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Employment as a Health Determinant in a Medicaid Population with Disabilities

Presented by Dr. Jean P. Hall

University of Kansas Institute for Health & Disability Policy Studies

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Employment as a Health Determinant in a Medicaid Population with Disabilities

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Background

- Evaluator of the Kansas Medicaid Buy-In, *Working Healthy*, since its inception in 2002
- Monitored changes in health, earnings, quality of life, and health expenditures over time
- Added a comparison group of Kansans with disabilities dually eligible for Medicaid and Medicare but not enrolled in the Medicaid Buy-In

KS Medicaid Buy-In, *Working Healthy*

- A work incentive program implemented July 1, 2002
- One of 45 state Medicaid Buy-Ins nationally
- Eligibility in Kansas:
  - 16-64 years of age
  - Income up to 300% of federal poverty level with disregards
  - Assets less than $15,000
  - Meet the SSA disability standard
  - Have verified earned income from competitive employment
  - Be a Kansas resident

Data Sources

- Longitudinal surveys of Buy-In enrollees to monitor employment, quality of life and health status over time
  - Demographics, including self-reported disability
  - Benefits information
  - Quality of Life (WHO-QOL)
  - Health status (SF-12)
  - Earnings and job type
  - Employment history and experiences
  - Buy-In satisfaction (enrollees only)
- Administrative data
  - Medicaid & Medicare claims
  - Income and taxes paid

KS Buy-In Demographics, 2011

- 1,278 enrollees as of December 2011
- Average age is 46.6 years*
- 48% male and 52% female*
- 90.9% white; 6.4% black; 0.9% Native American; 0.5% Asian; 1.3% unknown*
- 3.4% Hispanic*
- 83.4% single; 15.6% married; 1.0% unknown +
- 10.3% have children under age 19+
- 55.9% have at least some college+
- Average hourly wage is $8.79 and average hours worked per week is 17.1+

Data Sources: *Kansas Medicaid Management Information System (MMIS) and +*Working Healthy Satisfaction Surveys*

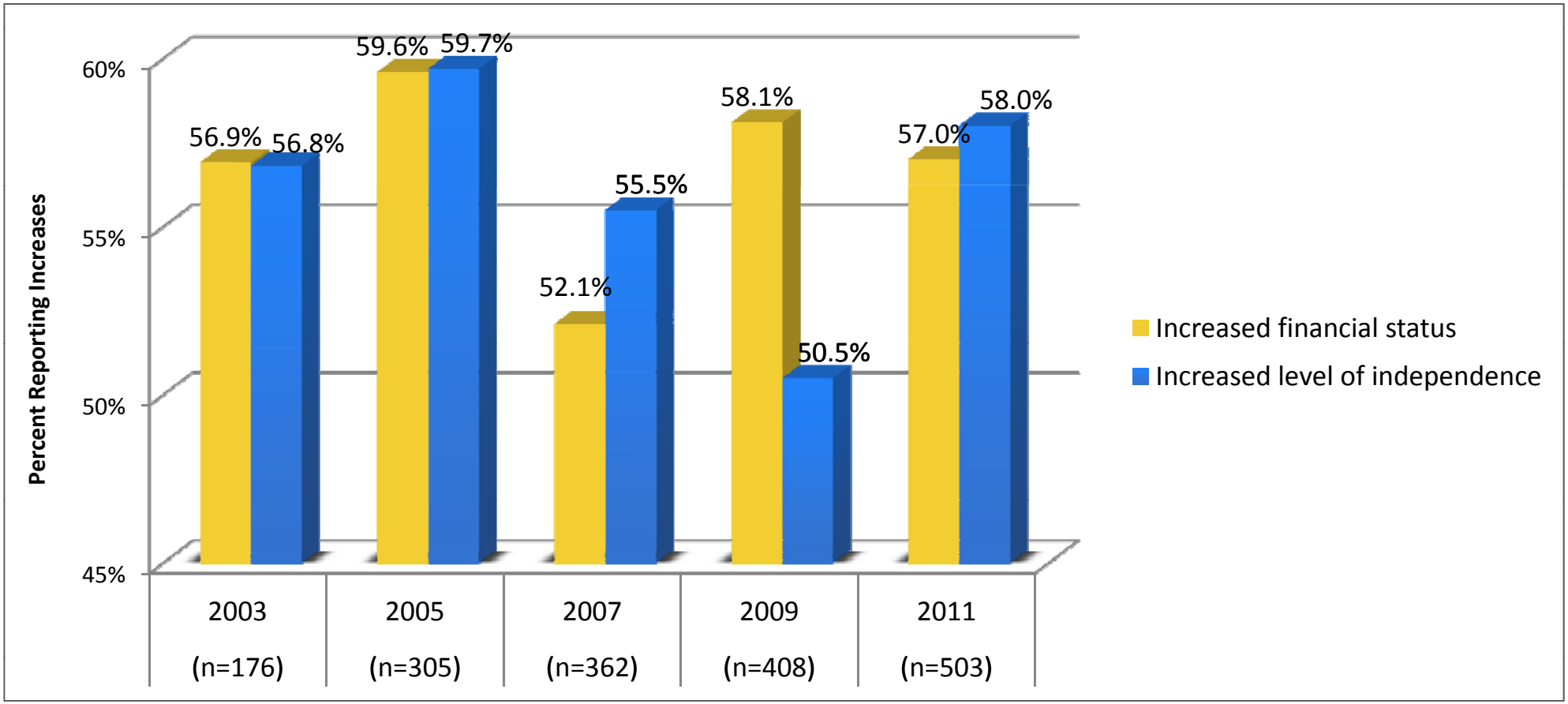
KS Buy-In Self-Reported Disability

Mental illness	36.0%
Physical disability & TBI	22.5%
Chronic illness	19.1%
Intellectual	14.0%
Sensory	4.1%
Undisclosed	4.3%

Data Source: 2011 Kansas Working Healthy Satisfaction Survey

Participant Experiences

Consistently, more than half of people enrolled in the KS Buy-In report increased financial status and level of independence since enrolling



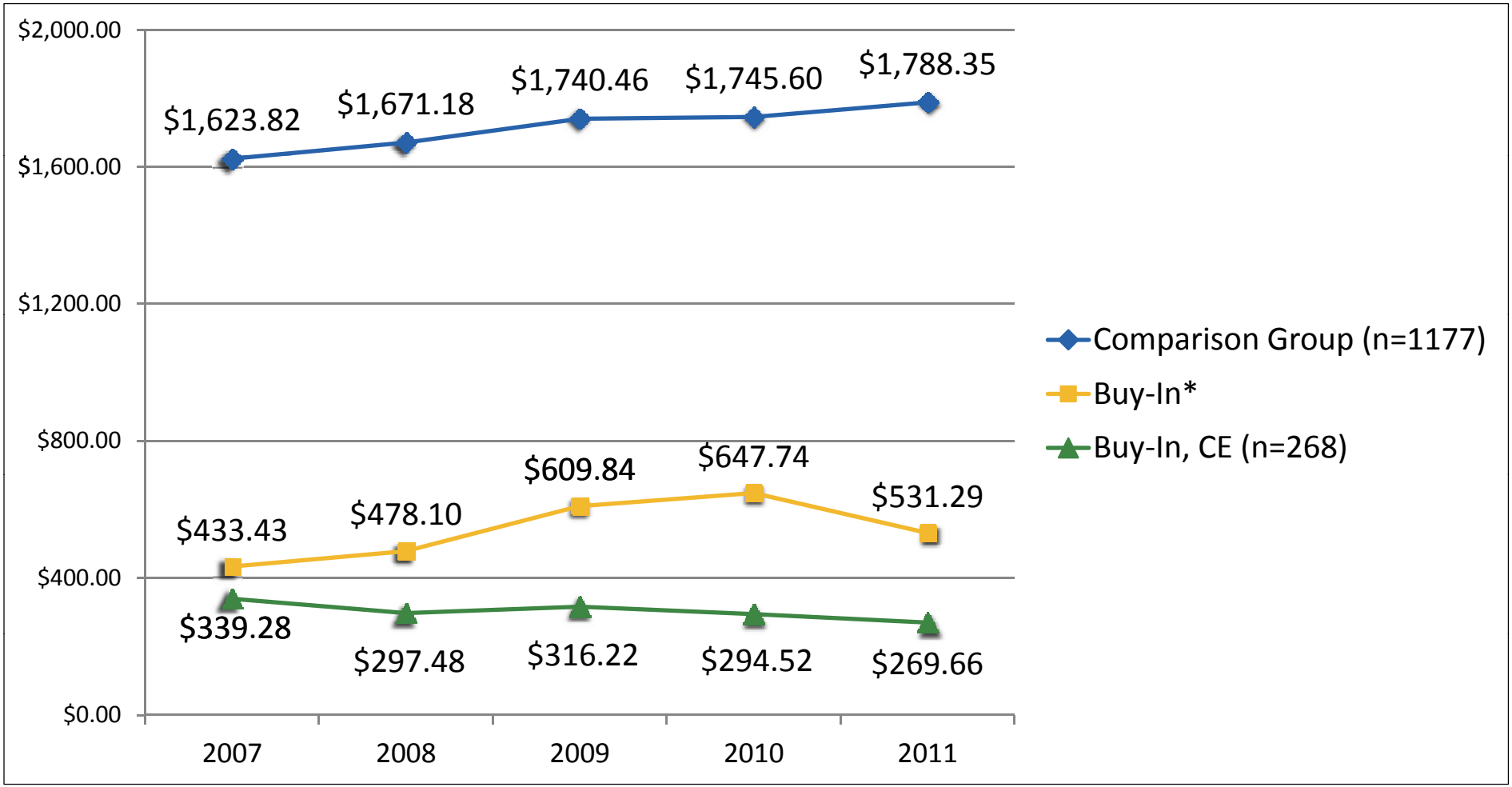
Data Source: *2003-2011 Working Healthy Satisfaction Surveys*

Buy-In Participants say…

- "I'm so grateful to the state of Kansas for this program – which helps me work when I'd be unable to without it."
- "I finally feel I am contributing to the economy."
- "My part-time job gives me meaning and purpose. I don't worry about paying for meds."
- "My self-esteem has improved. I'm more confident about myself and can take pride in working."
- "My stress is low…All of my illnesses are stabilized, I work, I stay socially involved and maintain my independence."

Medical costs stabilize

Medicaid Outpatient Expenditures (pmpm)



Notes: *n varies by year due to monthly enrollment & eligibility; 2007 n=1091 , 2008 n=1101, 2009 n=1227, 2010 n=1337, 2011 n=1546
Outpatient expenditures include medical, HCBS and mental health capitation costs. All figures have been adjusted to 2011 for medical inflation. Data Source: *Kansas Medicaid Management Information System (MMIS)*

Comparison Group Study

- Federally-funded NIDRR project began in 2010
- Able to survey a comparison group of dual-eligibles aged 16-64 and obtain their administrative data
- Interested in health status over time as compared to Medicaid Buy-In participants
- We thought that participation in the Buy-In would determine health status, but…

<u>EMPLOYMENT WAS THE KEY FACTOR</u>

Employed v. Not Employed

- For the purposes of this study 'employed' is defined using two survey items:
  - At any time in the past 30 days were you employed for pay?
  - How long have you worked at your current job?
    - 1 year or greater
- Buy-In population
  - 89% working
    - Employment is a requirement for participation (with grace periods)
    - Might not be employed/enrolled for full year prior
- Comparison group
  - 14% working

Demographics

	Employed (n=381)	Not employed (n=395)	Total Sample (n=810)
Gender	54.3% female	61.8% female	58.8% female
Age	Mean = 48.3 (SD = 10.8) Range = 20-64	Mean = 51.1 (SD = 9.4) Range = 25-64	Mean =49.8 (SD = 10.1) Range = 20-64
Race	89.5% White	82.8% White	86.1% White
Ethnicity	3.9% Hispanic	2.5% Hispanic	3.5% Hispanic
Education[a]	27.1% college degree	17.4% college degree	22.4% college degree
Marital Status	85.4% single	79.8% single	82.2% single
Parental Status	9.2% with children ≤ 18	14.0% with children ≤ 18	11.5% with children ≤ 18
Living Situation	50.7% live alone	49.9% live alone	49.3% live alone
Location[b]	35.7% frontier/rural 64.3% urban/metropolitan	36.7% frontier/rural 63.3% urban/metropolitan	36.8% frontier/rural 63.2% urban/metropolitan

Notes. Employed + not employed ≠ total sample due to item(s) non-response. [a]Includes associates, bachelors and graduate degrees. [b]Metropolitan = 150+ persons/square mile, Urban = 40-150 persons/square mile, Rural = 6-40 persons/square mile, Frontier = less than 6 persons/square mile. Data Sources: *2011 Kansas Disability & Health Survey* and *2011 Working Healthy Satisfaction Survey*

Self-Reported Disability Type

	Employed (n=381)	Not employed (n=395)	Total Sample (n=810)
Mental Illness [a]	35.2%	24.8%	29.6%
Physical Disability[b]	20.5%	32.2%	25.9%
Chronic Illness[c]	15.2%	26.1%	21.3%
Intellectual Disability	21.8%	8.1%	14.4%
Sensory	3.1%	3.0%	3.1%
Unreported	4.2%	5.8%	5.7%

Notes: [a]Mental Illness includes such conditions as schizophrenia, bipolar disorder, and depression. [b]Physical includes Traumatic Brain Injury. [c]Chronic Illness includes such conditions as end-stage renal disease, lupus, epilepsy, HIV/AIDS and cystic fibrosis.
Data Sources: *2011 Kansas Disability & Health Survey* and *2011 Working Healthy Satisfaction Survey*

Risk Behaviors & Health Status

	Employed (n=376)	Not employed (n=391)	*p*-value
Report fair or poor health[a]	43.6%	65.3%	< .0001*
Report poor or very poor QOL[a]	13.1%	24.0%	< .0001*
Smoking[b]	25.7%	44.8%	< .0001*
Obesity[b]	58.0%	55.6%	.283
Did not get dental care when needed[b]	31.6%	43.0%	< .001*

	Physical Health Component Summary Score[c]			
	Mean	**SD**	**95% CI**	***p*-value**
Employed (n=361)	39.9	12.4	(38.7,41.3)	< .0001*
Not Employed (n=368)	33.0	11.0	(31.9,34.1)	
	Mental Health Component Summary Score[c]			
Employed (n=361)	44.4	11.6	(43.2,45.6)	< .0001*
Not Employed (n=368)	40.2	11.7	(39.0, 41.4)	

Notes: [a] World Health Organization QOL Survey. [b] Behavioral Risk Factor Surveillance System (BRFSS) items [C] SF-12 Standard scores 1-100, national mean= 50 (SD=10); *Significant p < .01 Data Sources: *2011 Kansas Disability & Health Survey* and *2011 Working Healthy Satisfaction Survey*

Physical Health

Logistic Regression – odds of having a PCS[a] > sample mean

Variable	Odds Ratio (95% CI)	*p*-value
Age	0.964 (0.942, 0.985)	.0011*
Gender (female)	1.693 (1.073, 2.672)	.0238*
Education (associates degree+ v. no degree)	0.554 (0.345, 0.890)	.0145*
Employed 11-20 hrs/week v. not employed	2.020 (1.138, 3.586)	.0163*
Employed 21-30 hrs/week v. not employed	2.339 (1.055, 5.186)	.0365*
Employed 31+ hrs/week v. not employed	4.165 (1.590, 10.908)	.0037*
Physical disability v. mental illness	0.215 (0.123, 0.378)	< .0001*
Chronic illness v. mental illness	0.241 (0.133, 0.439)	< .0001*
Intellectual disability v. mental illness	2.516 (0.978, 6.470)	.0556

Notes: [a]SF-12 Standard scale scores 1-100, national mean= 50 (SD=10), sample mean = 36.5 (SD=12.2); . *Significant p < .05
Data Sources: *2011 Kansas Disability & Health Survey* and *2011 Working Healthy Satisfaction Survey*

Health Status (continued)

The **Chronic Illness and Disability Payment System (CDPS)**[a] utilizes primary and secondary diagnosis codes from Medicaid claims to describe the health status of enrollees. It assigns person-level risk scores and categorizes diagnoses into 20 major categories to look at individuals' disease burden. While these categories cannot provide a complete picture of an individual's disability (e.g. intellectual, SPMI), they do provide a measure of individual health status.

	CDPS Risk Score[b]					
	Mean	**SD**	**Min**	**Max**	**95% CI**	***p*-value**
Employed (n=381)	1.31	1.16	0.15	6.16	(1.20, 1.43)	
Not Employed (n=395)	1.68	1.15	0.18	12.05	(1.56, 1.80)	< .0001*
	Disease Burden (# of conditions out of 20 coded)					
Employed (n=381)	5.90	3.13	0.0	16.0	(5.60, 6.21)	
Not Employed (n=395)	7.35	3.50	0.0	16.0	(6.99, 7.71)	< .0001*

Notes: [a] cdps.ucsd.edu; [b]National mean for duals = 1.6 (Kronick, et. al. 2007); *Significant p < .01 Data Sources: Kansas Medicaid Management Information System (MMIS), 2010 claims; *2011 Kansas Disability & Health Survey; 2011 Working Healthy Satisfaction Survey*

CDPS Risk Score by Disability

Disability Type	CDPS Mean Risk Score		
	Employed	Not employed	*p*-value
Mental Illness[a] (n=234)	1.37 (SD=.74)	1.54 (SD=.83)	.115
Physical Disability[b] (n=206)	1.46 (SD=1.59)	1.75 (SD=1.26)	.149
Chronic Illness[c] (n=162)	1.58 (SD=1.45)	1.94 (SD=1.30)	.107
Intellectual Disability(n=114)	0.82 (SD=0.66)	1.10 (SD=0.88)	.078
Sensory (n=24)	1.67 (SD=1.91)	0.91 (SD=1.45)	.238
Overall (n=740)	1.31 (SD=1.16)	1.68 (SD=1.16)	< .0001*

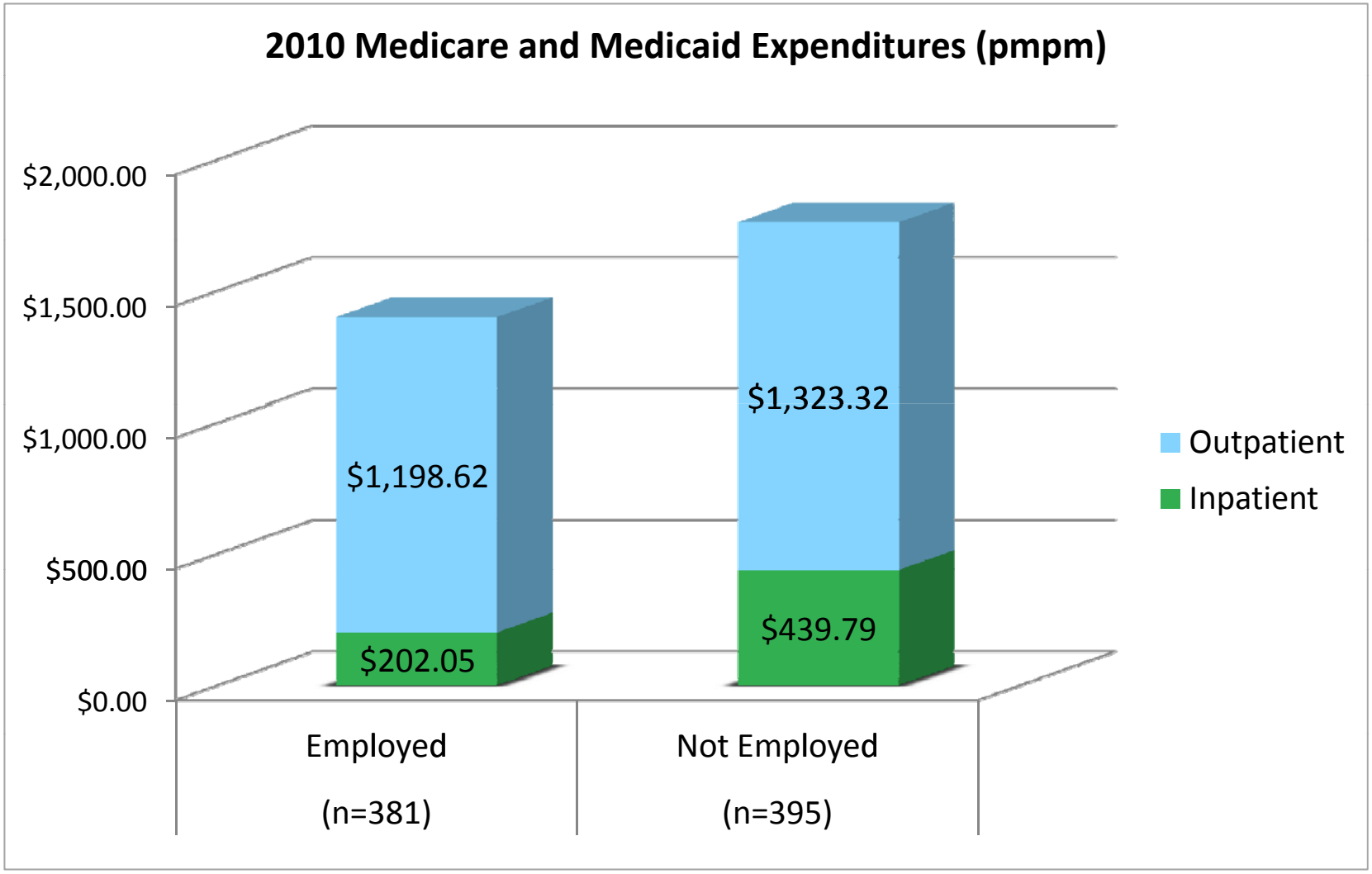
Notes. [a]Mental Illness includes such conditions as schizophrenia, bipolar disorder, and depression. [b]Physical includes Traumatic Brain Injury. [c]Chronic Illness includes such conditions as end-stage renal disease, lupus, epilepsy, HIV/AIDS and cystic fibrosis. *Significant p < .01. Data Sources: Kansas Medicaid Management Information System (MMIS), 2010 claims; *2011 Kansas Disability & Health Survey; 2011 Working Healthy Satisfaction Survey.*

CDPS Disease Burden by Disability

Disability Type	Disease Burden (mean # of conditions/20)		
	Employed	**Not employed**	***p*-value**
Mental Illness[a] (n=234)	6.61 (SD=3.14)	7.35 (SD=1.44)	.098
Physical Disability[b] (n=206)	5.92 (SD=3.16)	7.42 (SD=3.46)	.002*
Chronic Illness[c] (n=162)	6.02 (SD=3.21)	7.83 (SD=3.31)	.001*
Intellectual Disability (n=114)	4.66 (SD=2.73)	6.48 (SD=3.14)	.004*
Sensory (n=24)	4.79 (SD=3.17)	5.00 (SD=1.94)	.852
Overall (n=740)	5.90 (SD=3.13)	7.35 (SD=3.50)	< .0001*

Notes. [a]Mental Illness includes such conditions as schizophrenia, bipolar disorder, and depression. [b]Physical includes Traumatic Brain Injury. [c]Chronic Illness includes such conditions as end-stage renal disease, lupus, epilepsy, HIV/AIDS and cystic fibrosis. *Significant p < .01
Data Sources: Kansas Medicaid Management Information System (MMIS), 2010 claims; *2011 Kansas Disability & Health Survey; 2011 Working Healthy Satisfaction Survey.*

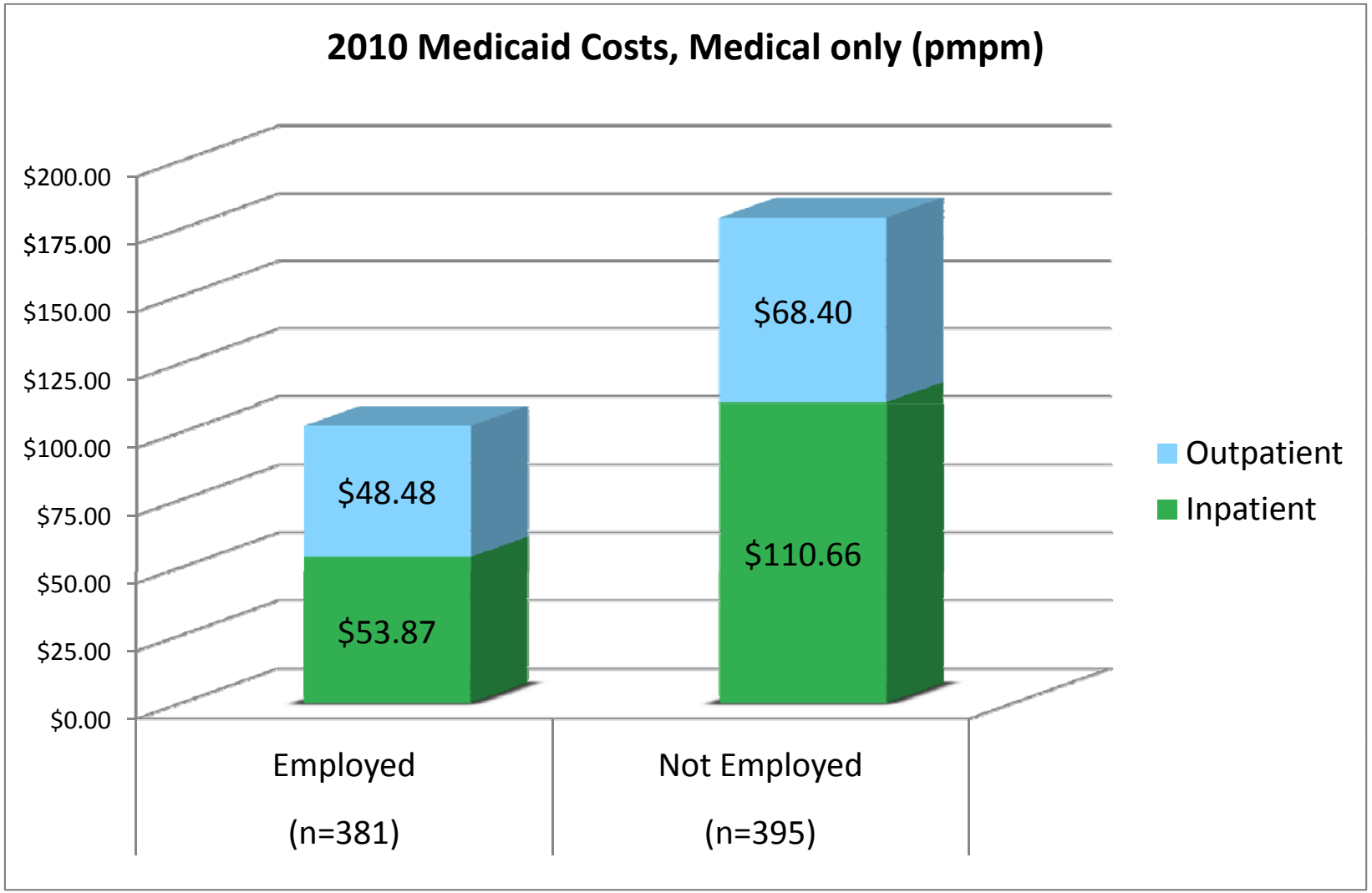
Expenditures



Notes: Outpatient claims include medical, mental health capitation rates, targeted case management and HCBS-related services (dental & drug claims not included)

Data Source: Kansas Medicaid Management Information System (MMIS) and CMS Medicare claims data files

Expenditures (continued)



Notes: Outpatient medical only claims include doctor & clinic visits, rehab, physical therapy.
Data Source: Kansas Medicaid Management Information System (MMIS)

So, working is a good thing, right?

- “I was actually discouraged by my case manager from going to work. She said, ‘you’re eligible for energy assistance, you’re eligible for commodities, you’re eligible for…’ and she listed things I never had done. She said, ‘you’ll lose all those things and you won’t make that much money’ and so she kind of discouraged me from working.”
- My therapist told the VR counselor ‘no way is she ready for a job’.” [person found & maintained job on her own]
- “I would like to work more but they [her physicians] are saying to take it slow.”
- “My doctor, my therapist, my case manager, all these people say don’t try to do any more.”

Survey of Kansas frontline case workers

- People with disabilities should be *encouraged* to work*:*
  - 56.5% agree or strongly agree
- People with disabilities *want* to work:
  - 42.2% agree or strongly agree
- People with disabilities are *able* to work:
  - 24.0% agree or disagree

Source: Kurth & Hall (2005)

Policy Barriers

- Disparate state and federal program eligibility requirements (e.g. Section 8 housing, food stamps)
- Social Security Administration (SSA) Disability Determination
- SSA's Ticket-to-Work Guidelines for Employment Networks (EN)
  - "What you (EN) cannot say or imply to a Ticket holder concerning their work goals: That a Ticket holder can work part time **indefinitely** with the support of an EN."

Conclusions & Discussion

- With the exception of obesity, employment has a positive relationship with all measures of health status and health risk behaviors across disability types. However, we cannot ***yet*** demonstrate a cause and effect relationship.
- Continued data collection & analyses
  - 2012 survey data being further analyzed
  - 2011 Medicare claims data (received Feb 2013)
  - 2011-12 Earnings & tax data
- Will allow for further in-depth analyses of trends
  - Which social determinants of health (e.g. employment) best predict health outcomes and overall quality of life for low-income, working age people with disabilities?

Preliminary Longitudinal Findings

	SF-12 PCS		SF-12 MCS	
	2011	**2012**	**2011**	**2012**
Employed (n= 178)	39.4	39.5	42.6	43.0
Not Employed (n= 160)	32.0	31.3	39.4	39.2

While not yet statistically significant, trends in physical and mental health scores from 2011 to 2012 begin to suggest that scores for the Employed group improve while scores for the Not Employed group decline.

Next Steps

- Other trends to explore? A major study limitation is only having two survey points.
- We plan to investigate differential trends among people with different types of disabilities
- Another interesting issue is whether accumulation of assets (allowed to a greater extent for Buy-In participants) is related to better health and employment outcomes
- Thoughts from a NIDRR perspective?

Breaking News: Assets

Looking only at the Buy-In group, who are allowed to accumulate cash assets > $2,000:

- Those with assets > $2K are have significantly better PCS, MCS and QOL scores
- Age is significantly, and negatively, correlated with assets>$2K (younger participants are more likely to have assets>$2K)
- Males are significantly more likely to have higher assets than females (23% v. 9%)
- People with intellectual disabilities are most likely to have higher assets (31%); people with physical disabilities are least likely (7%)
- Education, race/ethnicity, length of enrollment in the Buy-In were not associated with different levels of assets
- IMPORTANT IMPLICATIONS FOR ACA'S MEDICAID EXPANSION, WHICH DOES NOT CONSIDER ASSETS IN DETERMINING ELIGBILITY

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Additional Information

- This research will be published in the April issue of *Disability and Health Journal* (currently available via online to subscribers)

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