Medicinal cannabis use and preferred mode of administration: results from an anonymous patient survey to inform medicinal cannabis phase II and III trials for cancer-related anorexia-cachexia
Investigators

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BACKGROUND

• Consumers advocacy – for access to medicinal cannabis
• Different Jurisdictional approaches
  • Dec 2014 - NSW announced three medicinal clinical trials
  • 2015 Victoria first Australian state to legalise cannabis for medicinal purposes. The Access to Medicinal Cannabis Bill 2015 will give Victorian patients -- and their families -- legal, safe and secure access to the drug in "exceptional circumstances".
  • Feb 2016 - Federal Govt. announces changes to the Narcotic Drugs Act (1967)
• Context: Understanding the perspectives of potential trial participants and users of medicinal cannabis to inform design of NSW Ministry of Health (MoH) trials and future studies.
AIMS AND METHODS

• Aim
  To explore the preferences, attitudes and beliefs of patients eligible and willing to consider participation in a clinical trial of medicinal cannabis for symptoms from advanced cancer.

• Methods
  Cross-sectional survey study (June - December 2015)
PATIENT SURVEY METHODS

• Eligibility
  • Adults with advanced cancer
  • Poor appetite/taste problems/weight loss
  • Consider participating in a trial of medicinal cannabis

• Administration
  • Palliative care/oncology outpatient clinics (n=8) in NSW and SA and online

• Items
  • Preferences for route/mode of administration, previous use of medicinal cannabis, and trial-related concerns/comments
  • Questions did not specify botanical or pharmaceutical products
### PATIENT SURVEY RESPONDENTS (N=204)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>106 (52)</td>
</tr>
<tr>
<td>Female</td>
<td>96 (47)</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>6 (3)</td>
</tr>
<tr>
<td>26-40</td>
<td>14 (7)</td>
</tr>
<tr>
<td>41-60</td>
<td>68 (33)</td>
</tr>
<tr>
<td>61-75</td>
<td>77 (38)</td>
</tr>
<tr>
<td>76-85</td>
<td>30 (15)</td>
</tr>
<tr>
<td>&gt;85</td>
<td>5 (2)</td>
</tr>
<tr>
<td><strong>Self-reported cancer type</strong></td>
<td></td>
</tr>
<tr>
<td>Blood</td>
<td>37 (18)</td>
</tr>
<tr>
<td>Lung</td>
<td>33 (16)</td>
</tr>
<tr>
<td>Upper GI</td>
<td>36 (18)</td>
</tr>
<tr>
<td>Breast</td>
<td>24 (12)</td>
</tr>
<tr>
<td>Lower GI</td>
<td>17 (8)</td>
</tr>
<tr>
<td>Gynaecological</td>
<td>14 (7)</td>
</tr>
<tr>
<td>Prostate</td>
<td>13 (6)</td>
</tr>
<tr>
<td>Brain</td>
<td>10 (5)</td>
</tr>
<tr>
<td>Other</td>
<td>43 (21)</td>
</tr>
<tr>
<td>Unknown</td>
<td>3 (1)</td>
</tr>
</tbody>
</table>

* Missing data as follows – gender (n=2), age (n=4), cancer type (n=5); # some patients reported >1 cancer type; GI = gastro-intestinal
SUMMARY OF THE RESULTS

- Tablets/capsules were the preferred delivery mode (n=144, 71%), followed by mouth spray (n=84, 42%) and vaporiser (n=83, 41%).
- People who explained their preferences (n=134) - most commonly cited convenience (n=66; 49%).
- 82% (n=168) had no trial-related concerns: However a small number were:
  - concerned about adverse effects (n=14)
  - wanted more information and advice (n=8).
  - volunteered a belief that cannabis might cure cancer (n=2)
PATIENT SURVEY RESULTS: MODE OF ADMINISTRATION PREFERENCES

- Tablets/capsules (n=144, 71%), mouth spray (n=84, 42%), vaporiser (n=83, 41%), eating (n=76, 37%), drinking (n=68, 33%), topical (n=53, 26%), suppositories (n=16, 8%)

- Median number of preferences 2 (range 0 – 7); 9 (4%) any mode

- 14 (8%) expressed a preference for other modes, including smoking (n=7), PEG (n=4) and oil (n=3)

- Reasons for preferences (n=134) included: perceived ease/convenience (n=66, 49%), taste, nausea or appetite (n=17, 13%), familiarity (n=11, 8%), perceived faster action (n=11, 8%), control over dose (n=7, 5%), enjoyment (n=5, 4%), efficacy (n=4, 3%), unobtrusiveness (n=3, 2%) and adverse effects (n=2, 1%)
Logistic regression examining relationships between participant variables and exclusive preference for tablets/capsules (n=52/204)

<table>
<thead>
<tr>
<th>Variables in the model</th>
<th>OR (95% CI)</th>
<th>Results on association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1.86 (0.96-3.61)</td>
<td>p=0.067</td>
</tr>
<tr>
<td>Used medicinal cannabis</td>
<td>0.23 (0.05-1.03)</td>
<td>p=0.055</td>
</tr>
</tbody>
</table>
PATIENT SURVEY RESULTS: CURRENT/PREVIOUS USERS

• Participants: current/previous users (n=26) 13%
• Symptoms: poor appetite/anorexia (n=9), pain (n=9), psychological problems (n=5), insomnia (n=4), nausea (n=2)
• Administration mode: smoking on its own (n=18) or with tobacco (n=15), eaten (n=12), vaporiser (n=10)
• Trial Compliance: Stopping current use would not prevent trial participation – no (n=21), yes (n=3), unsure (n=1), missing (n=1)
• Compared with non-users, more likely to be aged ≥60 years ($\chi^2 =11.67, p=0.001$) but did not differ with regard to:
  • gender ($\chi^2 =3.24, p=0.07$); or
  • trial-related concerns ($\chi^2 =1.94, p=0.16$)
PATIENT PERSPECTIVES: MEDICINAL CANNABIS

• Favourable:
  • unqualified advocacy (n=10),
  • first (n=11) or second-hand (n=8) anecdotal evidence of efficacy
  • positive Media or advocate reports (n=3)
  • favourable side-effects compared to other medications (n=3)

• Cautionary:
  • side effects (n=14)
  • need for more information/advice (n=8)
  • addictiveness (n=3), compatibility with other medications (n=2), legal issues (n=2)

• Misconception
  • cannabis may cure cancer (n=6)
PATIENT - PERSPECTIVES CANNABIS TRIALS

• It’s about time / evidence sufficient (n=16)
• Trials can drive legal changes / improve access (n=4)
• Worried about slippery slope / need to limit access (n=5)
• Misconception – need assurance of efficacy before participating in a trial (n=2)
LIMITATIONS

• Likely volunteer effect supportive of study aims but limits generalisability to wider clinical population; users (n=26)

• Focus on medicinal cannabis omitted recreational use and left respondents to classify/report subjectively

• Comments rarely specific to appetite/weight loss versus other symptoms and general wellbeing (aka recreational use?)

• Open definition of medicinal cannabis means mode preferences cannot be contextualized within preferences for botanical versus pharmaceutical products
CONCLUSIONS

• Rapid accrual of cannabis naïve and previous users is encouraging for trial feasibility
• Tablets/capsules are preferred mode but only available for limited range of pharmaceutical products (not botanical)
• Misconceptions need addressing in patient information