An integrated health-sector strategy to combat COPD and asthma in Vietnam

Project LD16

14th November 2019

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The University of Sydney
Woolcock Institute of Medical Research
Overall objective of the VCAPS studies

To improve the management of chronic lung disease and reduce smoking rates for patients presenting to public health facilities in Vietnam.
The Vietnam COPD, Asthma and Prevention of Smoking (VCAPS) Study overview

<table>
<thead>
<tr>
<th>Study name</th>
<th>Description</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCAPS 1</td>
<td>Baseline quantitative evaluation of COPD, asthma and smoking in 46 health facilities</td>
<td>2017-18 (Completed)</td>
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<tr>
<td></td>
<td>• Prospective cohort study of patients with COPD and asthma presenting to 4 levels of the healthcare system</td>
<td>2017-18 (Completed)</td>
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<tr>
<td></td>
<td>• Prospective cohort study of current smokers presenting to 4 levels of the healthcare system</td>
<td>2017-18 (Completed)</td>
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<tr>
<td>VCAPS2</td>
<td>Qualitative study and health system evaluation</td>
<td>2017-18 (Completed)</td>
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<td></td>
<td>• Evaluation of smoke free policies within healthcare facilities</td>
<td>2017-18 (Completed)</td>
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<tr>
<td></td>
<td>• Qualitative evaluation of referral pathways for patients with COPD and asthma</td>
<td>2017-18 (Completed)</td>
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<tr>
<td></td>
<td>• Qualitative evaluation of healthcare workers’ attitudes to smoking</td>
<td>2017-18 (Completed)</td>
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<tr>
<td>VCAPS3</td>
<td>Pilot intervention study in 3 health facilities</td>
<td>2018-20 (recruitment completed)</td>
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<td>• A stepped algorithm using ICS/LABA to treat obstructive lung disease in 3 district clinics in Hanoi: a pilot study</td>
<td>2018-20 (recruitment completed)</td>
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<td></td>
<td>• Intervention to reduce smoking among patients presenting to 3 health facilities</td>
<td>2018-20 (recruitment completed)</td>
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<tr>
<td>VCAPS4</td>
<td>2-by-2 factorial cluster randomised controlled trial in 40 health facilities</td>
<td>Beginning 12/2019</td>
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SYGMA 2 Trial: Evidence for use of as-required budesonide/formoterol in asthma

As-Needed Budesonide–Formoterol versus Maintenance Budesonide in Mild Asthma

Eric D. Bateman, M.D., Helen K. Reddel, M.B., B.S., Ph.D., Paul M. O’Byrne, M.B., Peter J. Barnes, M.D., Nanshan Zhong, Ph.D., Christina Keen, M.D., Carin Jorup, M.D., Rosa Lamarca, Ph.D., Agnieszka Siwek-Posluszna, M.D., and J. Mark FitzGerald, M.D.

ABSTRACT

BACKGROUND
Patients with mild asthma often rely on inhaled short-acting β₂-agonists for symptom relief and have poor adherence to maintenance therapy. Another approach might be for patients to receive a fast-acting reliever plus an inhaled glucocorticoid component on an as-needed basis to address symptoms and exacerbation risk.

METHODS
We conducted a 52-week, double-blind, multicenter trial involving patients 12 years of age or older who had mild asthma and were eligible for treatment with regular inhaled glucocorticoids. Patients were randomly assigned to receive twice-daily place-
**Chronic respiratory disease intervention**

Criteria for enrolment: spirometry *OR* asthma questionnaire

<table>
<thead>
<tr>
<th>Step 1.</th>
<th>Poor symptom control <em>OR</em> Acute exacerbation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Prn budesonide/formoterol</td>
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</table>

<table>
<thead>
<tr>
<th>Step 2.</th>
<th>Poor symptom control <em>OR</em> Acute exacerbation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Maintenance budesonide/formoterol</td>
<td></td>
</tr>
<tr>
<td>(b) Prn budesonide/formoterol</td>
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</table>

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<tr>
<th>Step 3.</th>
<th>Refer to specialist care for further assessment</th>
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**Smoking cessation intervention**

- Prohibition of smoking and other activities to reduce smoking
- Brief smoking cessation advice offered by healthcare workers
- Follow-up counselling from call centre and text messages
- Help smokers quit and maintain abstinence
- Call centre and SMS
- Health facility smoking cessation intervention

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*Woolcock*

Leaders in Breathing & Sleep Research

*V-CAPS*
Setting of VCAPS studies

VCAPS 1, 2, 3 and 4

VCAPS 1, 2 and 4

VCAPS 1 and 2

VCAPS 4

Hà Nội Capital

Thanh Hóa Province

An Giang Province

Hồ Chí Minh City

Ca Mau Province
Timeline for VCAPS studies

- Inaugural meeting
- V-CAPS1
- V-CAPS2
- Phase 2 planning workshop
- V-CAPS3
- V-CAPS4

Engagement with policymakers

• Heads of the two national lung disease societies investigators
• Health system analysis completed, in collaboration with national and local stakeholders
• Working with the national smoking cessation organisation
• Sustainable funding mechanisms, through health insurance
Preliminary findings
VCAPS 1 cohort study

All participants
n = 1337

Respiratory symptom (+)
Smoking (-)
Baseline
n = 628

n = 950

Respiratory cohort
4-week
n = 855 (90.0%)

Respiratory cohort
3-month
n = 830 (87.4%)

Respiratory cohort
6-month
n = 802 (84.4%)

Respiratory cohort
9-month
n = 773 (81.4%)

Respiratory cohort
12-month
n = 758 (79.8%)

Respiratory symptom (+)
Smoking (+)
Baseline
n = 322

Smoking cohort
3-month
n = 399 (93.4%)

Smoking cohort
6-month
n = 384 (89.9%)

Smoking cohort
9-month
n = 369 (86.4%)

Smoking cohort
12-month
n = 358 (83.8%)
VCAPS 1 – Baseline smoking survey

<table>
<thead>
<tr>
<th>Gender</th>
<th>Central/provincial (8 facilities) n = 5,223 (50.2%)</th>
<th>District facility (16 facilities) n = 4,648 (44.7%)</th>
<th>Commune health facility (22 facilities) n = 524 (5.0%)</th>
<th>Total (46 facilities) n = 10,395 (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2,694</td>
<td>2,113</td>
<td>291</td>
<td>5,098</td>
</tr>
<tr>
<td>Female</td>
<td>2,529</td>
<td>2,535</td>
<td>233</td>
<td>5,297</td>
</tr>
<tr>
<td>Smoking prevalence</td>
<td>704 (26.1%)</td>
<td>774 (36.6%)</td>
<td>128 (44.0%)</td>
<td>1,606 (31.5%)</td>
</tr>
</tbody>
</table>

Smoking is more common among men at lower level health facilities.
## Patient smoking cessation strategies in past 12 months

<table>
<thead>
<tr>
<th>Method of smoking cessation</th>
<th>Central/provincial hospital (8 facilities) n = 277 (%)</th>
<th>District facility (16 facilities) n = 407 (%)</th>
<th>Commune health centre (12 facilities) n = 63 (%)</th>
<th>Total n = 747 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking counselling</td>
<td>3 (1.1%)</td>
<td>1 (0.2%)</td>
<td>1 (1.6%)</td>
<td>5 (0.7%)</td>
</tr>
<tr>
<td>Nicotine replacement therapy</td>
<td>11 (4.0%)</td>
<td>10 (2.5%)</td>
<td>5 (7.9%)</td>
<td>26 (3.5%)</td>
</tr>
<tr>
<td>Prescription medications (e.g. varenicline)</td>
<td>1 (0.4%)</td>
<td>0 (0%)</td>
<td>1 (1.6%)</td>
<td>2 (0.3%)</td>
</tr>
<tr>
<td>Traditional medicines</td>
<td>0 (0%)</td>
<td>1 (0.2%)</td>
<td>0 (0%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Smoking telephone support line</td>
<td>0 (0%)</td>
<td>1 (0.2%)</td>
<td>0 (0%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>eCigarettes</td>
<td>0 (0%)</td>
<td>1 (0.2%)</td>
<td>0 (0%)</td>
<td>1 (0.1%)</td>
</tr>
<tr>
<td>Other</td>
<td>15 (16.6%)</td>
<td>48 (11.8%)</td>
<td>6 (9.5%)</td>
<td>69 (9.2%)</td>
</tr>
</tbody>
</table>

259 (34.6%) made some attempt to quit in the last year
Respiratory treatments prescribed for patients

FEV1/FVC <70% at baseline (n=197)

Diagnosis COPD/Asthma by doctor (n=240)
VCAPS 3 Pilot study: COPD/asthma intervention

- 315 patients enrolled

At 3 months

- 52/303 (17%) had exacerbations requiring healthcare visits

- End of follow-up: July 2020

<table>
<thead>
<tr>
<th></th>
<th>Proportion (%)</th>
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<tr>
<td>Never used the medicine</td>
<td>3.3%</td>
</tr>
<tr>
<td>Step 1</td>
<td>69.6%</td>
</tr>
<tr>
<td>Step 2</td>
<td>24.4%</td>
</tr>
<tr>
<td>Don’t know how to use</td>
<td>2.6%</td>
</tr>
</tbody>
</table>
VCAPS 3 Pilot smoking cessation intervention

• 115 smokers enrolled in 3 district clinics
• 21/50 (42%) abstinent for 30 days at 3 months
• Continue to recruit until 200 participants or Jan 2020
• End of follow-up: Jan 2021
Challenges identified in the VCAPS3 pilot study

- High prevalence of smoking among male doctors
- ‘Smoke-free hospitals’ scale-up has been challenging
- Incentivising clinicians referring smokers is challenging
- Some resistance to pharmacists training patients about ICS/LABA use
VCAPS4 – a 2x2 factorial cluster RCT

• Randomise facilities to:
  • Chronic respiratory disease intervention or control
  • Smoking cessation intervention or control

• Recruitment planned from December 2019

• Completion by mid 2021
Conclusions and next steps
Acknowledgements

Vietnamese institutional partners
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