**PURPOSE: INVESTIGATE THE NUMBER OF TEENS COMPLETING CIC**

- Spina Bifida occurs in approximately 3.65 per 10,000 births (CDC, 2015).
- Completing clean intermittent catheterization (CIC) in children who have Spina Bifida can be important both medically and socially.
- CIC is important in the management of neurogenic bladder to prevent urinary tract infections and preserve kidney function (Clayton et al, 2010).
- The Spina Bifida Association recommends children begin participating in CIC activities as early as age 3 with simple activities such as gathering materials (Spina Bifida Association, 2006) and possess the fine motor skills for completing CIC activities at age 6 (Michelson et al, 2009).
- Abled children should be independently completing CIC activities by the elementary school years (Spina Bifida Association, 2006).
- Research shows that most children become independent with CIC activities between the ages of 8-12 years.
- CIC is generally completed approximately every 4-6 hours when awake (Katrancha, 2008).
- Previous research has shown that there are pre-teens and teens with Spina Bifida who do not complete CIC activities independently.
- In order to inform a quality improvement project to be conducted in the nurse run CIC clinic at the CHLA Spina Bifida Clinic, analysis of current data was completed to act as a pre-intervention baseline.
- The data was extracted from currently enrolled participants of the National Spina Bifida Registry at Children’s Hospital of Los Angeles.

**METHODS**

- **Recruitment:** The participants were selected from the CHLA Spina Bifida Registry version 2.
- **Inclusion/Exclusion:** 168 children were included ranging in age from 3-21 years old. 21 years old is the maximum age for continued care at CHLA. Any patient who was missing data was excluded from analysis. Only patients who perform CIC were included.
- **Measures:** Our outcome variable was the party, labeled as caregiver or patient, performing CIC. Independent variables of interest included Patient Age, Gender, Race/Ethnicity, the Age CIC activities began and whether the caregiver or patient completes CIC.
- In order to inform a quality improvement project to be conducted in the nurse run CIC clinic at the CHLA Spina Bifida Clinic, analysis of current data was completed to act as a pre-intervention baseline.
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**RESULTS**

<table>
<thead>
<tr>
<th>Age Category, n</th>
<th>Total Population (n=168)</th>
<th>CIC Performed by Caregiver (n=110)</th>
<th>CIC Performed by Patient (n=57)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &lt; 5 years</td>
<td>17</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>2: ≤5 years and &lt;8 years</td>
<td>30</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>3: ≤8 years and &lt;10 years</td>
<td>24</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>4: ≤10 years and &lt;13 years</td>
<td>28</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>5: ≥13 years and ≤21 years</td>
<td>68</td>
<td>22</td>
<td>46</td>
</tr>
</tbody>
</table>

**DISCUSSION**

Key findings included:
- The mean age of patient’s independently completing CIC is higher than the recommended age of 6-8 years old at 15.44 years old.
- There is a statistically significant difference between the age when CIC activities began and whether the caregiver or patient completes CIC.
- There was no significant association between the three spinal lesion locations and the children independently completing CIC.
- Significant difference between gender and whether the caregiver or patient completes CIC. This does not confound the relationship between Age and CIC performer.

**REFERENCES**