West Virginia Medical Cannabis: Patient and Physician Interest Survey Results and Other Data

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December 14, 2017
WV Medical Cannabis Advisory Board
• Objectives for Data Set Analyses
• Patient Interest Survey
• Provider Interest Survey
• Other Available Data Systems
• Methods and Result Narrative Statements for Each Data Set
• Graphics for Data Summaries
• County and Public Health District Maps
• Zip Code Maps: Patient Survey, Cancer Data, Medicaid and Medicare Data
Data Objectives for Patient Survey

Method:
Survey online October 14, 2017 - November 20, 2017

Results:
• 6,174 responses (62 by mail and 6,112 online)
• Patient provided zip code and interest in medical cannabis
• 6,003 surveys analyzed, 171 were out of state zip codes so not included in analysis
• Patients diagnosed with serious medical condition(s)
• Mapped serious medical conditions by patient zip code
• Most respondents indicated they were a patient or a family member was a patient
• Patients indicated how far they would travel to a dispensary
• Most frequent “other condition” response was related to anxiety disorders
Results - Patient Survey

Reported Interest in Use of Medical Cannabis, West Virginia, 2017

- I am a patient with a serious medical condition: 4,033
- My family member has a serious medical condition: 1,813
- I am a caregiver of a patient with a serious medical condition: 364
- Other (please specify): 611

Number of Responses

Reported Role
Counties from which Patient Respondents Reported, West Virginia, 2017
Patient Survey Respondents by Zip Code, 2017

[Map of West Virginia with various zip code categories indicated by different colors]
Age Ranges of Patient Respondents, West Virginia, 2017

<table>
<thead>
<tr>
<th>Age Ranges</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-18 years of age</td>
<td>209</td>
</tr>
<tr>
<td>19-25 years of age</td>
<td>530</td>
</tr>
<tr>
<td>26-35 years of age</td>
<td>1,360</td>
</tr>
<tr>
<td>36-45 years of age</td>
<td>1,410</td>
</tr>
<tr>
<td>46-55 years of age</td>
<td>1,240</td>
</tr>
<tr>
<td>56 years of age and older</td>
<td>1,808</td>
</tr>
</tbody>
</table>

Note: Respondents may have selected more than one option.
Results - Patient Survey (cont’d)

Diagnoses Reported by Patient Respondents, West Virginia, 2017

<table>
<thead>
<tr>
<th>Serious Medical Condition</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>694</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>2,120</td>
</tr>
<tr>
<td>Crohn’s Disease</td>
<td>370</td>
</tr>
<tr>
<td>Damage to Nervous Tissue</td>
<td>677</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>807</td>
</tr>
<tr>
<td>Neuropathies</td>
<td>1,579</td>
</tr>
<tr>
<td>PTSD</td>
<td>457</td>
</tr>
<tr>
<td>Seizure Disorders</td>
<td>17</td>
</tr>
<tr>
<td>Sickle Cell Anemia</td>
<td>522</td>
</tr>
<tr>
<td>Spasticity Disorders</td>
<td>112</td>
</tr>
<tr>
<td>Terminally Ill</td>
<td>2,370</td>
</tr>
<tr>
<td>Other</td>
<td>2,370</td>
</tr>
</tbody>
</table>

Note: Respondents may have selected more than one condition.
Types of Diagnoses Listed Under "Other, Please Specify" as Indicated by Patients, West Virginia, 2017

Percent of “Other” Responses

<table>
<thead>
<tr>
<th>Type of Diagnosis</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>20</td>
</tr>
<tr>
<td>Allergy</td>
<td>1</td>
</tr>
<tr>
<td>Asthma</td>
<td>2</td>
</tr>
<tr>
<td>Arthritis</td>
<td>198</td>
</tr>
<tr>
<td>Autoimmune</td>
<td>171</td>
</tr>
<tr>
<td>Cardiac</td>
<td>15</td>
</tr>
<tr>
<td>Circulatory</td>
<td>2</td>
</tr>
<tr>
<td>COPD</td>
<td>16</td>
</tr>
<tr>
<td>Diabetes</td>
<td>32</td>
</tr>
<tr>
<td>Digestive</td>
<td>57</td>
</tr>
<tr>
<td>Fibromyalgia</td>
<td>179</td>
</tr>
<tr>
<td>Genetic Disorder</td>
<td>34</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>46</td>
</tr>
<tr>
<td>Hepatic</td>
<td>5</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>20</td>
</tr>
<tr>
<td>Injury</td>
<td>35</td>
</tr>
<tr>
<td>Malignancies</td>
<td>20</td>
</tr>
<tr>
<td>Mental/Behavioral Health</td>
<td></td>
</tr>
<tr>
<td>Musculoskeletal Pain</td>
<td>138</td>
</tr>
<tr>
<td>Neurologic</td>
<td>215</td>
</tr>
<tr>
<td>Provider</td>
<td>3</td>
</tr>
<tr>
<td>Renal</td>
<td>20</td>
</tr>
<tr>
<td>Reproductive</td>
<td>18</td>
</tr>
<tr>
<td>Respiratory</td>
<td>2</td>
</tr>
<tr>
<td>Unspecified</td>
<td>99</td>
</tr>
<tr>
<td>Unspecified Pain</td>
<td>37</td>
</tr>
<tr>
<td>Urinary</td>
<td>3</td>
</tr>
<tr>
<td>Vascular</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Percent of "Other" Responses: 980
Patients Indicating Communication with Their Health Care Provider Regarding Medical Cannabis
West Virginia, 2017

- Yes: 43%
- No: 38%
- Unsure: 15%
- Other: 4%
Health Care Provider With Whom Patients Discussed Use of Medical Cannabis, West Virginia, 2017

<table>
<thead>
<tr>
<th>Type Of Health Care Provider</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Doctor (MD)</td>
<td>2,837</td>
</tr>
<tr>
<td>Doctor of Osteopathic Medicine (DO)</td>
<td>471</td>
</tr>
<tr>
<td>Nurse Practitioner (NP)</td>
<td>512</td>
</tr>
<tr>
<td>Physician Assistant (PA)</td>
<td>546</td>
</tr>
<tr>
<td>Unsure</td>
<td>1,427</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>768</td>
</tr>
</tbody>
</table>
Results - Patient Survey (cont’d)

Specialty of Health Care Provider as Indicated by Patient, West Virginia Medical Cannabis Patient Interest Survey, 2017

- Family Medicine: 2370
- Unsure: 1294
- Psychiatry: 754
- Neurological Surgery: 580
- Internal Medicine: 375
- Rheumatology: 303
- Orthopedic Surgery: 265
- Gastroenterology: 251
- Hematology & Oncology: 176
- Endocrinology: 159
- Hospital-Based: 132
- Pediatric Subspecialties: 108
- Emergency Medicine: 107
- Nephrology: 97
- Cardiology: 97
- General Surgery: 87
- Urology: 73
- Obstetrics & Gynecology: 73
- Infectious Disease: 71
- Addictionologist: 62
- Pulmonology: 53
- Allergy & Immunology: 48
- Pediatrics: 43
- Anesthesiology: 36
- Radiology-Diagnostics: 35
- Ophthalmology: 34
- Dermatology: 32
- Pathology Anatomic and Clinical: 15
- Plastic Surgery: 8

NUMBER OF RESPONSES

0.0  500.0  1,000.0  1,500.0  2,000.0  2,500.0
Patients Indicating Designation of Caregiver to Obtain Medical Cannabis, West Virginia, 2017

- Yes: 22%
- No: 49%
- Unsure: 29%
Ability and Willingness of Respondents to Drive to Purchase Medical Cannabis, West Virginia, 2017

- Yes: 84%
- No: 6%
- Unsure: 10%
Distance Respondents Indicated Willingness to Drive to Purchase Medical Cannabis, West Virginia, 2017
Preferred Form of Medical Cannabis as Indicated by Patient Respondents, West Virginia, 2017

Preferred Form of Cannabis

<table>
<thead>
<tr>
<th>Form of Cannabis</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pill</td>
<td>1,443</td>
</tr>
<tr>
<td>Oil</td>
<td>2,264</td>
</tr>
<tr>
<td>Topical forms, including gel, creams or ointments</td>
<td>1,108</td>
</tr>
<tr>
<td>Vaporization or nebulization (excluding dry leaf or plant form)</td>
<td>3,029</td>
</tr>
<tr>
<td>Tincture</td>
<td>911</td>
</tr>
<tr>
<td>Liquid</td>
<td>1,299</td>
</tr>
<tr>
<td>No preference</td>
<td>2,058</td>
</tr>
</tbody>
</table>
Data Objectives for Physician Survey

Method:
Survey available October 24, 2017 – November 14, 2017
• Medical boards sent email to licensed physicians with link to survey

Results:
• Total of 1,455 physicians completed online survey
• 1,190 physicians interested; 265 not interested in medical cannabis
• Physicians indicated practice environments, specialties, and counties in which they practice
• 28 specialties indicated by respondents
• Physicians indicated the serious medical conditions for which they provide care
• Physicians asked to indicate awareness of the 4-hour training course requirement for certifying physicians; most were not aware
• Physicians indicated interest in medical cannabis treatment
Results - Physician Survey

Practice Environment of Physicians, West Virginia, 2017

- Private Practice: 275
- Group Practice: 188
- Hospital System: 575
- FQHC or Primary Care Clinic: 78
- Other: 152

Practice Environment

Number of Respondents
Specialties Indicated by Physicians, West Virginia, 2017

- Family Medicine: 238
- Internal Medicine: 181
- Emergency Medicine: 117
- Hospital-based: 67
- Psychiatry: 64
- Orthopedic Surgery: 59
- Anesthesiology: 57
- Obstetrics & Gynecology: 56
- Pediatrics: 52
- General Surgery: 51
- Pediatric Subspecialty: 43
- Hematology & Oncology: 41
- Pathology: 34
- Radiology-Diagnostics: 34
- Pulmonology: 31
- Addictionologist: 28
- Cardiology: 26
- Neurosurgery: 22
- Ophthalmology: 19
- Dermatology: 14
- Endocrinology: 10
- Urology: 9
- Infectious Disease: 8
- Nephrology: 8
- Rheumatology: 7
- Plastic Surgery: 6
- Allergy & Immunology: 5
- Gastroenterology: 5

Number of Respondents
Serious Medical Conditions Combined

- Related disorders were combined:
  - Seizure Disorders
    - Epilepsy
    - Intractable Seizures
  - Spasticity Disorders
    - Amyotrophic Lateral Sclerosis (ALS)
    - Huntington’s Disease
    - Parkinson’s Disease
    - Multiple Sclerosis (MS)
Provide Care for Serious Medical Conditions, West Virginia, 2017

Number of Responses

<table>
<thead>
<tr>
<th>Serious Medical Conditions</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>638</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>495</td>
</tr>
<tr>
<td>Crohn's Disease</td>
<td>423</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>241</td>
</tr>
<tr>
<td>Neuropathies</td>
<td>518</td>
</tr>
<tr>
<td>Other</td>
<td>118</td>
</tr>
<tr>
<td>PTSD</td>
<td>444</td>
</tr>
<tr>
<td>Seizure Disorders</td>
<td>610</td>
</tr>
<tr>
<td>Sickle Cell Anemia</td>
<td>142</td>
</tr>
<tr>
<td>Spasticity Disorders</td>
<td>1,433</td>
</tr>
<tr>
<td>Terminally Ill</td>
<td>497</td>
</tr>
</tbody>
</table>
Respondents indicating awareness of 4-hour training course requirement, West Virginia Physician Survey, 2017

- Yes: 36%
- No: 64%
Interest Shown by Respondents,
West Virginia Physician Survey, 2017

- Yes: 82%
- No: 18%
Data Objectives for Other Data Systems

Method:
• Most recent three years of available data
• Determine location of person with serious medical conditions
• ICD 9-10 code data for serious medical conditions

Results:
• PEIA active membership with serious medical conditions
• West Virginia HIV/AIDS Registry Patients Living with HIV/AIDS (PLWHA) by Public Health District in 2017
• West Virginia Cancer Registry (January 2012 - December 2014) incidence data by zip code
• Medicaid (January 2015 - June 2017) by zip code
• Medicare (January 2015 - June 2017) by zip code
WV Public Employees Insurance Agency (PEIA)

- Currently has 152,000 insured active members
- Data Set:
  - Fiscal Years January 2015 – June 2017
  - Count of active members with claims that include diagnosis codes for the applicable serious medical conditions
  - Patient duplicates have been removed from each condition claim count; however, patients with multiple conditions are represented within each condition total
  - The HIPAA Privacy Rule does not allow PEIA to provide diagnoses information by geographic area in a unit smaller than a state

Source: PEIA
Results - PEIA (cont’d)

PEIA Claims by Medical Condition, West Virginia, January 2015 - June 2017

Number of Claims

<table>
<thead>
<tr>
<th>Serious Medical Conditions</th>
<th>Number of Claims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>8,378</td>
</tr>
<tr>
<td>Chronic Pain</td>
<td>6,561</td>
</tr>
<tr>
<td>Crohn's Disease</td>
<td>660</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>71</td>
</tr>
<tr>
<td>Neuropathies</td>
<td>8,632</td>
</tr>
<tr>
<td>PTSD</td>
<td>6,289</td>
</tr>
<tr>
<td>Seizure Disorders</td>
<td>1,332</td>
</tr>
<tr>
<td>Sickle Cell Anemia</td>
<td>28</td>
</tr>
<tr>
<td>Spasticity Disorders</td>
<td>995</td>
</tr>
</tbody>
</table>

Source: PEIA
Results - PEIA (cont’d)

PEIA Claims by Medical Condition, West Virginia, 2015-2017

- Cancer: 25.4%
- Chronic Pain: 19.9%
- Neuropathies: 26.2%
- PTSD: 19.1%
- Other: 9.4%
- Seizure Disorders: 4.0%
- Crohn's Disease: 2.0%
- Spasticity Disorders: 3.0%
- Sickle Cell Anemia: <1.0%
- HIV/AIDS: <1.0%

Source: PEIA
HIV/AIDS Registry Data

- West Virginia residence at the time of diagnosis who are still living in 2017
- Annual review of people living with HIV/AIDS (PLWHA) with reported lab results indicating still in care
- Small number of cases (<5) prevented mapping data by zip code
- Conduct National Death match two times a year to identify if living
- Annual case comparison with other states - deletes duplicates
People Living with HIV/AIDS by District in 2017

Distribution of People Living with HIV/AIDS (PLWH) by Public Health Management District in West Virginia* October 2017

Data Source: West Virginia Department of Health and Human Resources
Bureau of Public Health, Office of Epidemiology and Prevention Services,
Division of STD and HIV, HIV/AIDS Surveillance Program

Total PLWHA in West Virginia: 1,848
*Excludes federal prisoners.
Cancer Registry Data

- Number of invasive cancer (and in situ cancer) for the years 2012-2014 by zip code
- Incidence cases reported by zip code based on patient’s address at the time of diagnosis
West Virginia Medicaid Serious Medical Condition Claims Data

- Data generated from West Virginia Medicaid Data Warehouse
- Data Set:
  - Data from January 2015 - June 2017
  - Used ICD9/10 codes for serious medical conditions
  - Count of active members with claims that include diagnosis codes for the applicable serious medical conditions by zip code

Source: West Virginia Medicaid Data Warehouse
Medicaid Serious Medical Condition Claims, West Virginia, January 2015 - June 2017

Source: West Virginia Medicaid Data Warehouse
Medicaid Claims by Serious Medical Condition, West Virginia, January 2015 - June 2017

- **Cancer**: 55,666 claims
- **Chronic Pain**: 23,869 claims
- **Crohn's**: 3,738 claims
- **HIV/AIDS**: 2,273 claims
- **Neuropathies**: 8,578 claims
- **PTSD**: 10,692 claims
- **Seizure Disorders**: 25,101 claims
- **Sickle Cell**: 245 claims
- **Spasticity Disorders**: 5,348 claims
- **Terminally Ill**: 213 claims

Source: West Virginia Medicaid Data Warehouse
Medicaid Claims by Medical Condition
West Virginia, January 2015-June 2017

- Cancer 41%
- Chronic Pain Disorders 18%
- Seizure Disorders 18%
- Other 23%
- Neuropathies 6%
- PTSD 8%
- Spasticity Disorders 4%
- Terminally Ill <1%
- Sickle Cell <1%
- Crohn’s Disease 3%
- HIV/AIDS 2%

Source: West Virginia Medicaid Data Warehouse
Medicaid Medical Condition Claims, Zip Code 2015-2017
West Virginia Medicare Beneficiaries Data

- Data generated from Quality Insights
- Data Set:
  - Count of active members that include diagnosis codes for the applicable serious medical conditions
  - Patient duplicates have been removed from each condition claim count; however, patients with multiple conditions are represented within each condition total

Source: Quality Insights
Medicare Cases by Disease Group, West Virginia, 2017

Number of Cases

- Cancer: 133,796
- Chronic Pain: 25,209
- Crohn's Disease: 3,213
- HIV/AIDS: 1,139
- Neuropathies: 11,057
- PTSD: 2,563
- Seizure Disorders: 14,273
- Sickle Cell Anemia: 76
- Spasticity Disorders: 8,796
- Terminally Ill: 642

Source: Quality Insights
Medicare Cases by Disease Group, West Virginia, 2017

- **Cancer**: 67%
- **Chronic Pain**: 13%
- **Other**: 20%
- **Seizure Disorders**: 7%
- **Neuropathies**: 5%
- **HIV/AIDS**: 1%
- **PTSD**: 1%
- **Spasticity Disorders**: 4%
- **Terminally Ill**: <1%
- **Crohn's Disease**: 2%
- **Sickle Cell Anemia**: <1%
- **Other**: 20%

Source: Quality Insights
Acknowledgements

THANK YOU
Medical Cannabis Data Team

Allysa Crews
Alex Daniels
Bijal Patel
Jessica Shlitz
Melissa Scott
Ashley Simmons
Tonya Yablonsky
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