#O2TheFix
Swimming Between The Flags

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O₂

OXYGEN
Which one?
Confusion

O₂ via mask?

Controller O₂?

O₂ saturation > 96%?

FiO₂?

CO₂ retainer?
Evidence

• Oxygen titrated to a specific target saturation saves lives\(^1\)

• TSANZ Guideline “Swimming between the flags”\(^2\)
Why does this matter to us?

- 9.7% Māori population in WDHB³
- Poor rate of prescribing⁴
- Unsafe administration⁴
Oxygen Steering Group

• WDHB Medication Safety Committee
• Consultant led multi-disciplinary steering group
Aim

• Improve understanding
• Prescribe appropriately
• Patient safety → “Swimming Between the Flags”
1. Baseline audit

Patients *using* oxygen?

- Prescribed?
- Device?
- Target saturation range?
2. e-Prescribing
2. e-Prescribing

MINNIE, MOUSE TEST, NHI: 0005003, DOB: 13/07/1

Allergies: Class Allergy to Penicillins - rash, Substance Allergy

**Single Ingredient**

- Oxygen
- Oxygen via humidified high flow nasal prongs Continuous
- Oxygen via non-invasive ventilation (NIV) Continuous
- Oxygen via reservoir mask Continuous
- Oxygen via simple face mask (Hudson) Continuous
- Oxygen via standard nasal prongs Continuous
- Oxygen via Venturi mask Continuous
2. e-Prescribing

<table>
<thead>
<tr>
<th>Medication</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen via standard nasal prongs, Continuous Inhalation</td>
<td>DOSE: 0.25 to 4 L/min Inhalation PRN</td>
</tr>
<tr>
<td></td>
<td>minimum dosage interval 1 minute</td>
</tr>
<tr>
<td></td>
<td>Target SpO2 = 88-92%</td>
</tr>
<tr>
<td>Oxygen via standard nasal prongs, Continuous Inhalation</td>
<td>DOSE: 1 to 4 L/min Inhalation PRN</td>
</tr>
<tr>
<td></td>
<td>minimum dosage interval 1 minute</td>
</tr>
<tr>
<td></td>
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## 2. e-Prescribing

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<tr>
<td>Oxygen via humidified high flow nasal prongs</td>
<td><strong>DOSE:</strong> 21 to 40 % O2 Inhalation PRN</td>
</tr>
<tr>
<td>Continuous Inhalation</td>
<td>minimum dosage interval 1 minute</td>
</tr>
<tr>
<td></td>
<td><em>Airflow rate 35 L/min. Target SpO2 = 88-92%</em></td>
</tr>
<tr>
<td>Oxygen via humidified high flow nasal prongs</td>
<td><strong>DOSE:</strong> 21 to 40 % O2 Inhalation PRN</td>
</tr>
<tr>
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<tr>
<td></td>
<td><em>Airflow rate 35 L/min. Target SpO2 = 92-96%</em></td>
</tr>
<tr>
<td>Oxygen via humidified high flow nasal prongs</td>
<td><strong>DOSE:</strong> 0 % O2 Inhalation PRN</td>
</tr>
<tr>
<td>Continuous Inhalation</td>
<td>minimum dosage interval 1 minute</td>
</tr>
<tr>
<td></td>
<td><em>For specialist use. Airflow rate = (prescriber to complete) L/min. Target SpO2 = (prescriber to complete) %</em></td>
</tr>
</tbody>
</table>

2. e-Prescribing

MINNIE, MOUSE TEST, NHI: 0005003, DOB: 13/07/1942, Age: 74 years, Weight: 79.9 kg (01/03/2017)
(Mosteller)

**Allergies:** Class Allergy to Penicillins

<table>
<thead>
<tr>
<th>Meds On Adm</th>
<th>Scheduled - 5</th>
<th>Variable Dose</th>
<th>PRN - 1</th>
<th>Stat - 1</th>
<th>Infusion - 2</th>
</tr>
</thead>
<tbody>
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<table>
<thead>
<tr>
<th>Medication</th>
<th>Date</th>
<th>Time</th>
<th>Dose</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen via simple face mask (Hudson) Continuous Inhalation</td>
<td>27/03/2017</td>
<td>11:55</td>
<td>⬤ (green)</td>
<td></td>
</tr>
<tr>
<td>DOSE: 5 to 10 L/min Inhalation PRN (11:54)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>minimum dosage interval 1 minute</td>
<td></td>
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</table>

27/03/2017

Jessica NAND
(Pharmacist)
3. New oxygen policy

Oxygen Therapy – Inpatient & STOT Ordering

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4. Campaign and launch week

O₂ the fix, aim 92-96
If high CO₂, aim 88-92

#O2TheFix
5. Staff education
6. Post campaign audit
Results

Baseline

Post

Prescribed O2: 49%

Using O2: 51%

Prescribed O2: 12%

Using O2: 88%
Understanding

Target saturation range

Controlled O₂ devices

O₂ masks vs nasal prongs

CO₂ retainer?

FiO₂?
Tom

Photo used with permission
Moving forward

• Orientation & education of new staff
• Stickers
• Publication

O₂ the fix, aim 92-96
If high CO₂, aim 88-92

#O2TheFix
Conclusion

• Better
• Best
• Brilliant


3. Mortality Collection Data Set (MORT), Ministry of Health; National Minimum Data Set (NMDS), Ministry of Health

Acknowledgments

- Dr. Alex Chapman, SMO Respiratory and General Medicine
- Elizabeth Brookbanks, Pharmacist Team Leader - Medical Services
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- Laura Campbell, Respiratory Clinical Nurse Specialist
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- Monica McGrath, ICU Outreach Nurse
- Jo Rogers, e-Prescribing Pharmacist
- Dr Jonathan Casement, SMO ICU
- Andrew Watson, ADU Nurse Educator
- Charlotte Chesbrough, Fisher & Paykel Healthcare
Do the simple things well

*Best care for everyone*

\[ \text{O}_2 \text{ the fix, aim } 92-96 \]
\[ \text{If high } \text{CO}_2, \text{ aim } 88-92 \]

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