

# THE MARKET FOR COPD SERVICES IN ALBERTA

**INSPIRED Workshop**

February 10, 2015

Drs. Philip Jacobs, Irv Mayers, & Arianna Waye



INSTITUTE OF  
HEALTH ECONOMICS  
ALBERTA CANADA

# Workshop Outline

- **Background and Purpose** of Costing Study
- **Surveillance of COPD Service Market** in Alberta & Associated **Cost**
  - Smoking Prevention and Cessation
  - Diagnosis of COPD
  - Chronic Disease Management
  - Acute Disease Management
  - Management of COPD Decompensation
  - End of Life Care
- **Distribution of total cost** of COPD Market Services in Alberta
- **Policy Implications**
- **Data Gaps** and Future Research

*The results in this presentation are **PRELIMINARY**  
and are subject to change*

# Background

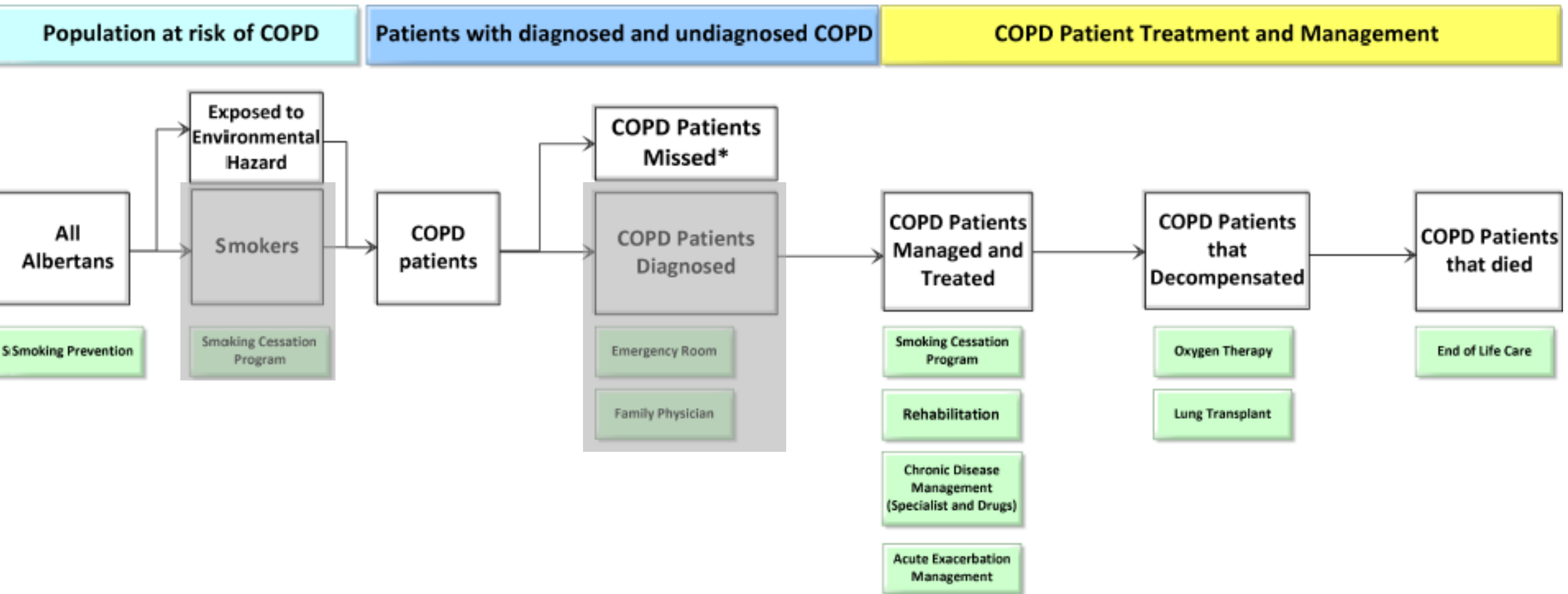
- The *market for COPD services* includes programs and care related to:
  - Disease prevention; early and late stage diagnosis, treatment, & management
- The *cost of the COPD-service market* in Alberta is *not known*
- Understanding public expenditure for the provision of care *illuminates the current policy environment and priorities*

# Purpose of Costing Study

**To estimate public expenditures within the Alberta market for COPD patient services and illuminate:**

- Current *areas identified as high priority* based on funding
- Program *capacity constraints*
- Possible *gaps in service provision and integration of care*

# Surveillance of Current Alberta Population-Level COPD Health Service Use & Cost



# Smoking Prevention/Cessation

- **Smoking prevention Program**

- Tobacco Reduction Act [2]
- *Alberta Cancer Prevention Legacy Fund* [2]

~\$25 million Smoking prevention

- **18% of Albertans Smoke** [1] = **600,000 smokers in Alberta**

- **Smoking cessation program costs \$165 per person for estimated 260,000 Albertans** [3]

- 46% attempted to quit last year [1]

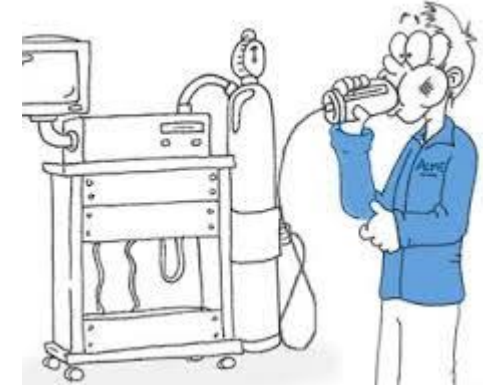
~\$43 million Smoking cessation



# Diagnosis of COPD

- **Number of Incident Cases = 12,000+** [4]

- Literature suggest underuse of spirometry [7]
- Very few ERs have a spirometer



- **Location of diagnosis (unknown):**

- *Community GP* (assume 50%)
  - Average cost is \$51
- *Hospital* (assume 50%)
  - Average cost is \$12k per visit

~\$0.5 million? Community GP

~\$72 million? Hospital Diagnosis



# COPD Chronic Disease Management

- **Number of prevalent cases =92,438**
  - 2.4% of Albertans are prevalent cases [4]
- **COPD Chronic Disease Management includes:**
  - *Specialist visits*  
*(~2.5/yr at cost \$130) [7]* **~\$30 million** Specialist Visits
  - *Drugs for all prevalent cases* **~\$ million** Drugs
  - *~1000 patients attend Rehab*  
*at a cost of \$1530 per person [8]* **~\$1.5 million** Rehab

# Acute COPD Exacerbation Management

## Number of Severe Exacerbations:

- **7990 Hospitalizations** [7]
  - Average cost of Hospitalization = \$12,039
- **6159 ER visits** [8]
  - Average cost of ER visit = \$950

~\$96 million Hospital Visits



~\$6 million ER Visits

# Management of COPD Decompensation

- Alberta Oxygen Program Serves 11,544 Albertans [10]

- Average cost of \$2348 [10]

~\$27 million Oxygen Program

- 13 Lung Transplants Annually for COPD patients

- 40 transplants annually in Alberta [11]
- 33% because of COPD
- Cost is \$150,000 [12]

~\$2 million Lung Transplants



# COPD End of Life Care

- According to Statscan ~1000 patient with chronic respiratory diseases die annually [13]
    - Cost of end of life care due to *organ failure* in Alberta ~\$40,000 [14,15]
    - Costs are already accounted for within acute disease management
- >\$40 million** End of life care

# Distribution of Total Cost of COPD Market Services in Alberta

<i>Service</i>	<i>Cost of service</i>	<i>% Total Cost</i>
<i>Prevention and Cessation</i>	\$68 million	29%
<b><i>Diagnosis</i></b> <i>(Through family physicians)</i>	<b>0.5 million</b>	<b>&lt;1%</b>
<b><i>Chronic Management</i></b> <i>(excluding drugs)</i>	<b>\$32 million</b>	<b>13%</b>
<b><i>Acute Management</i></b> <i>(including end of life and diagnosis in hospital)</i>	<b>\$102 million</b>	<b>44%</b>
<i>Decompensation</i>	\$29 million	12%
Total Cost	\$231.5 million	100%

# Policy Implications

- **Areas of high priority based upon funding – Acute care management**
  - Implications for possible resource re-allocation?
- **Program capacity constraints -- Chronic disease management**
  - Strong evidence of effectiveness of rehab, but capacity constraints limit its provision in AB
  - Question: How does this constraint affect progression of disease and patient quality of life?
- **Possible gaps in service provision and integration of care unclear**  
because of lack of data on patient transition

# Data Gaps & Areas for Future Research

- Uncertainty around *location of diagnosis* and timing of diagnosis
  - Change cost estimates
- *Referrals and transitions* between sectors unclear
  - Silos in care?
- *Costs vary by severity*, but data unavailable
- *Vaccinations* (Pevnar, flu) are often recommended but uptake is unknown
- *Smoking cessation service utilization* not yet available

# References

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2. <http://www.albertaquits.ca/helping-others-quit/healthcare-providers/tobacco-free-futures>
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