Nassau County N.Y.
Intranasal Narcan Administration:
A requested exploratory and trial period for First Responders to provide Narcan as a lifesaving procedure

This presentation presents the necessity relevant to the emergent administration of Naxolone (Narcan) by Nassau County First Responders

Gary T. Ferrucci PC EMT-CC CIC
May 2, 2012
This is a request for adoption of an exploratory period to train, and permit Basic Life Support Providers (EMT-B) of the Nassau County Emergency Medical Services [1] to administer Intra-Nasal Narcan (Naxolone) as an affirmative intervention for life threatening opiate drug overdose events. Realizing the propensity for law enforcement personnel to arrive on scene before Emergency Medical Services, it would be beneficial for Police Officers who are currently certificated by the State of New York pursuant to Public Health Law Article 30 Part 800 [2] as Fire Responders to be granted an amendment of the scope of practice for a CFR [3] to initiate this critical lifesaving technique.

Introduction:

Nassau County Communities have realized an alarming trend of young people losing their lives to drug overdoses. In calendar year 2011, [4] and in Nassau County alone, more than one hundred and nineteen (119) lost their lives to this epidemic, and more will ultimately succumb to this phenomenon.

Surveillance:

Since 1970, the writer has been an active member of the Emergency Services Community of Nassau County, in multidiscipline roles. Since that time, the effects of illicit drugs and their use and abuses have become nearly epidemic in proportion. Responding to drug emergencies can span a gamut of presentations; ranging from the docile individual to one possessing near super-human strength issues. Once exposed to the latter, the event is ingrained in the psyche of the first responder often with devastating results. Most believe that the first responder is immune to what they are exposed to, however; sciences, evidence and first hand experiences lend to the negative.

Why Intranasal Narcan/ Naxolone?

Intravenous drug users requiring Naxolone after heroin overdose are a unique population that places the prehospital health care provider (Paramedics/EMTs and other ambulance service personnel and police) at an especially high risk for blood borne pathogen exposure. Since these patients rarely need intravenous access for any reason beyond the administration of Naxolone (Narcan), a method of administering Naxolone without a needle would be preferable. Fortunately, Naxolone is a small molecule that easily crosses the nasal mucosal membranes. After intra-nasal (IN) administration, Naxolone exhibits an opiate antagonist effect almost as rapidly as the IV route. Based on this information two compelling reasons exist to consider Intra-Nasal delivery of Naxolone for acute opiate overdoses: First the reduction of needle stick injury risks to rescue providers and second the possibility of lay person Naxolone administration in a true emergency.
While intranasal option for delivering Naxolone is not necessarily more effective than traditional intramuscular or intravenous injection methods, it is easier to deliver and often works as well as an injection. Most importantly to and for health care workers, intranasal Naxolone delivery eliminates the risk of a contaminated needle sticks. A needle stick injury is not a minor issue! Blood borne exposures are an occupational hazard that healthcare providers face daily. The CDC estimates that 600,000-800,000 percutaneous injuries with contaminated sharps occur yearly in the United States. With the increasing prevalence of blood born pathogens such as human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV) accidental needle stick injury may pose a life-changing and possibly life-ending event for affected health care workers. This risk is higher in the pre-hospital environment where a combination of patient and environmental factors make needle stick injury more likely. In the United States blood to blood contact for an individual EMS worker (Emergency Medical Services – paramedic) has been estimated to be as high as 12.3 per year.

An especially high-risk patient population to EMS providers is the IVDU. These patients have contracted HIV, HBV and Hepatitis C (HBC) incident rates that are far higher than the baseline population. In addition, EMS personnel commonly are involved in their care for life threatening illnesses such as respiratory arrest from opiate overdose. Furthermore, ever occurring unique EMS environmental conditions such as combative patients, uncontrolled scene issues, poor lighting and moving ambulances make the probability of suffering a needle stick even more prevalent. Since opiate overdose patients rarely need an IV for any reason beyond the administration of Naxolone, a needleless method of administering Naxolone would eliminate the needle stick risk and potential transmission of blood borne pathogens. Effective methods of reducing needle stick risk to emergency providers in this situation are welcomed.

Results:

The writer respectfully request that The County of Nassau commence an exploratory period of twelve (12) months to determine the effectiveness of a Intranasal Narcan program. Today, Narcan is a medication that is restricted and may only be administered intravenously or intramuscularly by EMT-CCs or EMT-Ps. Following a comprehensive training period, of BLS providers, this request could and would be expected to bring life sustaining Narcan therapy to the emergent patient. This request will require a change in the scope of practice in NY State to allow Basic Emergency Medical Technicians to possess: carry and administer Narcan for intranasal administration. As you are aware, the abuse of heroin and prescription opiates is escalating, and opiate-induced respiratory depression can lead to hypoxic brain injury or death rapidly. The use of intranasal Narcan by BLS providers has been proven to be safe and effective in many parts of the United States, thus the benefits of Narcan administration in the emergency situation far our weight a miniscule risk.
Conclusion:

This request is placed specifically for the purpose of adopting this lifesaving technique. Suffolk County, New York has adopted a pilot program for this endeavor by solidifying a partnership with the Albany and Rochester Regional Emergency Medical Organizations.

The writer has constructed a PowerPoint presentation as an educational tool for first responders regarding the administration of Intra-nasal Narcan. This presentation is available for review and is protected by certain provisions.

Legend:  
[1] The Nassau County, New York Emergency Medical Services providers; Nassau County Fire Services, Nassau County Emergency Medical Services Corps, Nassau County Police Department and Nassau County Village Police Departments  
[3] New York State Certified First Responder  
[4] Statistics compiled from medical resources and government agencies in the County of Nassau

Attachments

1. Statistical evidence regarding the prevalence of drug overdose events in Nassau County, New York 2004-2011  
2. Copy of the Suffolk County, New York Administration of Intranasal Narcan Advisory fact sheet  
3. 2006 New York State Department of Health Opioid Overdose Prevention Training Guidelines

Gary T. Ferrucci PC EMT-CC CIC  
First Deputy Chief Instructor, Nassau County EMS Academy  
E-mail: years1065@gmail.com  
gferrucci@pdcn.org

Footnote: Some information in this request has been gleaned from multiple sources.
### Opiates in Causes of Death by Year

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heroin</strong></td>
<td>24</td>
<td>38</td>
<td>37</td>
<td>27</td>
<td>46</td>
<td>38</td>
</tr>
<tr>
<td><strong>Oxycodone</strong></td>
<td>3</td>
<td>9</td>
<td>21</td>
<td>29</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td><strong>Hydrocodone</strong></td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>11</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td><strong>Hydromorphone</strong></td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td><strong>Codeine</strong></td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Morphine</strong></td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td><strong>Buprenorphine</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Fentanyl</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td><strong>Methadone</strong></td>
<td>19</td>
<td>13</td>
<td>20</td>
<td>22</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td><strong>Oxymorphone</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Total non-Heroin:</strong></td>
<td>28</td>
<td>34</td>
<td>65</td>
<td>81</td>
<td>93</td>
<td>88</td>
</tr>
</tbody>
</table>

Data Represents **C**

### Opiates in Toxicology Cases by Year

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heroin</strong></td>
<td>33</td>
<td>48</td>
<td>44</td>
<td>35</td>
<td>54</td>
<td>42</td>
</tr>
<tr>
<td><strong>Oxycodone</strong></td>
<td>12</td>
<td>18</td>
<td>38</td>
<td>43</td>
<td>48</td>
<td>46</td>
</tr>
<tr>
<td><strong>Hydrocodone</strong></td>
<td>12</td>
<td>14</td>
<td>19</td>
<td>18</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td><strong>Hydromorphone</strong></td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>18</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td><strong>Codeine</strong></td>
<td>5</td>
<td>14</td>
<td>16</td>
<td>19</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td><strong>Dihydrocodeine</strong></td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>14</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td><strong>Morphine</strong></td>
<td>29</td>
<td>33</td>
<td>39</td>
<td>43</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td><strong>Buprenorphine</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Fentanyl</strong></td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>12</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td><strong>Methadone</strong></td>
<td>31</td>
<td>19</td>
<td>32</td>
<td>38</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td><strong>Oxymorphone</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Total non-Heroin:</strong></td>
<td>101</td>
<td>111</td>
<td>163</td>
<td>206</td>
<td>258</td>
<td>227</td>
</tr>
</tbody>
</table>

Data Represents **C**
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>74</td>
<td>119</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>259</td>
<td>274</td>
<td></td>
</tr>
</tbody>
</table>

As of March 24, 2012.