility, not by individual.

In addition, this section provides information on an early retirement incentive plan, because the timing of an offering of early retirement could create a staff shortage affecting the ability to serve the residents at Montgomery and Youngstown developmental centers.

[130] Hewitt, A. & Lakin, K.C. (May 2001). *Issues in the Direct Support Workforce and their Connections to the Growth, Sustainability and Quality of Community Supports*. A Technical Assistance Paper of the National Project: Self-Determination for People with Developmental Disabilities, University Training Center on Community Living, University of Minnesota.

[131] *Ibid,* p. 6.

Staff to Resident Ratios

Medicaid Standards

All developmental centers must meet the standards set by Medicaid for staff to resident ratios. The Medicaid guidelines for ICFs require that there be present and on duty every day of the year one direct care staff for every eight residents on the first shift, one direct care staff for every eight residents on the second shift, and one direct care staff for every 16 residents on the third shift.[132]

Table 28 shows the direct care staff to resident ratio generally maintained at each developmental center for first, second, and third shifts. The number shown represents the number of residents cared for by each direct care staff person each shift. As the table shows, the developmental centers, on all shifts, exceed Medicaid staffing standards.

Table 28. Direct Care Staff to Resident Ratios

Developmental Center	First Shift	Second Shift	Third Shift
Cambridge	1:2.6	1:3.5	1:5.6
Columbus	1:2.7	1:2.7	1:3.9
Gallipolis	1:2.2	1:3.1	1:4.2
Montgomery	1:2.9	1:2.9	1:5.9
Mount Vernon	1:2.5	1:3.0	1:5.4
Northwest	1:3.3	1:2.9	1:4.6
Southwest	1:3.0	1:3.0	1:5.7
Tiffin	1:3.4	1:3.5	1:5.4
Warrensville	1:2.3	1:2.1	1:2.6
Youngstown	1:3.2	1:2.7	1:4.8

In addition, as shown in Table 29, the developmental centers have met the Medicaid standard for staffing over 98.77% of the time in FY 2010-FY 2014.

[132] "Direct care staff" are personnel whose daily responsibility it is to manage, supervise, and provide direct care to individuals in their residential living units. This staff could include professional staff (e.g., registered nurses, social workers) or other support staff, if their primary assigned daily shift function is to provide management, supervision, and direct care of an individual's daily needs (e.g., bathing, dressing, feeding, toileting, recreation, and reinforcement of active treatment objectives) in their living units. However, professional staff who simply work with individuals in a living unit on a periodic basis cannot be included. Also, supervisors of direct care staff can be counted only if they share in the actual work of the direct care of individuals. Supervisors whose principal assigned function is to supervise other staff cannot be included.

Table 29. Percentage of Medicaid Standard Achieved for Developmental Center Staffing	
Fiscal Year	**Percentage Achieved**
2010	98.77%
2011	98.83%
2012	98.84%
2013	99.10%
2014	99.29%

Overall Staff to Resident Ratio

Medicaid requires that each developmental center maintain enough staff to ensure the provision of active treatment for the residents. Table 30 shows the number of full-time direct care, professional, and medical staff for each resident at each of the state's developmental centers. All the developmental centers exceed the ratio of no less than one direct care staff person per resident.

Table 30. Staff to Resident Ratios*			
Developmental Center	**Direct Care Staff**	**Professional Staff**	**Medical Staff**
Cambridge	1.55:1	.01:1	.23:1
Columbus	1.85:1	.02:1	.22:1
Gallipolis	1.80:1	.04:1	.35:1
Montgomery	1.43:1	.01:1	.25:1
Mount Vernon	1.63:1	.01:1	.30:1
Northwest	1.67:1	.02:1	.27:1
Southwest	1.57:1	.01:1	.30:1
Tiffin	1.56:1	.02:1	.21:1
Warrensville	2.26:1	.01:1	.30:1
Youngstown	1.68:1	.17:1	.27:1

*FTEs divided by residents

Staff Turnover Rate

The high rate of turnover among direct care workers in the field of developmental disabilities has been an ongoing problem. With the continuing shift toward deinstitutionalization, most of the research literature available focuses on the direct care staff shortages and turnover in community residential settings. Larson et al. found that annual turnover rates for direct support workers in community residential settings ranges from 34% in small publicly operated homes to 70% for small privately

operated homes, with most estimates of turnover rates in the 50% to 70% range.[133] Furthermore, Mitchell and Braddock, in their survey of 1,600 residential facilities nationwide, found that turnover was generally higher in private than in publicly operated community facilities. The authors' findings are consistent with other research that found that turnover of direct care workers in privately operated community facilities has typically been two to three times the rate of turnover in public institutions.[134] Despite the potential differences in turnover rates for different care settings, it may be valuable to review the insights of some researchers regarding staff turnover in community residential settings.

Hewitt and Larson reviewed research on staff turnover in community settings. The authors found that, between 1980 and 2005, turnover rates in community settings have remained consistent and have ranged from 45% to 70%. They discussed that these rates are becoming more problematic. Even though the turnover rates have remained consistent, the number of staff available to fill the vacancies has decreased significantly, so vacancies remain unfilled for longer periods of time. The authors additionally noted that staff turnover is costly; the average cost to replace a staff member is $2,413.[135]

Lord and Pedlar, in their study of deinstitutionalization, found that the individuals studied had a very limited social network and considerable dependence on staff members with respect to social and emotional support. The authors go on to suggest that a fairly high rate of staff turnover means that residents cannot be assured of continuity and stability in terms of this source of social support.[136] In addition, Hewitt and Larson in their research on the direct support workforce reported that high staff turnover and associated vacancies have serious negative consequences. Higher staff turnover has been associated with a low morale, absenteeism, and "burnout" in which staff may stay on the job but without commitment to it, all of which negatively affect the staff's ability to provide quality care to residents.[137]

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[133] Larson, S., Lakin, K.C., & Bruininks, R.H. (1998). **Staff Recruitment and Retention: Study Results and Intervention Strategies**. American Association on Mental Retardation: Washington D.C.

[134] Mitchell, Dale & Braddock, D. (1994). *Compensation and Turnover of Direct Care Staff in Developmental Disabilities Residential Facilities in the United States.* **Mental Retardation**, 32(1), pp. 34-42.

[135] Hewitt, A. & Larson, S. (2007). *The Direct Support Workforce in Community Supports to Individuals with Developmental Disabilities: Issues, Implications, and Promising Practices.* **Mental Retardation and Developmental Disabilities Research Reviews**, 13(7), pp. 178-187.

[136] Lord, J. & Pedlar, A. (1991). *Life in the Community: Four Years After the Closure of an Institution*. **Mental Retardation**, 29(4), pp. 213-221.

[137] Hewitt & Larson at 182.

The problem of staff turnover is not unique to community settings. In a survey of large state facilities in 2012, the average state facility reported direct support professional turnover rates of 33.2%. Average turnover rates for direct support workers were 24%. Turnover was higher in facilities with lower wages and higher supervisor turnover. Turnover rates for supervisors were 14%. Between 2002 and 2012, Ohio reported that the vacancy rates of funded direct support positions increased by 133%.[138]

Table 31 below shows the turnover rate at each developmental center as of July 27, 2014. This information should be viewed in light of the fact that LSC staff found no standard defining "high turnover."

Table 31. Staff Turnover Rates

Developmental Center	Turnover Rate (Percentage)*
Cambridge	21.4%
Columbus	12.2%
Gallipolis	40.0%
Montgomery	22.2%
Mount Vernon	17.8%
Northwest	17.4%
Southwest	19.5%
Tiffin	7.4%
Warrensville	10.7%
Youngstown	14.7%
Total for all DCs	**18.3%**

*As of July 27, 2014

Overtime

Studies have shown a relationship between the amount of overtime worked by staff and the quality of services. Hewitt and Larson assert that, "[w]orking large amounts of overtime makes [direct support professionals] more susceptible to exhaustion, increased mistakes, increased abuse and neglect, and decreased performance."[139] While the researchers were primarily discussing community settings, the implications for institutional settings may be similar.

[138] Larson, S.A., Hallas-Muchow, L., Aiken, F., Hewitt, A., Pettingell, S., Anderson, L.L., Moseley, C., Sowers, M., Fay, M.L., Smith, D., & Kardell, Y. (2014). *In-Home and Residential Long-Term Supports and Services for Persons with Intellectual or Developmental Disabilities: Status and Trends through 2012*. Minneapolis: University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration.

[139] Hewitt & Larson at 182.

Table 32 shows the total amount of overtime worked by direct care workers at each of the developmental centers over the past three years. Included in the table is the annual census for each developmental center for each fiscal year. This information is presented to provide context for the amount of overtime worked. The higher the census, the greater the number of direct care workers; therefore, a greater amount of overtime may be expected (though this may not always be the case). Again, this information should be viewed in light of the fact that LSC staff found no standard defining what constitutes "a large amount of overtime" and overtime data are aggregated by facility, not by individual.

Table 32. Total Overtime Hours Worked by Direct Care Staff

Developmental Center	FY 2012		FY 2013		FY 2014		FY 2015*	
	Census	OT	Census	OT	Census	OT	Census	OT
Cambridge	93	6,396	89	6,446	92	11,817	91	10,364
Columbus	97	13,752	91	28,605	104	27,478	100	16,449
Gallipolis	168	12,535	127	6,510	89	2,144	83	9,355
Montgomery	93	8,660	94	12,633	92	16,999	92	13,487
Mount Vernon	132	24,350	106	21,003	100	20,132	100	18,191
Northwest	125	6,487	99	7,771	92	23,373	92	7,922
Southwest	108	3,427	101	2,060	96	5,057	89	2,623
Tiffin	120	7,566	102	9,031	99	7,903	98	3,834
Warrensville	96	16,112	92	18,490	93	19,633	87	16,983
Youngstown	103	2,205	97	2,089	85	5,100	84	2,662

*The numbers shown for FY 2015 are from July 1, 2014-February 20, 2015.

Early Retirement Incentive Plan

ODODD will be offering a one-year ERIP for employees of Montgomery and Youngstown. (For more information on the ERIP, see "**Section 6**" of this report.) According to ODODD, the ERIP will be offered at the time ODODD files the rationale for laying off employees with DAS. Once the rationale is filed, a hiring freeze goes into effect for Montgomery and Youngstown, as well as Southwest and Warrensville.[140] If all individuals who are eligible to take advantage of the ERIP choose to retire immediately, it could cause a staffing shortage. At the same time, the hiring freeze could restrict the developmental center's ability to maintain necessary staffing levels to serve the residents. For these reasons, ODODD has decided to proceed cautiously in deciding

[140] The developmental center within Montgomery's bumping jurisdiction is Southwest. The developmental center within Youngstown's bumping jurisdiction is Warrensville.

when to file the layoff rationale with DAS, though ODODD has indicated that it will likely occur sometime in CY 2017.

Employees who retire not later than January 7, 2018, must have a minimum of 30 years of service at any age, 25 years of service at age 55, and five years of service at age 60. Table 33 shows the number of individuals by category at Montgomery and Youngstown who will be eligible to take advantage of the ERIP because one year of service credit provided under the ERIP will make them eligible for retirement under PERS.

Table 33. Employees Eligible for a One-Year Early Retirement Incentive Plan

	Number of Eligible Employees	
Eligibility Category	**Montgomery**	**Youngstown**
29 or more years of service, any age	16	26
24 or more years of service, 55 years of age	8	9
4 or more years of service, 60 years of age	27	19
Total	**51**	**54**

SECTION 9. CONTINUING COSTS FOLLOWING CLOSURE OF A FACILITY

This section focuses on continuing costs that would follow the proposed closures of Montgomery and Youngstown developmental centers. The types of continuing costs described would also be applicable to developmental center closures in general. ODODD provided LSC staff with estimates of continuing costs following closure based on actual annual costs from the closures of Springview and Apple Creek centers in 2005 and 2006, respectively. Having reviewed the cost estimates and assumptions, LSC staff finds the estimated continuing costs to be reasonable and reflect the assumptions LSC staff believes should be included.

In addition to continuing maintenance costs, the state will also incur costs of providing services for the relocated residents of Montgomery and Youngstown. Furthermore, the state will incur employment costs, such as unemployment compensation benefits and the ERIP, related to the employees of those two developmental centers. Finally, the state could also realize one-time revenue if the closed facilities are sold. The three categories of the costs and the potential property sale following closure of a facility are discussed below.

Continuing Maintenance Costs

Table 34 below shows the estimated annual maintenance costs following the proposed closures of Montgomery and Youngstown developmental centers.

Table 34. Estimated Annual Continuing Costs Following Closure

	Montgomery	Youngstown
Utilities	$235,000	$224,500
Security	$75,000	$81,000
Personnel Costs	$20,000	$15,000
General Maintenance Repairs	$12,000	$15,000
Snow Removal	$5,000	$7,500
Lawn Cutting	$3,000	$7,000
Total	**$350,000**	**$349,500**

Utilities

The buildings at Montgomery and Youngstown would still need to be heated following closure. According to ODODD, the temperature in the buildings would be set to 50 degrees, which would reduce utility costs by about two-thirds. The utility costs estimated for each developmental center represent approximately one-third of historical utility costs.

Security

When a developmental center is closed there are ongoing security costs to protect the property. Generally, ODODD would ask security to survey the perimeter of each building at least once each day to look for broken glass or other signs of trespassing. The schedule for a security officer would vary each week to avoid creating noticeable security patterns. ODODD estimates that 40 hours of security a week would be needed at each developmental center. Moreover, ODODD estimates that it would cost more to recruit and retain security personnel for Youngtown due to the Youngstown area's statistically higher crime rates and the larger size of the Youngstown campus. Consequently, the estimate for security at Youngstown assumes a higher hourly rate than for Montgomery.

Personnel Costs

ODODD would use an employee from another developmental center in the area to make general repairs and to make sure contractors are doing their jobs at Montgomery and Youngstown (e.g., lawn cutting, snow removal, etc.). ODODD expects to use an employee from the Southwest Developmental Center to monitor Montgomery and an employee from Warrensville to monitor Youngstown. The only additional costs that would be incurred would be the costs for travel. ODODD assumes that the employees would make one trip per week to Montgomery and Youngstown.

General Maintenance Repairs

General maintenance repairs are expected to continue following the closures of Montgomery and Youngstown centers.

There may also be one-time costs incurred for repairs before Montgomery and Youngstown could be sold. Potential buyers could ask ODODD to make needed repairs or reduce the price of the property. As of this writing, no capital projects have been placed on hold as a result of the proposed closure. Projects are evaluated on a case-by-case basis with priority given to those situations where the health and safety of residents are impacted.

Snow Removal

The cost estimates for snow removal at both developmental centers are estimated at about $357 per snow removal. Snow will be removed only on the main roads at each facility. It is assumed that snow removal would be required 14 times annually at Montgomery and 21 times annually at Youngstown. Therefore, the cost of snow removal at Montgomery and Youngstown is estimated at $5,000 and $7,500 a year, respectively. As a general rule, snow would be removed if there was three inches or more accumulation.

Lawn Cutting

ODODD assumes that lawns at the two developmental centers would need to be cut twice a month, for a total of ten times per season. Montgomery has 18 acres of land, compared to 35 acres at Youngstown. Lawn cutting is estimated to cost $300 per cut at Montgomery and $700 per cut at Youngstown. Youngstown has higher costs per cut because of the larger area.

Cost of Providing Services for Relocated Residents

Costs of providing services would continue to be incurred for residents who are relocated from Montgomery or Youngstown. The costs for residents moving from Montgomery and Youngstown to other developmental centers are unlikely to change significantly. The developmental centers receiving individuals from Montgomery and Youngstown that have available capacity may experience only a small increase in expenditures due to economies of scale. However, for the most part, LSC staff expects the operating costs of the receiving developmental centers to largely stay the same. It is anticipated that, on average, individuals moving from Montgomery and Youngstown into community ICFs and IO waivers will have some budget reduction. However, some individuals with significant behavioral issues who require multiple levels of staff supervision in IO waivers may be more costly.

Medicaid Waiver Costs

ODODD plans to use IO waivers for residents transitioning from developmental centers to the community. Table 35 shows the total estimated state share of Medicaid waiver costs through FY 2018 for individuals moving into the community resulting from the closure of Montgomery and Youngstown. However, these waiver costs would continue for the life of the individual. When an individual transfers from a developmental center to a waiver, ODODD provides county DD boards with the option of either having ODODD pay the nonfederal portion of the waiver for each year the individual is enrolled on the waiver or receive $37,000 each year in state waiver allocation funds, even after the individual leaves the waiver program (unless the individual disenrolls from the waiver within two years of transferring and returns to a developmental center).

Table 35. Estimated State Share of Medicaid Waiver Costs through FY 2018

	Estimated Number of Individuals	Total Estimated Cost
Montgomery and Youngstown	65	$5,122,068
Other Developmental Centers and Private ICFs	98	Cost Neutral*
Total	163	$5,122,068

*Since the individuals are moving to a similar setting, there are no assumed new costs to the system.

Capital Housing Costs

ODODD has committed capital housing dollars to counties to develop housing for individuals relocating from any of the ten developmental centers to the community. Table 36 below shows these capital housing costs as estimated by ODODD. Because these capital funds have already been budgeted, it is assumed that if they were not used for community housing, they would be used elsewhere in the DD system and would not result in a cost reduction because of the closure of a developmental center.

Table 36. Capital Housing	
	Total Estimated Cost
Capital Housing	$4,350,000
Residential Renovations	$87,000
Residential Accessibility Project	$174,000
Total	$4,611,000

Employment Costs

Unemployment Compensation

Costs associated with unemployment compensation would be incurred if Montgomery and Youngstown were closed. ODODD estimates that there would be 50 employees each at Montgomery and Youngstown eligible for unemployment compensation. The estimated unemployment compensation costs in Table 37 below are based on these assumptions. Please see "**Section 13**" for a more detailed presentation of unemployment compensation cost estimates.

Table 37. Estimated Unemployment Compensation Costs		
	Eligible Employees	**Estimated Cost**
Montgomery	50	$520,000
Youngstown	50	$520,000
Total	100	$1,040,000

Early Retirement Incentive Plan

A one-year ERIP will be offered to eligible staff at both Montgomery and Youngstown centers. Table 38 shows the estimated costs of a one-year ERIP for the 105 eligible employees. ODODD anticipates that the ERIP costs will be split evenly across FY 2016 and FY 2017.

Table 38. Estimated One-Year ERIP Costs		
	Eligible Employees	Estimated Cost
Montgomery Developmental Center	51	$809,066
Youngstown Developmental Center	54	$1,185,332
Total	**105**	**$1,994,398**

Other Potential Employment Costs

The collective bargaining employees who continue working at Montgomery or Youngstown will then have the opportunity to bump into other state positions through the layoff procedures prescribed in their collective bargaining agreements. If employees bump less senior employees, there could be increased payroll costs to the developmental center in which the less senior employee is bumped. As of this writing, ODODD is unsure of the number of employees from Montgomery or Youngstown who will transfer to other developmental centers. Since some developmental centers are having difficulty with high turnover rates, the transfers could have the benefit of increasing the available pool of workers for those developmental centers thereby reducing some training and recruitment costs. See "**Section 8**" for a more detailed discussion of turnover rates.

Potential Revenue/Loss of Asset

ODODD may sell Montgomery and Youngstown if they are closed. It may establish land-use committees for each developmental center that could ultimately determine what will be done with the property. However, ODODD has not begun this process as of this writing.

Before the facilities could be sold, an appraisal would be necessary. As of this writing, ODODD has not had an appraisal. Therefore, it is not possible to accurately estimate the potential revenue generated from the sale of the two developmental centers proposed for closure. However, LSC staff obtained the insurance coverage value for both Montgomery and Youngstown. Montgomery's insured value is $7.1 million, while Youngstown is insured at $10.1 million. Each center is only insured for the actual buildings. The insurance value does not include the value of the land or the contents of the buildings.

Any equipment or vehicles remaining at Montgomery or Youngstown would likely be made available to the remaining eight developmental centers. Any equipment or vehicles remaining after they had been made available to the eight developmental centers would likely then be made available to other state agencies. Anything remaining after that would likely be auctioned.

SECTION 10. THE IMPACT OF THE CLOSURES OF MONTGOMERY AND YOUNGSTOWN DEVELOPMENTAL CENTERS ON THE LOCAL ECONOMIES

Overview

The closures of Montgomery and Youngstown developmental centers will have an effect on their respective local economies. The closure of any state facility implies that some portion of tax dollars collected statewide will stop flowing through that facility to its local economy via payroll and purchases of vendor supplies. For purposes of this report, the "local economy" of each center is considered to be the county in which it is located together with the contiguous counties (unless otherwise indicated).

Hundreds of employees at the two centers could lose their jobs if the state closes the centers at the end of FY 2017. The loss of jobs at the two developmental centers results in reduced economic resources for those households affected by job loss. The loss of jobs also reduces spending at businesses in the communities and reduces tax revenues to municipalities and school districts in the area (i.e., unemployed workers typically spend less money and pay less taxes). Some businesses in each area will be affected directly by the loss of a customer because the two developmental centers purchase goods and services directly from some area businesses. These negative implications may be offset in the long run by positive ones that arise from alternative uses of the physical facilities. If the land and facilities of the developmental centers are transferred to a private entity, the property could begin to generate property taxes to support local schools and local governments; the state does not pay property taxes. Alternatively, the property could be transferred to a political subdivision, providing it a low-cost addition to needed office (or other) space.[141] In addition, any such alternative uses of the facilities could generate new jobs and payroll, replacing the jobs and payroll lost due to the closures.

Alternative uses of the properties remain hypothetical as of this writing. The potential is there for the local economies to benefit from the closures, but LSC staff do not know the extent to which the potential will be realized. Many other relevant issues remain. Some staff at these facilities will find jobs in other developmental centers or in the community, meaning that not all jobs eliminated will reduce spending and tax revenues. Unemployment compensation and retirement benefits will temporarily replace some of the lost purchasing power, both for families and in the communities.

[141] According to ODODD, the previously closed Springview Developmental Center was transferred to Clark County government and it is utilized as the East District Office of Clark County. The Apple Creek Developmental Center was initially sold to East Union Township and Apple Creek Village. Subsequently, the Apple Creek facilities were sold to FB Leasing in March 2014, however, as of this writing, the current use or plans for future development are unknown.

ODODD is making the retirement option more widely available by offering a one-year early retirement incentive plan (ERIP). Neither ODODD nor LSC staff is able to forecast which employees will move smoothly into new jobs and which will have a significant period of unemployment before finding new jobs.

LSC staff has not found, as of this writing, any existing studies of the economic impact of closing a facility similar to a developmental center. A rather large number of studies have been published by economists on the economic effects of the closing of manufacturing plants. But manufacturing plants are certainly different than developmental centers, and the economic effects would be expected to differ correspondingly. To a significant extent, though, the topics that must be addressed by a study of local economic effects are known from the literature on plant closures, and a few studies have been done on the results of hospital closures. This report will rely on the literature regarding both types of closure.

LSC staff estimate that the closure of Montgomery will reduce spending in its local economy by between $8.1 million and $10.8 million in a transitional year during which some former Montgomery staff will be searching for new jobs. After the transitional year, LSC staff estimate that the closure will reduce spending by between $4.1 million and $5.4 million. Similarly, the closure of Youngstown is estimated to reduce spending in its local economy by between $12.6 million and $16.8 million during the transitional year, and by between $8.3 million and $11.0 million in subsequent years.

The remainder of this section of the report presents a review of existing literature on the closing of facilities, and describes LSC staff's attempts to estimate the impact of the closures of Montgomery and Youngstown on the local economies.

Existing Literature

LSC staff conducted searches of the economics literature using *EconLit*, a database of published research compiled by the American Economic Association. LSC staff ran searches on the phrases "center for individuals with developmental/intellectual disabilities," "developmental center closure," "hospital closure," and "plant closure." The first two searches yielded no article citations, while the third search yielded 44 citations on the topic of hospital closure. Most of the 44 publications dealt with unrelated, or only slightly related, subjects. For example, one of the articles focused on the effects of the closure on staff of the facility closed, especially the effects on their stress levels and job satisfaction (on subsequent jobs), while another focused on whether the projected cost savings from closure were achieved and how they might be achieved.[142]

[142] The first article cited was Havlovic, S.J., Bouthillette, F., & van der Wal, R. (1998). *Coping with Downsizing and Job Loss: Lessons from Shaughnessy Hospital Closure*. **Canadian Journal of Administrative Sciences**, 15(4), pp. 322-332. The hospitals studied were located in British Columbia. The second article

Among the articles more directly relevant to this section of the report, one examined the economic impact of hospital closure on rural communities in Georgia, Tennessee, and Texas during the period 1998-2000.[143] The article concluded that the counties that experienced these hospital closures did not appear to be significantly adversely affected in economic terms relative to those that did not suffer such a closure. Another article assessed the effects of urban hospital bailouts on social welfare and the local economy.[144] The article found that the cost savings from the five hospital closures studied more than offset the reduction in patient welfare. The findings in these two articles support the view that in the long run the closure of a state facility could leave a local economy no worse off than it was before the closure, but the findings may not be generalizable, i.e., it may be that closures that were not studied could leave their communities worse off.

The fourth search, on the term "plant closure," yielded 249 article citations, but only 21 were related to job loss. The titles and dates of publication of these citations were manually inspected to determine whether they appeared to be helpful in producing this report, and several resulting titles were consulted. To supplement this search method, LSC staff manually inspected recent online issues of *Monthly Labor Review*, a U.S. Department of Labor (DOL) publication.

The publications consulted were useful primarily in providing general information about the types of economic costs associated with facility closures. The types of costs described in these publications are frequently mentioned whenever this issue arises: job loss and associated unemployment and wage loss, reduction in local tax base, reduction in purchased services, and secondary effects like loss of revenue to area businesses due to reduction in workers' collective purchasing power. Estimating such costs does not require any complicated statistical model – just careful application of economic principles. For example, a worker displaced from one job may find another locally. In such a case, that worker's entire income from the first job is not lost – the loss to the local economy would depend on the size of the income on the new job relative to the initial income and the length of time the worker was unemployed between jobs.

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was Verma, Kiran (1996). *Covert Costs of Privatization: Lessons from the Closure of Three Public Chronic Care Hospitals in Massachusetts.* **Public Budgeting & Finance**, 16(3), pp. 49-62.

[143] Ona, Lucia Y, Hudoyo, Agus, & Freshwater, David (2007). *Economic Impact of Hospital Closure on Rural Communities in Three Southern States: A Quasi-Experimental Approach*. **The Journal of Regional Analysis & Policy**, 37(2), pp. 155-164.

[144] Capps, Cory, Dranove, David, & Lindrooth, Richard C. (2010). *Hospital Closure and Economic Efficiency*. **Journal of Health Economics**, 29, pp. 87-109.

It is not possible to predict the labor market experience of developmental center staff after the developmental centers are closed. Some staff may move smoothly into new jobs that pay comparably well, but some may experience an intervening spell of unemployment, and some may require years to find jobs that pay as well as their current jobs. Still others may move out of the area to accept jobs comparable to ones they held at the developmental center. The U.S. Bureau of Labor Statistics (BLS) periodically conducts studies of the experiences of workers dislocated from jobs they had held for (at least three) years. BLS conducts a biennial supplement to the Current Population Survey (CPS), which serves as the source of information for these studies. These studies would probably be the best basis for projecting the experience of Montgomery and Youngstown staff members.

According to the most recent survey, covering workers who were displaced between January 2011 and December 2013, 61% of such workers were re-employed by January 2014, 21% were unemployed,[145] and 18% were no longer in the labor force (meaning that they were not employed and were also not actively looking for employment). Of the displaced workers who lost full-time jobs during that period and were re-employed full-time in January 2014, 52% of the workers were earning as much or higher wages than they did at their lost job. Of those employed by January 2014, about 27% were paid at least 20% less than they had been paid on the previous job.

Data like these have been found to vary over time. For example, in the preceding version of the survey, concerning workers who were displaced between January 2009 and December 2011, 56% of such workers were re-employed by January 2012, 27% were unemployed (36% in prior survey), and 17% were no longer in the labor force; of those employed, 46% were earning as much or more than they did prior to dislocation. Generally speaking, then, labor market experiences improved for the average displaced worker during the more recent period surveyed. There was similar improvement from the survey prior to that one, covering workers displaced during the period January 2007 through December 2009.

One reason for such variation is that business cycle conditions change: the faster the economy is growing the better the labor market for workers, generally speaking. The economy was growing steadily, if slowly, leading up to January 2014, so the improved economy presumably contributed to the improvements in displaced workers' experiences.[146]

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[145] The median number of weeks unemployed after dislocation for similar workers who found a job in previous surveys was 5.5 weeks (Helwig, R.T. (June 2004). *Worker Displacement in a Strong Labor Market*. **Monthly Labor Review**, pp. 54-68).

[146] During the 2007-2009 recession, the U.S. unemployment rate reached 10.0% in October 2009, but had declined to 8.3% in January 2012 and 6.6% in January 2014.

A second factor behind the improvement, though, is presumably related to the fact that workers with more years of education typically have better labor market experiences after dislocation. For example, the median weeks of unemployment before finding a job in the January 2002 survey was 5.6 weeks for workers with a bachelor's degree, but 10.5 weeks for workers who did not graduate high school.[147] With each passing year, the average number of years of education of workers in the labor market increases, which suggests that the labor market experiences of dislocated workers as a group, might be expected to improve over time.

We do not yet know whether recent economic growth will continue between now and the closure of the developmental centers. Global Insight, an economic forecasting firm, projected in January 2015 that growth in the national economy would continue at annualized quarterly rates of at least 2.3% between now and the end of FY 2017. If that proves to be close to reality, then the staff affected by the closures may have results fairly comparable to those found in the most recent BLS survey, though we do not know if they will be better or worse. In addition, LSC staff do not know if these national statistics are fairly representative of the experience of Ohio workers.

Despite these sources of uncertainty, LSC staff believe the most recent BLS survey results are the most helpful guide to the expected experience of developmental center staff affected by these closures, subject to one qualification. Data provided by ODODD indicate that over 27% of Montgomery staff and 24% of Youngstown staff are expected to be eligible for the ERIP. With such high retirement eligibility statistics for these groups, the percentage of staff members exiting the workforce as a result of the closures is likely to be significantly higher than the 18% national rate given above.[148] The analysis below assumes all eligible staff with more than 25 years of service credit will retire and continue to stay in the community, and correspondingly reduces the percentages unemployed, otherwise out of the labor force, or employed in new jobs.

In addition to the direct impact on the local economies of the developmental center closures, there will be secondary effects; economists often refer to these as "multiplier effects." When a local business loses the Youngstown Developmental Center

[147] Helwig, R.T. (June 2004). *Worker Displacement in a Strong Labor Market*. **Monthly Labor Review**, pp. 54-68. The relationship between unemployment duration and educational attainment is not uniform in the survey cited. The median duration of unemployment for high school graduates was 4.4 weeks, and the median for associate's degree holders was 4.8 weeks. Advanced degree holders restored the more typical experience, with a median unemployment duration of 4.0 weeks.

[148] The actual percentages of employees that left the workforce at the previously closed developmental centers, Apple Creek and Springview, were lower than the 18% national average; 15% of total employees at Apple Creek participated in the ERIP plan while 10% of Springview employees took advantage of the plan.

(for example, or one of the center's employees) as a customer, that business experiences a reduction in sales and profits. The reduction in profits means that the owner is forced to reduce spending in the local economy somewhat. The business may need to reduce its workforce in response. Because of these multiplier effects, a $1.00 reduction in direct spending in the local economy typically leads to a reduction in overall economic activity of more than $1.00. The ratio between the overall reduction in economic activity, including multiplier effects, and the reduction attributable to the direct reduction in spending is known as "the multiplier."

LSC staff do not know of any universally accepted value for the multiplier for a developmental center closure and its surrounding local economy. Moreover, the precise value probably depends on a number of characteristics of the developmental center and its local economy; for example, occupational mix at the developmental center, geographical area of the center, transportation links with other economies, or the types of industries that make up the local economy. LSC staff have asked Global Insight about the size of the multiplier that their economic model implies for a developmental center closure in Ohio. They report that their model implies a multiplier value between 1.5 and 2.0. This means that a $1.00 reduction in direct spending in Ohio translates into an overall reduction in economic activity in Ohio of between $1.50 and $2.00, after allowing for multiplier effects.

Montgomery Developmental Center

The Montgomery Developmental Center is located in Huber Heights, Ohio in Montgomery County. The center employed 191 staff members during the second quarter of FY 2015, before the February 20, 2015 announcement of its intended closure. According to BLS, 232,170 Montgomery County residents were employed in January 2015,[149] making Montgomery's employment approximately 0.1% of overall employment in the county. The unemployment rate in Montgomery County that month was 6.3%, without any seasonal adjustment, slightly higher than the unadjusted statewide figure of 6.1% (and higher than the seasonally adjusted statewide figure of 5.1%). The local labor market is probably adequately defined as Montgomery County, since approximately 51% of the calendar year (CY) 2014 Montgomery payroll is attributable to residents of that county. An increase of 191 in the number of unemployed workers would increase the Montgomery County unemployment rate from 6.3% to 6.4%.

Montgomery, because it is a state institution, does not pay property taxes. ODODD projects that the total amount of local income taxes that would be withheld from employees' checks during the 2015 tax year would be $170,404, based on the

[149] This number is somewhat fewer than the number employed during December 2014 (233,877), but slightly more than were employed the preceding January (222,875).

staffing level in effect in CY 2014. Nearly the entire amount of revenue loss would be borne by the city of Huber Heights, the place of employment, although Dayton, Springfield, and Trotwood will lose some income tax revenue as a city of residence for some of the staff (Dayton, $7,050; Springfield, $4,197; and Trotwood, $1,684). In addition, the closure would result in lost school district income taxes paid by some employees, based on their school district of residence; ODODD reports that $4,511 will be withheld for school district taxes from the Montgomery payroll in CY 2015.

Montgomery's expenditures for operating expenses and capital expenses amounted to $117,740 in Montgomery County (in FY 2014), $124,344 in Greene County, $37,552 in Warren County, and $30,279 in Clark County.[150] The total spending in Montgomery County or any of its neighboring counties for center purposes in FY 2014 was $309,915, an increase from $201,624 in FY 2013. In addition to this spending by the developmental center itself, residents spent $3,315 in Montgomery County in FY 2014, and $3,783 in FY 2013. Total direct spending in Montgomery County and its neighboring counties thus amounted to $313,230 in FY 2014 and $205,407 in FY 2013 (after adjusting for rounding).

In addition to a reduction in direct purchases in the local economy by Montgomery, the closing of the developmental center will mean a reduction in purchasing power in the local economy due to the loss of jobs. The FY 2014 payroll for Montgomery was approximately $12.0 million. Of this total amount, about $9.3 million is attributable to Montgomery County residents and approximately $2.4 million to surrounding counties' residents (Clark, $1.3 million; Greene, $0.6 million; Miami, $0.1 million; Warren, $0.1 million; and Butler, $0.1 million). The remainder is attributable to residents outside of the surrounding counties.

As explained above, the entire payroll will not be removed from the local economy. In fact, of the 191 employees prior to the closure announcement, ODODD estimates that 51 will be eligible for the one-year ERIP ODODD plans to offer. Of these 51, 16 will have at least the full 30 years of service credit needed for full retirement benefits regardless of age.[151] Additionally, eight employees age 55 will have at least 25 years of service credit and 27 employees age 60 will have five years of service credit

[150] Montgomery also spent $111 in operating expenses and capital expenses in Miami County.

[151] Sub. H.B. 343 of the 129th General Assembly created three transition groups for PERS members under the Traditional Pension Plan – Group A (members who are eligible to retire or will be eligible not later than January 7, 2018), Group B (members who will be eligible to retire not later than January 7, 2023, or have 20 years of service credit on that date), and Group C (all other members). To retire with unreduced allowance after January 7, 2018, a regular member in Group A must have (1) at least 30 years of service credit or (2) have five or more years of service credit and be age 65 or older. A member may also retire before reaching age and service eligibility with a reduced allowance.

and will be eligible to participate in the ERIP plan. For a PERS member who retires with full benefits, the benefits replace 66% of the member's final average salary (FAS).[152] The amount increases by 2.5% of FAS for each additional year of service over 30 years for certain members.[153] The payroll loss attributable to the current staff that take the ERIP would be somewhat more than 34%[154] of the total payroll of those staff members. Similarly, of the remaining 140 staff members, some purchasing power would be replaced by a new job, unemployment compensation, another job with ODODD, or by some combination of the three.[155]

LSC staff conducted an analysis of payroll data to estimate the overall reduction in purchasing power in the local economy associated with job loss. The data, supplied by ODODD, were organized by years of service with ODODD. The estimate assumes that all staff with more than 25 years of service would retire and stay in the community. It assumes that 50% of staff with 20 to 24.9 years of service and 25% with 10 to 19.9 years of service would remain employed with ODODD and commute to their new job, thus staying in the community. These assumptions yield an estimate that, of overall staff payroll, 22.5% would stay in the community due to retirees and continuing employees of ODODD.

In addition, some staff with under 25 years of service are likely to find new jobs in the community. As noted in the "**Existing Literature**" section, LSC staff believe that the best data for estimating the purchasing power loss for this group is from the BLS surveys of displaced workers. If the experience of Montgomery staff is similar to that of these workers, as described in the *Monthly Labor Review* articles cited above, LSC staff estimates that an additional 18.6% of overall payroll would be retained in the local economy by workers finding new jobs, allowing for a period of unemployment while they look for new jobs. This estimate is based on several assumptions, which are based on one of the two *Monthly Labor Review* articles. Although based on actual experience of other displaced workers, LSC staff selected the data from whichever of the two surveys

[152] For members in Groups A and B, FAS is the average of the three highest years or the last 36 months of earnable salary while contributing to the PERS Traditional Plan.

[153] A member's retirement benefits are based on a formula: for members in groups A and B, the retirement benefits equal 2.2% of FAS multiplied by the first 30 years of service credit, plus 2.5% of FAS for each year or partial year of service credit over 30.

[154] It would be more than 34% because the retirement benefit is based on final average pay, rather than the current pay rate, and because of those staff (51) who qualify for retirement on the basis of a combination of age and years of service.

[155] Some employees may exercise "bumping" rights to assume the same or similar job at one of the neighboring developmental centers. Whether those employees would move out of the county to be closer to their new jobs or continue to contribute their wages to the local economy is unknown.

yielded the lower figure for purchasing power retained in the local economy. Thus, LSC staff believes that the resulting estimate of purchasing power retained in the community is more likely to be underestimated than overestimated. The estimate also does not reflect the receipt of unemployment compensation, which would further, at least temporarily, cushion the local economy. The specific assumptions used are described in "**Appendix 10-1**."

When displaced workers experience unemployment before finding new jobs, the local economy experiences a corresponding reduction in purchasing power on a transitional basis. Once workers have moved into new jobs and the transition is over, some of the purchasing power that is lost while those workers are unemployed is restored to the local economy. LSC staff estimates that the 18.6% of payroll retained by workers who find new jobs, allowing for periods of unemployment, would increase to 41.1% on a continuing basis after they have found employment.

During the transitional period, the overall reduction in purchasing power in the local economy is roughly halved by developmental staff receiving pensions, remaining employed with ODODD, or finding new jobs. LSC staff estimate that purchasing power amounting to about 57.1% of current payroll would remain in the local economy, without allowing for unemployment compensation.[156] Thus, the $12.0 million loss of payroll in the local economy falls to approximately $5.1 million. Once the transitional period is over and more workers have found new jobs, the percentage of payroll retained in the local economy is estimated to increase to 79.7%. The loss of payroll then falls further from $5.1 million to $2.4 million.

The total reduction in spending in the local economy, due both to the end of direct spending by Montgomery and to reduced purchasing power associated with the loss of jobs, is estimated to be approximately $5.4 million compared with FY 2014 during the transitional period. After the transitional period, the reduction in spending in the local economy falls to $2.7 million compared with FY 2014. Neither amount represents the full impact on the local economy. As explained in the "**Existing Literature**" section, there are multiplier effects on the economy. Because the multiplier for local economies is assumed to be between 1.5 and 2.0, the total reduction in economic activity in the local economy could be between $8.1 million and $10.8 million during the transitional period, and between $4.1 million and $5.4 million after the transition.

[156] ODODD estimates that it will spend approximately $520,000 on providing unemployment compensation to staff during FY 2018. Their estimate was derived independently and is not necessarily derived consistently with LSC staff estimates.

Youngstown Developmental Center

The Youngstown Developmental Center is located in Mineral Ridge, Ohio in Mahoning County. The facility employed 221 staff members during the second quarter of FY 2015, before the February 20, 2015 announcement of its intended closure. According to BLS, 99,960 residents of Mahoning County were employed in January 2015,[157] making the center's employment approximately 0.2% of overall employment in the county. The unemployment rate in Mahoning County that month was 7.1%, without any seasonal adjustment, significantly higher than either the seasonally unadjusted (6.1%) or the adjusted (5.1%) statewide figure. An increase of 221 in the number of unemployed workers would increase the Mahoning County unemployment rate from 7.1% to 7.3%.

Mahoning County residents account for approximately 39% of the Youngstown CY 2014 payroll. Youngstown staff are drawn from several neighboring counties, but principally from Trumbull County, which accounts for approximately another 22% of payroll. Since residents of these two counties account for approximately 61% of Youngstown payroll, the local labor market might be better defined to include both Mahoning and Trumbull counties. The total number of employed workers in Mahoning and Trumbull counties in January 2015 was 185,507, meaning that Youngstown's employment is approximately 0.1% of overall employment in the local labor market if LSC staff define it to include both counties. An increase of 221 in the number of unemployed workers would increase the unemployment rate in the combined Mahoning County/Trumbull County labor market from 7.3%[158] to 7.4%.

Youngstown, because it is a state institution, does not pay property taxes. ODODD projects that the total amount of local income taxes that would be withheld from employees' checks during the 2015 tax year would be $70,679,[159] based on the staffing level in effect in CY 2014. This revenue loss would be shared between the cities of Youngstown ($32,207), Warren ($5,367), Niles ($7,153), McDonald ($4,936), Campbell ($4,273), Hubbard ($3,851), Girard ($2,333), Struthers ($1,737), Garrettsville ($1,170), Columbus ($1,003), and several other municipalities (none of which would lose more than $1,000), based on the employees' places of residence. In addition, the closure would result in lost school district income taxes paid by employees based on their

[157] This number is somewhat fewer than the number employed during December (101,393), but slightly more than were employed the preceding January (98,559).

[158] The unemployment rate in Trumbull County alone in January was 7.5% before any seasonal adjustment.

[159] This amount is less than for Montgomery despite the staff being somewhat larger at Youngstown. This is because Youngstown Developmental Center is not in an incorporated area, and many employees do not live in incorporated areas, meaning that no local income tax is due.

residence; ODODD reports that approximately $2,492 will be withheld for school district taxes from Youngstown payroll in CY 2015.

Youngstown's operating and capital expenditures, excluding payroll and utilities, amounted to $864,133 in Mahoning County (in FY 2014), $962,022 in Trumbull County, $224,193 in Columbiana County, and $19,848 in Portage County. The total spending in all four counties for developmental center purposes in FY 2014 was about $2.1 million, up from $2.0 million in FY 2013. In addition to this spending by the developmental center itself, residents spent $3,588 in Mahoning County in FY 2014, and $3,666 in FY 2013. Total direct spending in Mahoning County and its neighboring counties thus amounted to $2.1 million in FY 2014 and $2.0 million in FY 2013 (after adjusting for rounding).

In addition to a reduction in direct purchases in the local economy by Youngstown, the closing of the developmental center will mean a reduction in purchasing power in the local economy due to the loss of jobs. The current payroll for Youngstown is approximately $13.6 million. Of this total, about $8.1 million is attributable to Mahoning County residents and approximately $4.6 million to Trumbull County residents. Columbiana County residents account for $0.4 million, Stark County residents account for $0.1 million, and Portage County residents account for $0.1 million. The remainder goes to residents outside of the surrounding counties.

As explained above, the entire payroll will not be removed from the local economies. In fact, of the 221 employees prior to the closure announcement, ODODD estimates that 54 would be eligible for the one-year ERIP ODODD plans to offer. Of these 54, 26 will have the full 30 years of service credit or more, an additional nine will have at least 25 years of service, and 19 employees age 60 will have five years of service credit. As explained above, the payroll loss attributable to the current staff that take the ERIP would be somewhat more than 34% of the total payroll of those current staff. Similarly, of the remaining 167 staff members, some purchasing power would be replaced by a new job, unemployment compensation, another job in ODODD, or some combination of the three.

LSC staff conducted an analysis of payroll data to estimate the overall reduction in purchasing power in the local economy associated with job loss. The data, supplied by ODODD, were organized by years of service with ODODD. Similarly to the estimate for the Montgomery Developmental Center, the estimate assumes that all staff with more than 25 years of service would retire and stay in the community. It assumes that 40% of staff with 20 to 24.9 years of service would remain employed with ODODD and commute to their new job, thus staying in the community, and that 20% of staff with 10 to 19.9 years of service would do so. These assumptions yield an estimate that, of overall staff payroll, 22.0% would stay in the community due to retirees and continuing employees of ODODD.

In addition, some staff with under 25 years of service are likely to find new jobs in the community. As noted in the "**Existing Literature**" section, LSC staff believe that the best data for estimating the purchasing power loss for this group is from the BLS surveys of displaced workers. If the experience of Youngstown staff is similar to that of these workers, LSC staff estimate that an additional 16.4% of overall payroll would be retained in the local economy by workers finding new jobs, allowing for a period of unemployment while they look for new jobs. Although based on actual experience of other displaced workers, LSC staff selected the data from whichever of the two BLS surveys yielded the lower figure for purchasing power retained in the local economy. Thus, we believe the resulting estimate of purchasing power retained in the community is more likely to be underestimated than overestimated. The estimate also does not reflect the receipt of unemployment compensation, which would further cushion the local economy. The specific assumptions used are described in "**Appendix 10-1**."

When displaced workers experience unemployment before finding new jobs, the local economy experiences a corresponding reduction in purchasing power on a transitional basis. LSC staff estimate that the 16.4% of payroll retained by workers who find new jobs, allowing for periods of unemployment, would increase to 38.4% on a continuing basis after more workers have found employment.

During the transitional period, the overall reduction in purchasing power in the local economy is roughly halved by staff receiving pensions, remaining employed with ODODD, or finding new jobs. LSC staff estimate that purchasing power amounting to about 53.3% of current payroll would remain in the local economy, without allowing for unemployment compensation.[160] Thus, the $13.6 million loss of payroll in the local economy falls to $6.4 million. Once the transitional period is over and more workers have found new jobs, the percentage of payroll retained in the local economy is estimated to increase to 74.4%. The loss of payroll then falls further from $6.4 million to $3.5 million.

The total reduction in spending in the local economy, due both to the end of direct spending by Youngstown and to reduced purchasing power associated with the loss of jobs, is estimated to be approximately $8.4 million compared with FY 2014 during the transitional period. After the transitional period, the reduction in spending in the local economy falls to $5.5 million compared with FY 2014. As previously mentioned, these amounts do not represent the full impact on the local economy. There are multiplier effects on the economy. Because the multiplier for local economies is assumed to be between 1.5 to 2.0, the total reduction in economic activity in the local

[160] ODODD estimates that it will spend approximately $520,000 on providing unemployment compensation to staff during FY 2018. Their estimate was derived independently and has not been audited by LSC staff.

economy could be approximately between $12.6 million and $16.8 million during the transitional period, and between $8.3 million and $11.0 million after the transition.

APPENDIX 10-1

Assumptions Employed in Estimates of Reductions in Purchasing Power in Local Economies Associated with Job Loss

The U.S. Bureau of Labor Statistics (BLS) conducts periodic surveys of workers who are displaced from a job after at least three years of service. Survey results are reported in articles published in *Monthly Labor Review*, a U.S. Department of Labor publication. The results of these surveys served as the basis for several assumptions employed by LSC staff in estimating the reduction in purchasing power in local economies due to the loss of jobs at the Montgomery and Youngstown developmental centers.

LSC staff estimated the percentage of payroll at each developmental center that was associated with staff who would either retire or retain a job with ODODD at another developmental center (and continue to live in the local economy).[161] The following table presents the key assumptions used in determining the subsequent labor market experience of other Montgomery and Youngstown staff, derived from findings of two BLS surveys. That experience underpins the estimate of income loss for those staff members who are estimated to go on to find a new job in the local economy.

Percentage of staff who…	Assumed %	Helwig (2004)[162]	Hipple (1999)[163]
Move out of community	8.9%	7.9%	8.9%
Remain unemployed for over a year	25.8%	25.8%	17.5%
Percentage of those remaining who…			
Find a job within 5 weeks	44.4%	48.9%	44.4%
Take between 5 and 14 weeks to find a job	17.8%	22.4%	17.8%
Take between 14 and 26 weeks to find a job	15.5%	14.0%	15.5%
Take more than 26 weeks to find a job	22.2%	14.6%	22.2%

Those workers who are assumed to find a job within five weeks are assumed to lose two and one-half weeks of income. Workers who are assumed to find a job after five weeks of unemployment but before 14 weeks are assumed to lose nine and one-half

[161] The assumptions underlying these stages of the estimation process are explained in "**Section 10**" of the report itself.

[162] Helwig, R.T. (June 2004). *Worker Displacement in a Strong Labor Market*. **Monthly Labor Review**, pp. 54-68.

[163] Hipple, S. (July 1999). *Worker Displacement in the Mid-1990s*. **Monthly Labor Review**, pp. 15-32.

weeks of income. Workers who are assumed to find a job after 14 weeks of unemployment but before 26 weeks are assumed to lose 20 weeks of income. Workers unemployed for over 26 weeks are assumed to lose 39 weeks of income. Staff that are assumed to find a job are assumed to find one that pays the same as their job at the developmental center; both surveys find that the (slight) majority of displaced workers who find a job find a higher paying one.[164]

[164] This section does not assume that developmental center staff find jobs in the same field. As "**Section 6**" of this study explains, the state pays more than most private employers for several job classifications employed in the field of residential care for individuals with developmental disabilities.

SECTION 11. ALTERNATIVES AND OPPORTUNITIES FOR CONSOLIDATION WITH OTHER FACILITIES

LSC staff requested that ODODD provide information on the number of beds that could reasonably be made available in each developmental center, if necessary. ODODD provided LSC staff with an estimate of reasonable capacity for each developmental center. "Reasonable capacity" is defined as the number of residents that could be accommodated at a developmental center without using floors not currently in use in multiple story buildings. Generally, ODODD does not use multiple story residential buildings because of fire concerns. ODODD's estimates include all possible residential sites at each of the developmental centers. However, ODODD's reasonable capacity estimates do not take into account vacant buildings because they cannot be easily restored or are not appropriate for restoration.

Table 39 shows the current census and the reasonable capacity of each developmental center. As the table shows, the current reasonable capacity in developmental centers is 1,138. Available capacity, which includes currently open beds and beds that could be created by expanding the licensed capacity at each developmental center, is 364.

Table 39. Available Capacity in Ohio's Developmental Centers

Developmental Center	Census*	Reasonable Capacity	Available Capacity
Cambridge	93	117	24
Columbus	110	190	80
Gallipolis	90	128	38
Mount Vernon	101	115	14
Northwest	96	144	48
Southwest	94	154	60
Tiffin	97	130	33
Warrensville	93	160	67
Total	**774**	**1,138**	**364**

*As of April 21, 2014

Source: Developmental Center Weekly License Capacity Report and DC Superintendents

SECTION 12. HOW THE CLOSING OF MONTGOMERY AND YOUNGSTOWN DEVELOPMENTAL CENTERS RELATES TO ODODD'S PLAN FOR THE FUTURE OF DEVELOPMENTAL CENTERS IN THIS STATE

In researching this issue, LSC staff questioned ODODD staff, including Director John Martin. ODODD has stated that "the remaining eight developmental centers will serve as a resource for technical assistance to counties in their catchment areas as well as a residential option for those persons needing short-term stabilization or those adjudicated by the court to require developmental services." ODODD also stated that downsizing at developmental centers will continue to occur as opportunities for living in the community increase. ODODD plans to continue to evaluate the future of developmental centers. Director Martin commented that, "the decision to close the Youngstown and Montgomery Centers was not easy. Because the number of people living in DCs has declined by more than 40% in the last eight years, and will continue to decrease by about 90 people each year, it no longer makes sense to continue operating ten centers." In addition, Director Martin stated that he continues to see a need for state-run facilities to serve individuals with complex behavioral needs as well as court commitments.

LSC staff also reviewed two documents that further provide insight into ODODD's philosophies about serving individuals with developmental disabilities. The first document discussed in this section is the final report of the Strategic Planning Leadership Group (SPLG). This report seems to support the move toward further development of services in the community. The second document discussed is the Ohio Department of Developmental Disabilities Capital Plan for Fiscal Years 2015-2020. In the Capital Plan, ODODD discusses its prioritization of the rebalancing of services from institutional settings to home and community-based services. Finally, this section provides data on the decreasing population in developmental centers, as well as information on discharges, deaths, and admissions at state-operated developmental centers over the last few years, showing that the number of individuals leaving developmental centers exceeds the number entering them.

Strategic Planning Leadership Group

In November 2013, ODODD convened the SPLG consisting of advocates, self-advocates, providers, and representatives from county DD boards. SPLG's mission was to examine roles and philosophies, and to develop a strategic vision for the next ten years. SPLG's work was influenced by two key events: (1) new rules were issued by CMS that more clearly define home and community-based services versus services provided in an institutional setting and (2) ODODD received a letter from Disability Rights Ohio (DRO) that outlined concerns regarding the developmental disabilities

system in Ohio. The SPLG met every month between November 2013 and November 2014. In addition, four forums were held, whereby interested parties and individuals were able to hear presentations and ask questions of presenters, which included national, state, and provider organizations. The forums covered the following topics: the CMS rule, work opportunities, community living, and listening to people/family supports.

In December 2014, the SPLG issued its final report, which established 24 benchmarks for the future.[165] These benchmarks, among other things, address the new CMS rules and the DRO letter. They are organized into three areas: (1) experiences of people with disabilities and their families, (2) service delivery, and (3) infrastructure. Some of the benchmarks that might impact community-based services are the following:

- Nursing services are available in all waivers;
- Direct support professionals earn a livable wage for services provided to people with disabilities;
- No one is living in developmental centers – community supports are adequate and funded;
- The total number of ICF beds is reduced to 2,800 beds (50% reduction);
- Waiting lists are reduced by offering 500 new L1, 600 new SELF, and 100 new IO waivers each year;
- The number of quality, affordable, and accessible housing units in safe neighborhoods is increased by 25%;
- People with disabilities have subsidies and resources to live in the community; and
- A comprehensive developmental disabilities waiver is available.

To read the complete list of benchmarks or the report in its entirety, refer to this link: http://dodd.ohio.gov/OurFuture/Documents/SPLG%20Final%20Report.pdf.

Role of Developmental Centers

ODODD included information on its prioritization of the rebalancing of services from institutional settings to home and community-based services in its capital plan for FY 2015-FY 2020:

> More than 30,000 Ohioans with developmental disabilities now receive services through home and community-based waivers. Between 2006 and 2013, the

[165] A "yes" vote was required of at least 75% of the SPLG members before a benchmark could be adopted. According to the report, ODODD staff did not vote in this process.

number enrolled on Medicaid-funded waivers has nearly doubled. In addition, we continue to explore other Medicaid-funded waiver options to assist those individuals living in institutional settings who want to move into the community.

In accordance with the Office of Health Transformation's goal to rebalance long term care, DODD is committed to both the downsizing of its Developmental Centers, large facilities, and the conversion of ICF/IID funded beds to home and community-based waiver settings.

The capital plan also acknowledges that, "even though we are reducing the census at the DCs, we anticipate that they will be part of the continuum of care and choice for individuals."

Population in Developmental Centers

The number of individuals in developmental centers has been decreasing over time. The chart below shows the population in developmental centers from 1957 to 2015.

Chart 4: Population in Developmental Centers

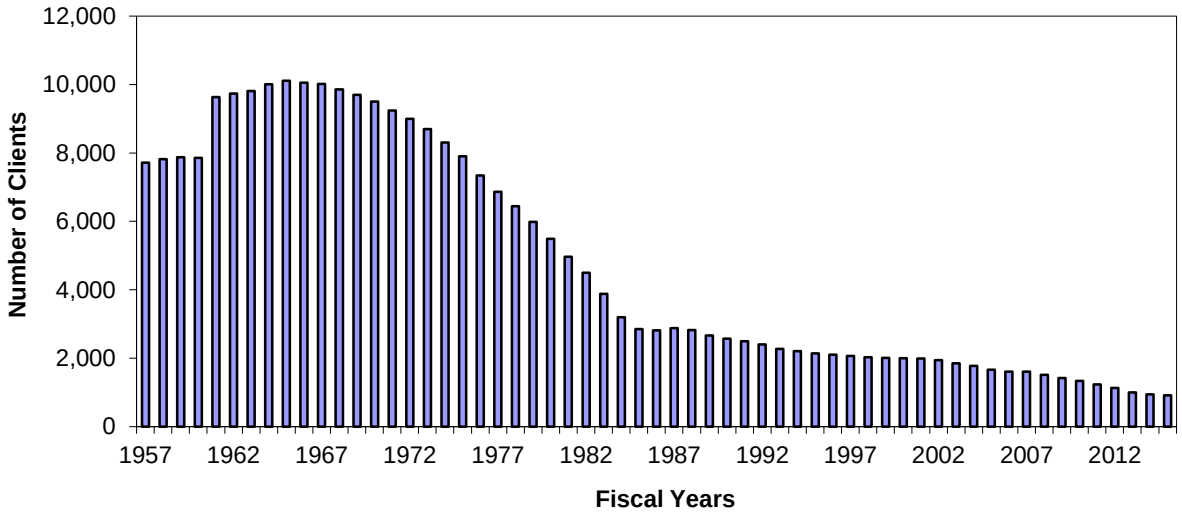

Table 40 below provides data on admissions, discharges, and deaths at state-operated developmental centers over the last few years. This data shows that the number of individuals leaving developmental centers exceeds the numbers entering them.

Table 40. Admissions, Discharges, and Deaths				
Calendar Year	**Admissions**	**Discharges**	**Deaths**	**Net Change***
2012	100	164	39	(103)
2013	126	220	28	(122)
2014	146	147	33	(34)

*Admissions minus the sum of discharges and deaths

SECTION 13. THE EFFECT OF THE CLOSURE OF MONTGOMERY AND YOUNGSTOWN DEVELOPMENTAL CENTERS UPON THE STATE'S FISCAL RESOURCES AND FISCAL STATUS

Summary

ODODD provided LSC staff with cost reduction estimates for the closures of Montgomery and Youngstown developmental centers. Having reviewed the estimates and assumptions, LSC staff finds the estimated net cost reductions shown in Table 41 below to be reasonable and reflect the assumptions LSC staff believe should be included. The net estimated reductions in costs stated for FY 2019 will continue annually thereafter, but can be expected to change over time due both to inflation and to reduction in the number of former residents who receive waiver services.

As seen from Table 41, for FY 2019 the state share of the total cost reduction is estimated at $6.3 million for Montgomery and $4.9 million for Youngstown for a total cost reduction of $11.1 million. The estimated costs for providing services to the former residents of the two centers, including community waiver match and rental assistance expenses are estimated to total $2.9 million. The net cost reduction to the state from the closures of Montgomery and Youngstown developmental centers is therefore estimated to be $8.2 million for FY 2019. The remainder of this report will briefly explain how the estimates are derived.

Table 41. Estimated Total Cost Reduction Due to Closing of Montgomery and Youngstown FY 2016-FY 2019

	FY 2016	FY 2017	FY 2018	FY 2019
Montgomery Developmental Center	$1,279,159	$2,975,920	$5,507,271	$6,285,118
Youngstown Developmental Center	$893,745	$2,096,283	$4,114,387	$4,860,547
Total Cost Reductions from Closures	**$2,172,904**	**$5,072,203**	**$9,621,658**	**$11,145,665**
Community Waiver Match Expenditures	$629,832	$1,915,799	$2,576,438	$2,583,263
Rental Assistance Expenditures	$86,400	$218,700	$351,000	$351,000
Net Cost Reduction	**$1,456,672**	**$2,937,704**	**$6,694,220**	**$8,211,403**

Source: ODODD

Net Cost Reduction Calculations

The estimates presented in Table 41 above take into consideration the change in operating costs (personal services, maintenance and supplies, and equipment) that would occur should the developmental centers close. The estimates also take into account the federal share of these expenditures, and are adjusted for continuing maintenance and security costs following closures, lost federal reimbursements for

bond interest payments, capital depreciation expenses, bed tax, ERIP costs, and unemployment compensation expenses. Furthermore, the estimates take into account the costs for continuing to provide services to the former residents. These costs include the community waiver match and rental assistance.

As an example, Table 42 below breaks down the Montgomery estimate found in Table 41 for FY 2018. FY 2018 was used because it contains examples of all the costs included in the cost reduction calculations except for ERIP costs, which are anticipated to occur in FY 2016 and FY 2017.

Table 42. Breakdown of Estimated Cost Reduction for Montgomery for FY 2018

	Without Closure	With Planned Closure	Difference
Operating Costs			
Personal Service	$15,488,132		$15,488,132
Maintenance & Supplies	$2,693,300		$2,693,300
Equipment	$92,700		$92,700
Total Operating Costs	**$18,274,132**		**$18,274,132**
State Share of Operating Cost Reduction			
Operating Costs: Not Eligible for Federal Reimbursement			$182,741
Operating Costs: Eligible for Federal Reimbursement			$18,091,391
State Match on Operating Costs			$6,829,500
State Cost Reduction (State Match + Nonreimbursable)			**$7,012,241**
Additional Costs Due to Closure			
Maintenance and Security		$350,000	
Lost Federal Reimbursement: Bond Interest Expense		$42,014	
Lost Federal Reimbursement: Depreciation Expense		$252,181	
Lost Federal Reimbursement: Bed Tax		$340,776	
Unemployment Compensation		$520,000	
Total Additional Costs Due to Closing		**$1,504,971**	**$1,504,971**
Savings before Waiver Match and Rental Assistance			**$5,507,271**
Less: Community Waiver Match			$1,308,038
Less: Rental Assistance			$178,200
Net Cost Reduction			**$4,021,033**

Source: ODODD

Table 42 lists Montgomery's FY 2018 estimated operating costs without closure, with the planned developmental center closure, and the difference. The difference is the total cost reduction. If Montgomery is to close by the end of FY 2017, the total operating cost savings is estimated at $18.3 million, which represents an increase of 3.4% over the estimated FY 2017 operating costs.

The federal government, via Medicaid reimbursements, would pay for some of these expenses if the developmental center continued to operate; therefore, it is necessary to determine the state's share of the operating cost reduction. ODODD estimates that 1% of operating costs are not Medicaid reimbursable. These include costs associated with probated individuals not eligible for Medicaid, clothing costs, and burial costs. Subtracting the nonreimbursable from the total operating cost difference yields the total operating costs eligible for federal reimbursement. Multiplying this by the state's share (about 38%) yields the state match amount for the estimated operating cost reduction. The state match amount plus the nonreimbursable amount equals the state share of the total cost reduction, which is estimated to be $7.0 million in FY 2018 for Montgomery.

After closing a developmental center, the state will continue to incur costs to maintain the property, including security for the buildings and grounds and general maintenance. These costs will continue until the state no longer owns the property. For Montgomery, these general maintenance and security costs are estimated at $350,000 in FY 2018.

The state can receive federal reimbursement for bond interest payments and capital depreciation expenses related to developmental centers. These amounts will vary depending on the asset and the life of the asset. When the developmental centers are no longer open, the state will lose federal reimbursement. When a developmental center is closed, the state will also lose federal reimbursement for bed tax. The loss of federal funds is estimated to total $634,971 for Montgomery in FY 2018.

Another cost component of closing the facility is unemployment compensation. ODODD assumes that 50 individuals at each facility will receive unemployment compensation, that the average weekly unemployment benefit for each employee will be $400, and that each employee will receive that benefit for 26 weeks. Therefore, unemployment costs are estimated to be $10,400 for each employee, or $520,000 for the 50 employees at each facility. These one-time costs are assumed to occur in FY 2018.

The additional costs from closing Montgomery, including maintenance and security costs, losses in federal reimbursements, and unemployment compensation costs, are estimated to total $1.5 million in FY 2018. Furthermore, the state will incur costs for the community waiver match and rental assistance for the residents of Montgomery, which are estimated to be close to $1.5 million.

The net cost reduction to the state from closing the Montgomery Center is therefore estimated to be $4.0 million ($7.0 million - $1.5 million - $1.5 million) for FY 2018.

Table 43 below shows a similar example for Youngstown. In FY 2018, the state share of the total cost reduction from closing the Youngstown Center is estimated at $5.6 million. The additional costs are estimated to total $1.5 million. The community waiver match and rental assistance expenses for Youngstown residents are estimated to total $1.4 million. The net cost reduction to the state from closing the Youngstown Center is estimated to be $2.7 million for FY 2018.

The combined net cost reduction from closures of Montgomery and Youngstown is estimated to total $6.7 million for FY 2018.

Table 43. Breakdown of Estimated Cost Reduction for Youngstown FY 2018

	Without Closure	With Proposed Closure	Difference
Operating Costs			
Personal Service	$13,669,285		$13,669,285
Maintenance & Supplies	$866,000		$866,000
Equipment	$52,000		$52,000
Total Operating Costs	**$14,587,885**		**$14,587,885**
State Share of Operating Cost Reduction			
Operating Costs: Not Eligible for Federal Reimbursement			$145,879
Operating Costs: Eligible for Federal Reimbursement			$14,442,006
State Match on Operating Costs			$5,451,857
State Cost Reduction (State Match + Nonreimbursable)			**$5,597,736**
Additional Costs Due to Closure			
Maintenance and Security		$350,000	
Lost Federal Reimbursement: Bond Interest Expense		$47,521	
Lost Federal Reimbursement: Depreciation Expense		$237,369	
Lost Federal Reimbursement: Bed Tax		$328,458	
Unemployment Compensation		$520,000	
Total Additional Costs Due to Closing		**$1,483,349**	**$1,483,349**
Savings before Waiver Match and Rental Assistance			**$4,114,387**
Less: Community Waiver Match			$1,268,400
Less: Rental Assistance			$172,800
Net Cost Reduction			**$2,673,187**

Source: ODODD

Note that there could be a one-time revenue gain realized if the property is sold. For more information on various continuing costs following closure, including potential revenue, please see "**Section 9**."

Community Medicaid Waiver Match Expenditure Calculations

When estimating the community Medicaid waiver match expenditures found in tables 41 through 43 above, ODODD took into consideration the type of waiver the individual would be on, the date it is estimated the client will be moving out of a developmental center, and the state's share of the transition costs. These Medicaid waiver costs, less the transition costs, will continue for the life of the resident. See "**Overview**" and "**Section 4**" for more information on the Medicaid waivers.

ODODD estimates that 33 individuals (40%) from Montgomery and 32 individuals (40%) from Youngstown will likely move onto waivers through FY 2018. It anticipates that individuals who transition from the Montgomery or Youngstown developmental centers to the community will primarily do so via the IO waiver. The IO waiver is an HCBS Medicaid waiver that provides federal financial participation (reimbursement) for certain Medicaid services for eligible persons residing in noninstitutional settings. This waiver provides services to approximately 18,003 individuals with developmental disabilities. The average annual cost per enrollee under the waiver was $64,032 in FY 2014. The As Introduced version of H.B. 64, the main operating budget bill of the 131st General Assembly, provides a rate increase of $2.08 per hour for one year to help with the transition from a developmental center to the IO waiver. Additionally, ODODD is currently working to gain approval from CMS to add nursing services to the IO waiver. According to ODODD, the cost of an individual transitioning from a developmental center to an IO waiver in FY 2014 was $104,271.

Services covered under an IO waiver include supported employment, adaptive/assistive equipment, environmental modifications, home-delivered meals, personal care, and transportation, among others. As with all waivers, the individual pays costs associated with room and board. However, a provision in the As Introduced version of H.B. 64 would allow ODODD to provide rental assistance to individuals who leave a developmental center for a waiver. The bill provides $1.0 million in each fiscal year for this provision.

Early Retirement Incentive Plan

ODODD will likely offer a one-year ERIP to eligible employees at Montgomery and Youngstown. It will be available to employees with 29 years or more of service, 24 years or more of service who are at least age 55, and four years or more of service who are at least age 60. The ERIP cost estimate is based on eligible employees as of June 30, 2016. As of this writing, the latest data available shows that 51 employees will be eligible at Montgomery. It is assumed that 50% of the 51 eligible employees will take

up the ERIP offer in FY 2016 and the other 50% will do the same in FY 2017. The ERIP costs for Montgomery in FY 2016 and FY 2017 are estimated to be $404,533 per year for a total of $809,066.

Like Montgomery, a one-year ERIP will also be offered to Youngstown employees. As of this writing, the latest data available shows that 54 employees will be eligible at Youngstown. The ERIP costs for Youngstown in FY 2016 and FY 2017 are estimated to be $592,666 per year for a total of $1,185,332.

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