



“High-Utilizers”: Patterns of Healthcare Utilization for MI Medicaid Beneficiaries, 2011-2013

November 12, 2013

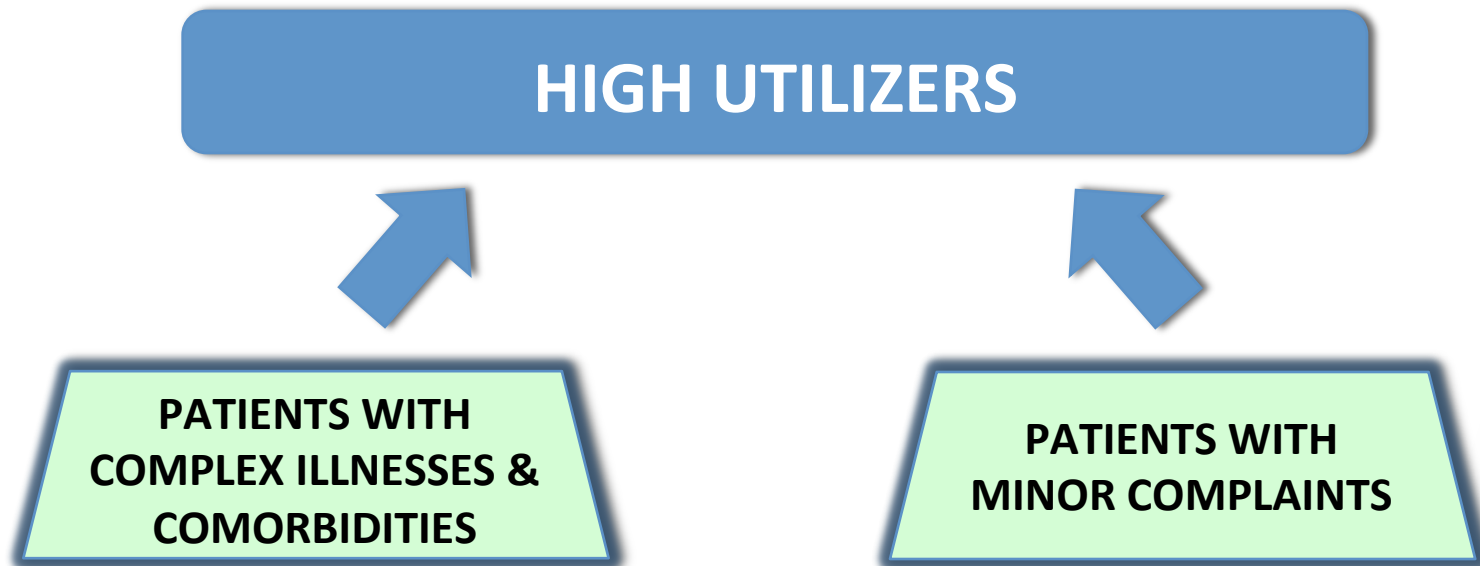
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Chief Medical Director, Office of Medical Affairs
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Michigan Department of Community Health

Healthy Michigan and ED Utilization

Healthy Michigan Act – PA 107

“MDCH shall convene a symposium to examine the issues of emergency department overutilization and improper usage”



Healthy Michigan and ED Utilization

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The diagram features a blue rounded rectangular box at the top containing the text 'HIGH UTILIZERS'. Below this box, a large red circle highlights a light green trapezoidal box on the left containing the text 'PATIENTS WITH COMPLEX ILLNESSES & COMORBIDITIES'. To the right of the red circle is a grey trapezoidal box containing the text 'PATIENTS WITH MINOR COMPLAINTS'. A grey arrow points from the grey box up and to the left towards the blue box.

HIGH UTILIZERS

**PATIENTS WITH
COMPLEX ILLNESSES &
COMORBIDITIES**

PATIENTS WITH
MINOR COMPLAINTS

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HIGH UTILIZERS

**PATIENTS WITH
COMPLEX ILLNESSES &
COMORBIDITIES**

KEY QUESTIONS:

- 1 – What proportions of Medicaid beneficiaries are high-utilizers?
- 2 – What are the characteristics of high-utilizers on Medicaid?

WHERE?

WHO?

WHY?

High-Utilizers in Michigan Medicaid - Methods

DEFINITION

Working definition from the national literature on high-utilizer patterns:

High-utilizers: 5 or more ED visits in one year

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DETAILS TO CONSIDER

- What constitutes a year?
- Medicaid – Fee-for-service (FFS) or managed care (MC)
- Time period

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- Time period
 - Jan 2011-Mar 2013 (most recent data)

High-Utilizers in Michigan Medicaid - Methods

FURTHER DETAILS TO CONSIDER

- What constitutes a year?
 - 12 months continuous enrollment
 - *But also interested in beneficiaries who may be on Medicaid for shorter periods*
- Medicaid – Fee-for-service (FFS) or managed care (MC)
 - Comparison of both
 - *Those on MC start for some period on FFS*
- Time period
 - Jan 2011-Mar 2013 (most recent data)
 - *Any changes over time?*

How Often Do MI Medicaid Beneficiaries Use the ED?

Number of ED Visits in a 12-Month Period	Number of Beneficiaries	Proportion of All Medicaid Beneficiaries
No ED visits		
1-2 visits		
3-4 visits		
5-7 visits		
8-10 visits		
11-15 visits		
16+ visits		

Data in table reflect Jan 2011-December 2011, as an example 12-month period;
no minimum enrollment

How Often Do MI Medicaid Beneficiaries Use the ED?

Number of ED Visits in a 12-Month Period	Number of Beneficiaries	Proportion of All Medicaid Beneficiaries
No ED visits	1,649,446	66.3%
1-2 visits		
3-4 visits		
5-7 visits		
8-10 visits		
11-15 visits		
16+ visits		

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1-2 visits	618,648	24.9%
3-4 visits	137,486	5.5%
5-7 visits		
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1-2 visits	618,648	24.9%
3-4 visits	137,486	5.5%
5-7 visits	53,872	2.2%
8-10 visits	14,753	0.6%
11-15 visits	7,696	0.3%
16+ visits	5,226	0.2%

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HIGH-UTILIZERS

THE MAJORITY OF HIGH-UTILIZERS AMONG MI MEDICAID BENEFICIARIES HAVE 5-7 VISITS IN A 12-MONTH PERIOD

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What Proportion of Michigan Medicaid Beneficiaries are High-Utilizers?

CATEGORIZATION OF MEDICAID BENEFICIARIES	Total Number of High-Utilizers	High-Utilizers as Proportion of Medicaid Beneficiaries
OVERALL	177,968	6.2%

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OVERALL	177,968	6.2%
Continuous enrollment only	161,699	7.6%

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Continuous enrollment only	161,699	7.6%
Continuous enrollment – FFS	36,635	9.4%
Continuous enrollment - MC	84,979	7.3%

Where Do High-Utilizing Michigan Medicaid Beneficiaries Live? – a County-by-County Analysis

5 Counties with HIGHEST Proportion of High-Utilizers		5 Counties with LOWEST Proportion of High-Utilizers	
?		?	

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Mason	9.5%	?	
Lake	8.9%		
Saginaw	8.8%		
Muskegon	8.7%		
Montcalm	8.3%		

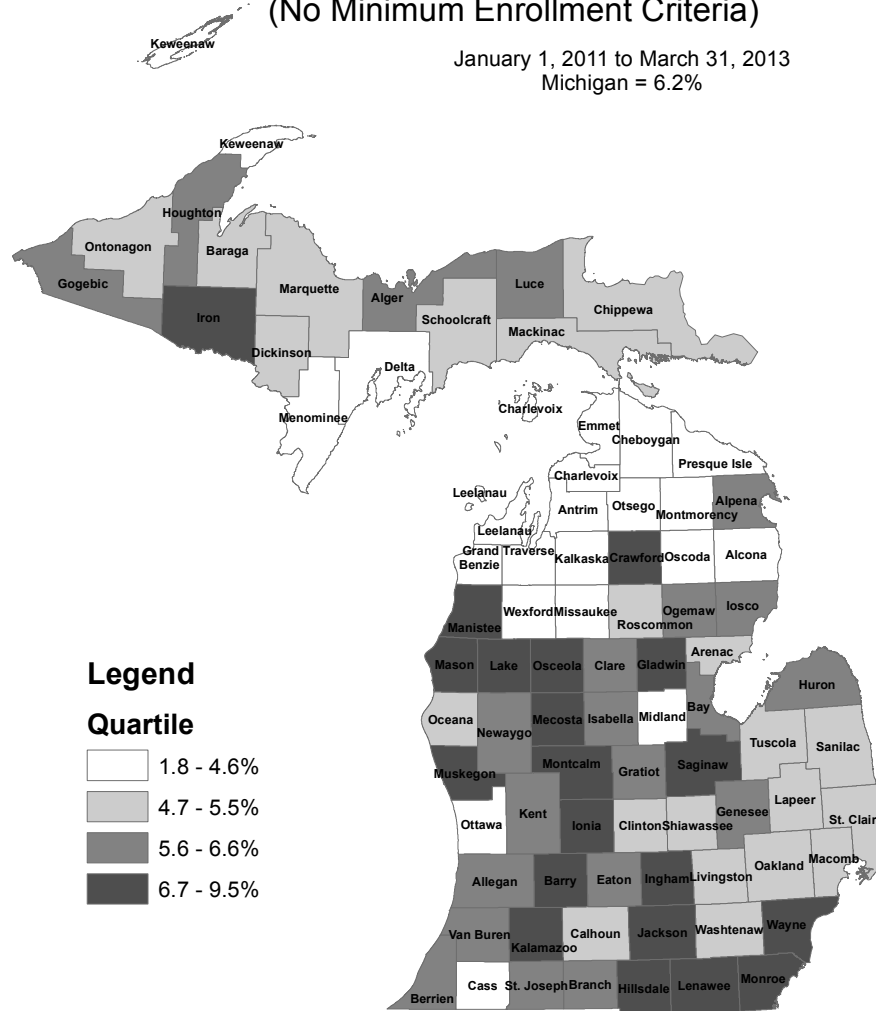
Where Do High-Utilizing Michigan Medicaid Beneficiaries Live? – a County-by-County Analysis

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Mason	9.5%	Antrim	2.8%
Lake	8.9%	Presque Isle	2.7%
Saginaw	8.8%	Montmorency	2.7%
Muskegon	8.7%	Missaukee	2.5%
Montcalm	8.3%	Leelanau	1.8%

Where Do High-Utilizing Michigan Medicaid Beneficiaries Live? – a County-by-County Analysis

Percentage of Medicaid Beneficiaries with
5+ ED Visits within a 12 Month Period
(No Minimum Enrollment Criteria)

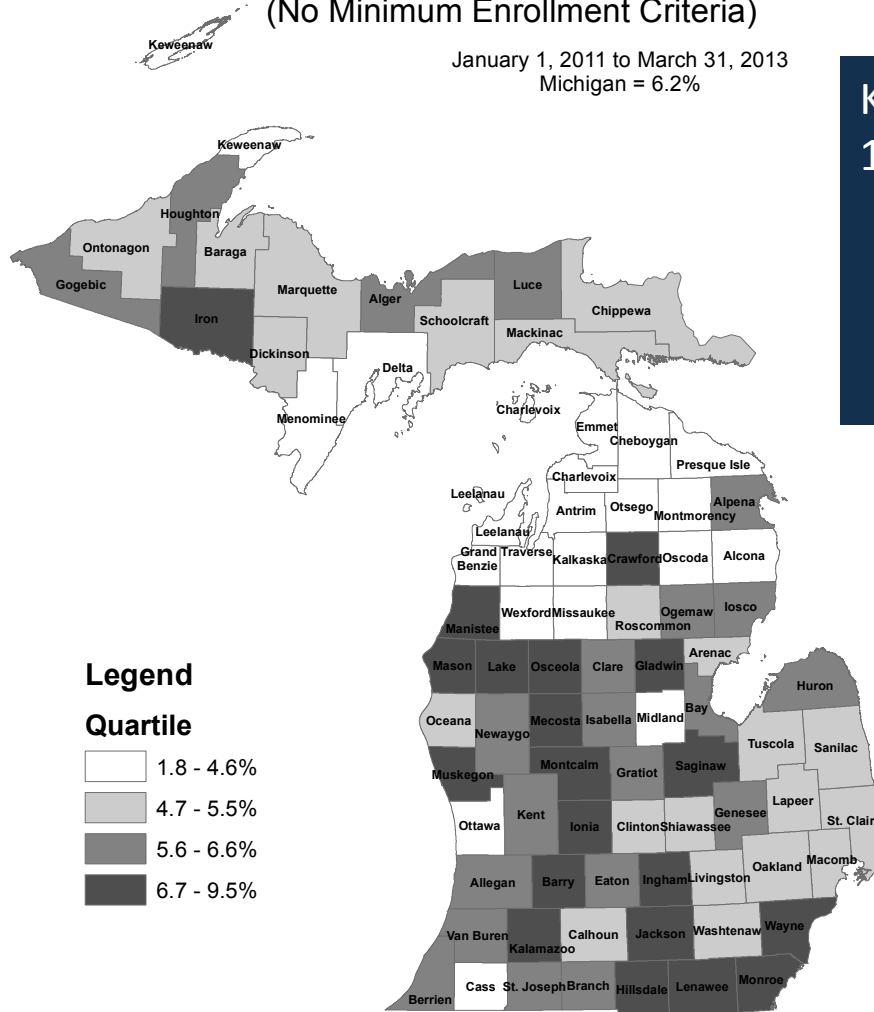
January 1, 2011 to March 31, 2013
Michigan = 6.2%



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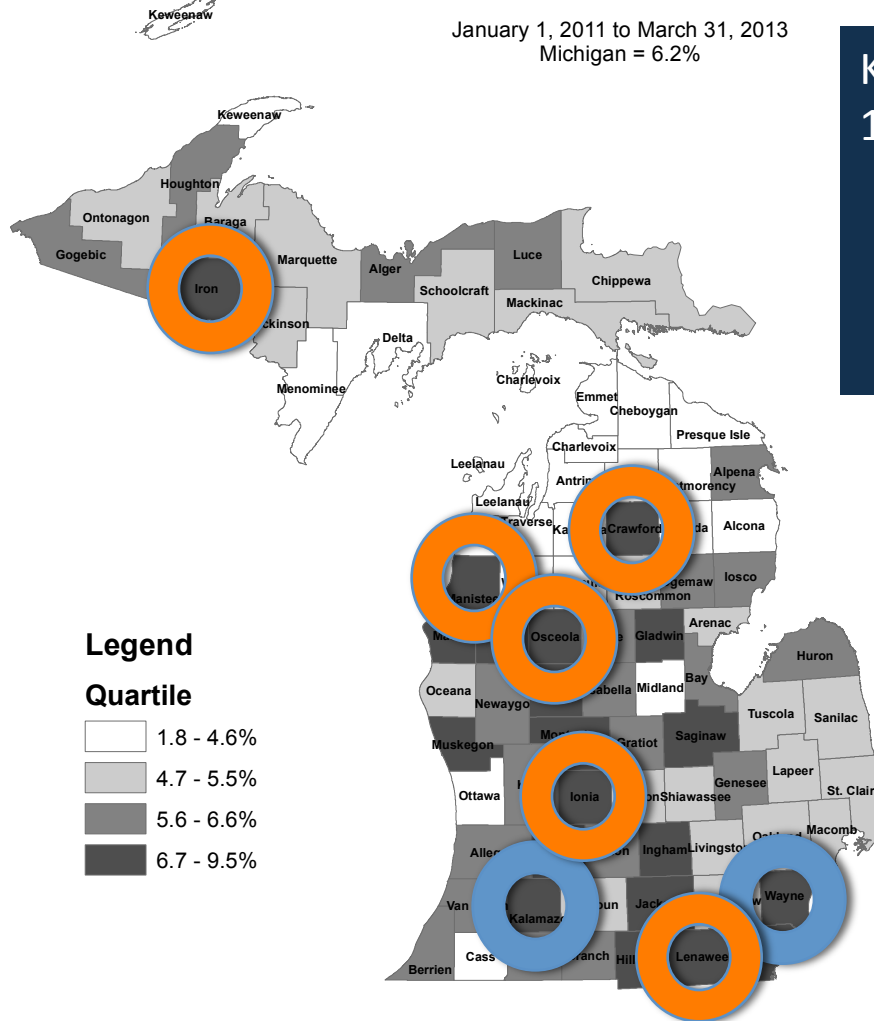


KEY INSIGHT:
1) Counties with highest rates of High-Utilizers on Medicaid are not all of the predominantly urban counties

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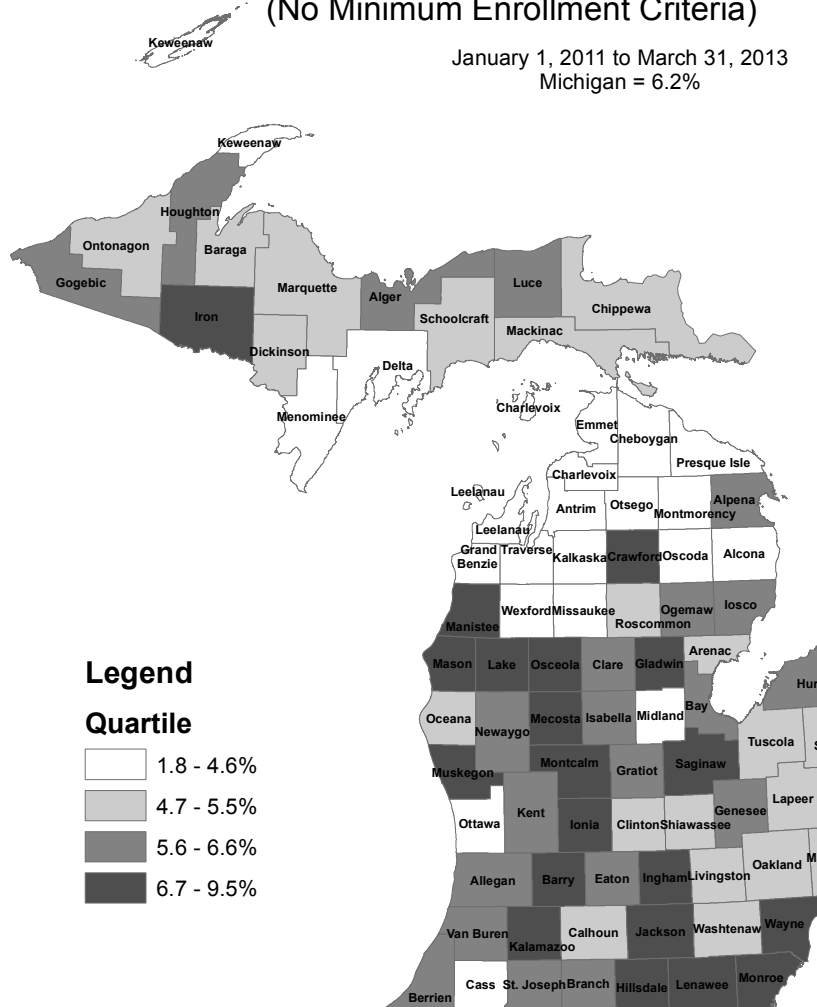
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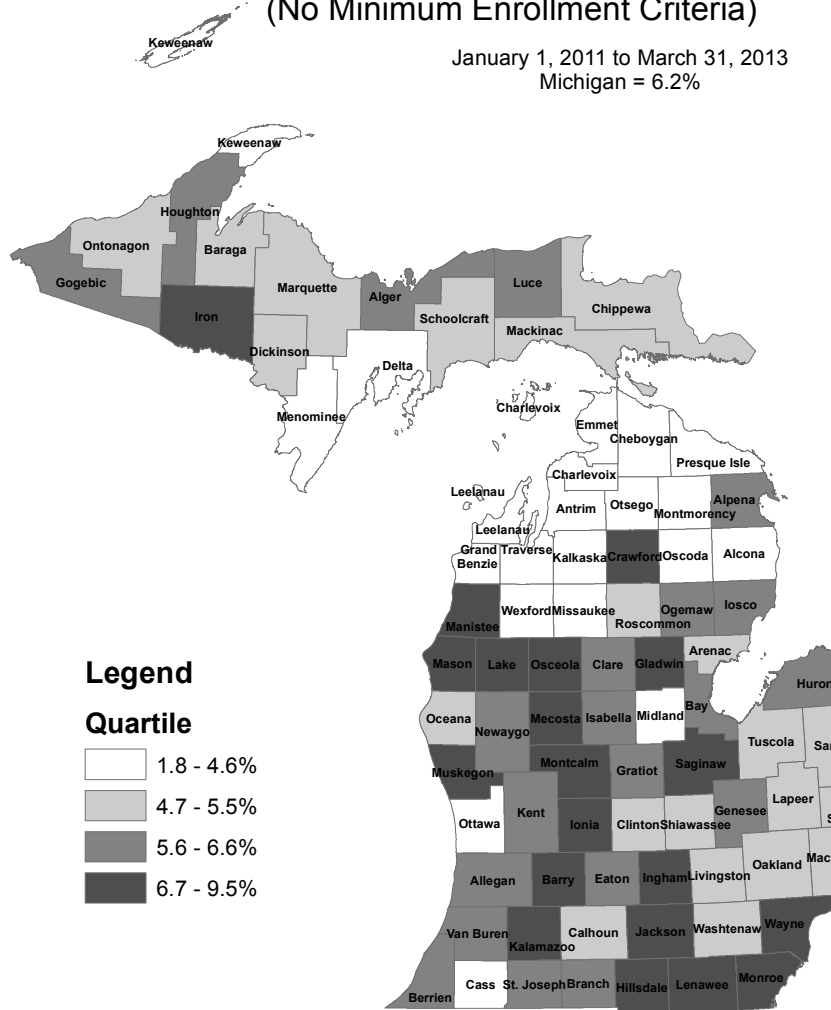
FOLLOW-UP QUESTION:
Do rates of high-utilization for MI Medicaid relate to ...

- Number of primary care providers in each county who accept Medicaid?
- Number of ED visits that are not admitted in each county (i.e. ED volumes)? (adjust both for county pop.)

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KEY INSIGHTS:

- 1) Counties with highest rates of High-Utilizers on Medicaid are not all of the predominantly urban counties
- 2) High-utilizer rates are not associated with the number of primary care providers in each county
- 3) High-utilizer rates correspond closely with the volume of non-admitted ED patients in each county

Who Are High-Utilizing Medicaid Beneficiaries?

DEMOGRAPHIC CHARACTERISTICS	Total Number of High-Utilizers	Total Number of Medicaid Beneficiaries	High-Utilizers as Proportion of Medicaid Beneficiaries
Total	177,968	2,848,493	6.2%
Age			
<2 years	19,598	306,016	6.4%
2-5 years	9,189	290,264	3.2%
6-10 years	5,240	328,433	1.6%
11-19 years	21,920	546,446	4.0%
20-34 years	52,562	575,068	9.1%
35-49 years	35,346	400,878	8.8%
50-64 years	23,562	221,771	10.6%
65+ years	10,549	179,558	5.9%

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 High-utilizer defined as 5+ ED visits within a 12-month period

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DEMOGRAPHIC CHARACTERISTICS	Total Number of High-Utilizers	Total Number of Medicaid Beneficiaries	High-Utilizers as Proportion of Medicaid Beneficiaries
Total	177,968	2,848,493	6.2%
Age			
0-19 years	55,947	1,471,159	3.8%
20-64 years	111,470	1,197,717	9.3%
65+ years	10,549	179,558	5.9%
Gender			
Male	62,190	1,230,753	5.1%
Female	115,778	1,617,740	7.2%

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What Are the Most Common Diagnoses in the ED for High-Utilizing Medicaid Beneficiaries?

RANK ORDER	HIGH-UTILIZERS PRINCIPAL DIAGNOSES	NON-HIGH-UTILIZERS PRINCIPAL DIAGNOSES
1	Abdominal pain (8.4%)	
2	Upper resp infections (5.3%)	
3	Chest pain (5.0%)	
4	Back problem (4.2%)	
5	Headache (4.2%)	
6		
7		
8		
9		
10		

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4	Back problem (4.2%)	
5	Headache (4.2%)	
6	Pregnancy-related complications (4.0%)	
7	Sprain (3.6%)	
8	Superficial injury (3.6%)	
9	Lower resp infections (3.3%)	
10	Nervous syst disorders (2.9%)	

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2	Upper resp infections (5.3%)	Abdominal pain (5.4%)
3	Chest pain (5.0%)	Superficial injury (5.3%)
4	Back problem (4.2%)	Sprain (4.4%)
5	Headache (4.2%)	Other injury (3.9%)
6	Pregnancy-related complications (4.0%)	
7	Sprain (3.6%)	
8	Superficial injury (3.6%)	
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3	Chest pain (5.0%)	Superficial injury (5.3%)
4	Back problem (4.2%)	Sprain (4.4%)
5	Headache (4.2%)	Other injury (3.9%)
6	Pregnancy-related complications (4.0%)	Otitis media (3.6%)
7	Sprain (3.6%)	Fever – unknown origin (3.5%)
8	Superficial injury (3.6%)	Chest pain (3.1%)
9	Lower resp infections (3.3%)	Lower resp infections (3.0%)
10	Nervous syst disorders (2.9%)	Pregnancy-related complications (2.8%)

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What Are the Most Common Diagnoses in the ED for High-Utilizing Medicaid Beneficiaries?

RANK ORDER	PRINCIPAL DIAGNOSES	SECONDARY DIAGNOSES
1	Abdominal pain (8.4%)	History of mental health condition (21.5%)
2	Upper resp infections (5.3%)	Hypertension (16.7%)
3	Chest pain (5.0%)	Other/unclassified (11.1%)
4	Back problem (4.2%)	Factors influencing health care (11.1%)
5	Headache (4.2%)	Nervous syst disorders (10.2%)
6	Pregnancy-related complications (4.0%)	
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5	Headache (4.2%)	Nervous syst disorders (10.2%)
6	Pregnancy-related complications (4.0%)	Diabetes mellitus (9.3%)
7	Sprain (3.6%)	Mood disorders (9.2%)
8	Superficial injury (3.6%)	Lower resp infections (9.0%)
9	Lower resp infections (3.3%)	Asthma (8.7%)
10	Nervous syst disorders (2.9%)	Abdominal pain (8.0%)

What Are the Most Common Diagnoses in the ED for High-Utilizing Medicaid Beneficiaries?

KEY INSIGHTS from examining secondary diagnoses for High-Utilizers:

- 1) Mental health comorbidities (mental health condition, mood disorders)**
- 2) Common chronic physical health problems that complicate care (hypertension, diabetes, asthma)**
- 3) Social determinants of health (factors influencing health care)**
- 4) Common diagnoses from list of principal diagnoses (respiratory infections, abdominal pain)**

SECONDARY DIAGNOSES

History of mental health condition (21.5%)
Hypertension (16.7%)
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Diabetes mellitus (9.3%)
Mood disorders (9.2%)
Lower resp infections (9.0%)
Asthma (8.7%)
Abdominal pain (8.0%)

Are Nursing Home Residents Contributing to the Challenge of High-Utilizers?

YES

... Among 67,845 Medicaid beneficiaries in a nursing home environment from Jan 2011-March 2013 (no minimum enrollment):

13.6% were high-utilizers

(more than twice the rate of high-utilizers overall in MI Medicaid)

High-Utilizers in Michigan Medicaid - SUMMARY

- Among MI Medicaid beneficiaries, ED high-utilization is both an urban *and* a rural phenomenon
 - Mean proportion of high-utilizers: 6.2%
 - Range of high-utilizer proportion by county: 1.8%-9.5%

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- **High-utilization of the ED corresponds more strongly to overall patterns of lower-acuity ED use at the county level than to the number of primary care providers in the county**
- **Primary diagnoses for high-utilizer ED visits include several common, pain-associated conditions**
 - **Secondary/comorbid conditions reflect complexity of multiple chronic conditions, mental health concerns, & social situations**

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- **Primary diagnoses for high-utilizer ED visits include several common, pain-associated conditions**
 - **Secondary/comorbid conditions reflect complexity of multiple chronic conditions, mental health concerns, & social situations**
- **Nursing home residents have disproportionately higher high-utilization rates**

Acknowledgments

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