The patient experience of the care delivered by an outpatient intravenous antibiotic service.

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OBJECTIVE

To survey patients’ experience of the care provided by the outpatient intravenous antibiotic (OPIVA) service at Auckland City Hospital.
**BACKGROUND**

- OPIVA - 1st introduced in 1974 to treat patients with cystic fibrosis & exacerbation of pneumonia in the USA
- 1st introduced at ACH in 1979 but formally introduced in 2000 allowing many patients to receive treatment at home
- 2001 - introduction of elastomeric pump bottles
INTRODUCTION

- OPIVA service allow patients, who require prolonged intravenous antibiotic treatment, to receive some or all of their treatment at home.¹-³
- OPAT, HITH or COPAT
- Widely available due to their utility in the treatment of patients with a wide range of infectious diseases.¹²
MODELS OF OPIVA ADMINISTRATION

1) Infusion centre or clinic
2) Community nursing services for daily home visits
3) Patient and/or their family members to administer intravenous antibiotics at home
ADHB OPIVA Service

- 150-200 patients annually
- 3958 beds days saved in 2016
- Approximate cost saving of over $5 million
PURPOSE

- To understand patients’ experiences of the OPIVA service
- To identify areas for potential improvement.
MATERIALS & METHODS

- Participants were consenting adults (≥15 years of age)
- All patients cared for by the service between 1\textsuperscript{st} of January and 30\textsuperscript{th} of June 2016 were invited to participate in the survey.
- No exclusion criteria were applied.
**Survey**

- A self-administered questionnaire, which consisted of 35 questions across three sections, was designed for this study.
**Data Analysis**

- SPSS software v16.0 (Likert scale findings)
- Nvivo version 10 (in text comments)
**Ethical Approval**

- Obtained from the University of Auckland Human Participants Ethics committee on 14\textsuperscript{th} of December, 2015
RESULTS: SECTION A

Table: Demographic and clinical features of the OPIVA participants.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean Age (std dev)</strong></td>
<td>58.2 (19)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49 (65)</td>
</tr>
<tr>
<td>Female</td>
<td>26 (35)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>NZ European</td>
<td>48 (64)</td>
</tr>
<tr>
<td>NZ Maori</td>
<td>8 (11)</td>
</tr>
<tr>
<td>Pacific People</td>
<td>10 (13)</td>
</tr>
<tr>
<td>Asian</td>
<td>7 (9)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (3)</td>
</tr>
<tr>
<td><strong>English as first language</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>60 (80)</td>
</tr>
<tr>
<td>No</td>
<td>12 (17)</td>
</tr>
<tr>
<td>Missing data</td>
<td>2 (3)</td>
</tr>
<tr>
<td><strong>Lives alone</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11 (15)</td>
</tr>
<tr>
<td>No</td>
<td>60 (81)</td>
</tr>
<tr>
<td>Missing data</td>
<td>3 (4)</td>
</tr>
<tr>
<td><strong>Central Venous Access Device</strong></td>
<td></td>
</tr>
<tr>
<td>Peripherally-inserted central catheter</td>
<td>71 (95)</td>
</tr>
<tr>
<td>Tunneled central venous catheter</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Missing</td>
<td>3 (4)</td>
</tr>
<tr>
<td><strong>Person responsible for antibiotic administration</strong></td>
<td></td>
</tr>
<tr>
<td>Patient &amp; District Nurse (DN)</td>
<td>6 (8)</td>
</tr>
<tr>
<td>DN</td>
<td>35 (47)</td>
</tr>
<tr>
<td>Patient</td>
<td>31 (41)</td>
</tr>
<tr>
<td>Missing</td>
<td>3 (4)</td>
</tr>
</tbody>
</table>
SECTION B: LIKERT SCALE RESULTS
SECTION C: PATIENT COMMENTS

THEME 1: INCONSISTENT CARE

“The district nurses were inconsistent. The last nurse took PICC line out too early - much inconvenience to myself”

“More regular PICC line dressing changes would have been good as I struggled to keep them on for a week, however the district nurses seemed reluctant.”

“PICC line dressing sometimes caused skin allergy. Not all the nurses had good experience in change [sic] the dressing.”
“Tape was not placed above the thin part of the tube and it kinked and did not work. I had to go to ED after discharge to get it working ... also after hours staff do not know about PICC lines.”

“I found that trying to receive this treatment which I desperately needed was difficult to say the least! Had it not been for another specialist involvement, I do not believe would have received it ... This was all due to a lack of knowledge by doctors in the areas of my infection.”
Theme 2: Inconvenience associated with health care delivery

- “No problems at all except for the inconvenience of having to carry antibiotics around in bag but cannot be avoided ... Maybe something provided to cover PICC line to enable showering as this proved difficult, like where to place bag to keep dry and to keep PICC dressing dry.”

- “Not given enough information or help with managing to get to appointments from the team, and parking costs was a disappointment.”

- “General complaint that all outpatients ... should not have to pay for parking because sometimes you can be waiting up to 6 hours. Not affordable.”

- “On call OPIVA service for weekends would be helpful”
Discussion

- Widely used in many countries
- Avoids or reduces period of hospitalisation
- Improves patients’ quality of life and gives them the option of being treated at home
- Reduces inpatient costs
- Fewer incidence of HAI
- Several patient satisfaction surveys found OPIVA to be safe, acceptable, efficient and patient centred.
**STRENGTHS/LIMITATIONS**

- Small number of participants. Given that the OPIVA service treats 150-200 patients per annum, the response rate represented about 40-50% of those treated over a year, although it was 75% for the six month period.

- The possibility of memory recall bias.

- Lastly, the thematic analysis focussed on the negative comments only which relied on a very limited number of comments from participants.
Conclusion

- Majority of the patients were satisfied with the way the OPIVA team communicated, provided training on antibiotic administration, gave information, and coordinated care.
- The survey identified a requirement for more focussed information in regards to clinic appointments, location and car parking availability and costs.
RECOMMENDATIONS

- Increased consideration of the patient’s choice for the method of intravenous antibiotic delivery,
- Improved standardisation of education for antibiotic administration,
- Increased information provision about PICC line and cares,
- Increased whanau/family involvement,
- Improved provider training, coordination and teamwork,
- Extending the availability of OPIVA resources, including creation of an OPIVA website and improving access to the OPIVA team members during overnight and during weekends.
Our study only focused on adult patients cared for by the OPIVA service. For future research, it will be important to study the experiences of those patients who were declined by the OPIVA service and learn if we can meet some of the needs of this patient population.
ACKNOWLEDGEMENT

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REFERENCES


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