The INSPIRED COPD Outreach Program™ :
Insights and Outcomes

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COPD in Canada

1st

Cause of hospital admissions among chronic illness

4th

Leading cause of death

In Ontario,

12%

of population,

24%

hospital admissions

(Gershon et al 2013)

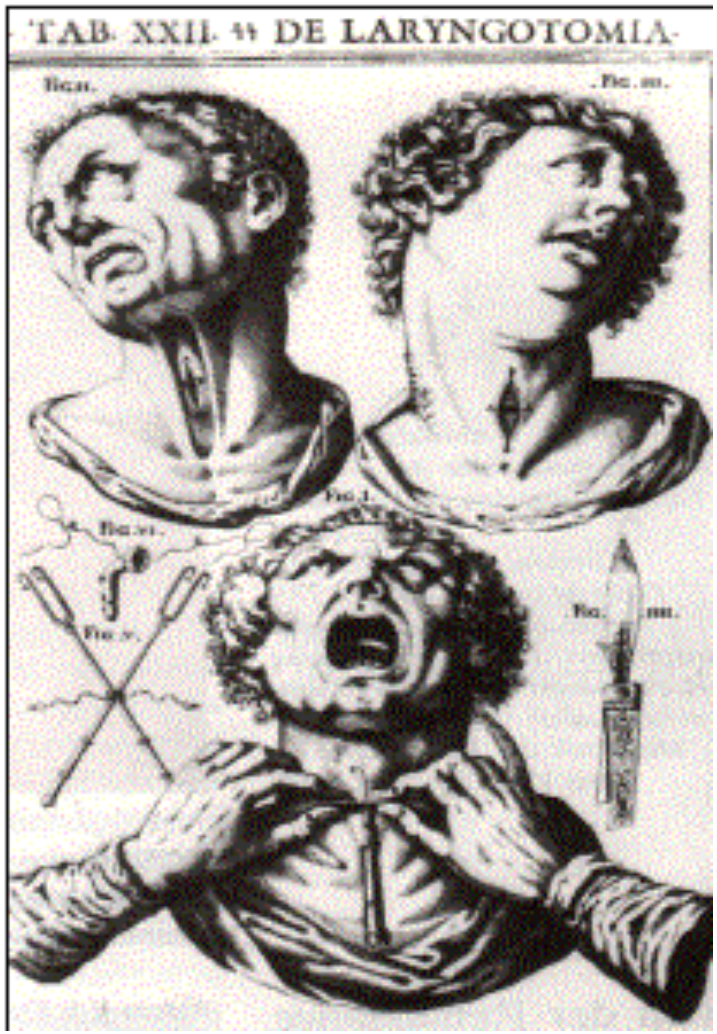
1 in 4

>35yrs

$750,000,000

annually in healthcare costs

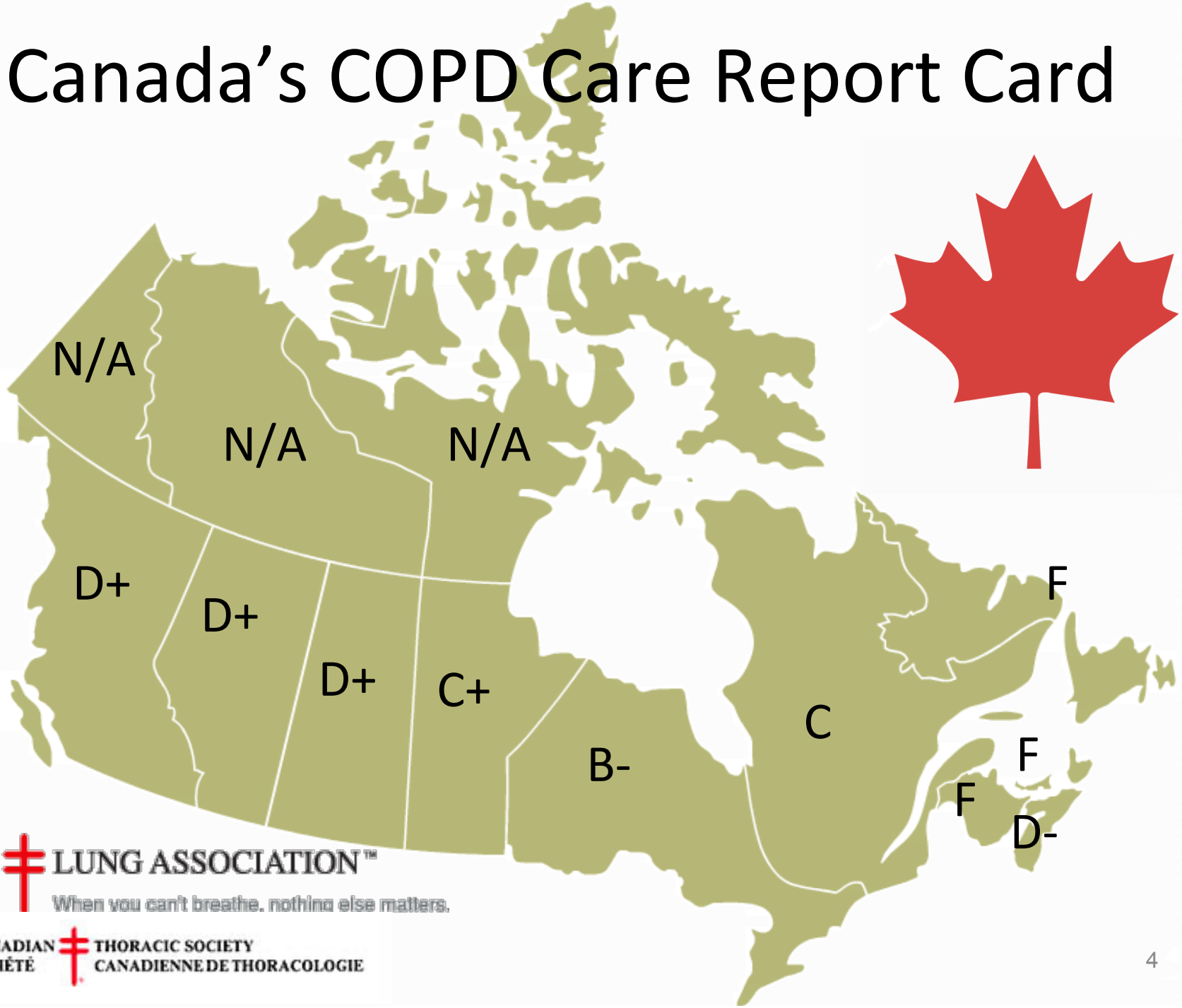
Many patients with advanced COPD:



- Suffer from refractory dyspnea (up to 50%)
- Relief from dyspnea a top priority; plan of care at discharge[1]
- Have symptom burden similar to or worse than patients with advanced lung cancer[2]

1. *Rocker GM, Dodek PE, Heyland DK. Can Respir J 2008;15:249-54*
2. *Gore et al., Thorax 2000*

Canada's COPD Care Report Card



THE LUNG ASSOCIATION™
When you can't breathe, nothing else matters.

CANADIAN SOCIÉTÉ THORACIC SOCIETY CANADIENNE DE THORACOLOGIE

Listening to Patients

Advanced COPD: Most important elements of end of life care

Patients n=118	%
Not being kept alive on a ventilator when there's no meaningful hope of recovery	55%
Relief of physical symptoms	47%
An adequate plan of care & health services after after discharge	40%

Source: Rocker G, Dodek P, Heyland D et al, Can Respir J 2008

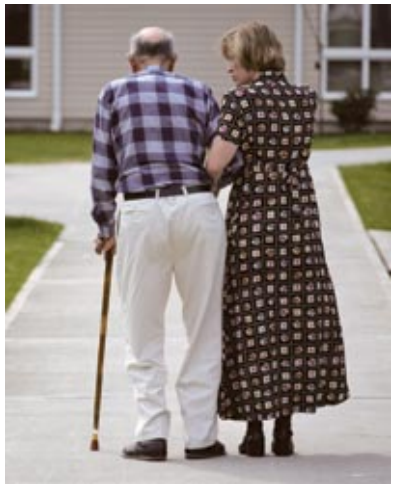
Listening to Patients

Advanced COPD Care: Top 3 opportunities for Improvement

Caregivers n=37	Need to fix	Patients n=37
Know which doctor is the main doctor in charge of your family member's care		That you not be a physical or emotional burden on your family
Family member has relief of physical symptoms		An adequate plan of care & health services available to look after me at home after discharge
An adequate plan of care & health services available to look after him/her at home after discharge		To have trust & confidence in the doctors looking after you

Source: Young J, Allan DE, Simpson AC, Heyland DK, Rocker GM. What maters to family carers of patients with advanced COPD. Am J Respir Crit Care Med 2008:A665

COPD:The family caregivers Loss is a central theme



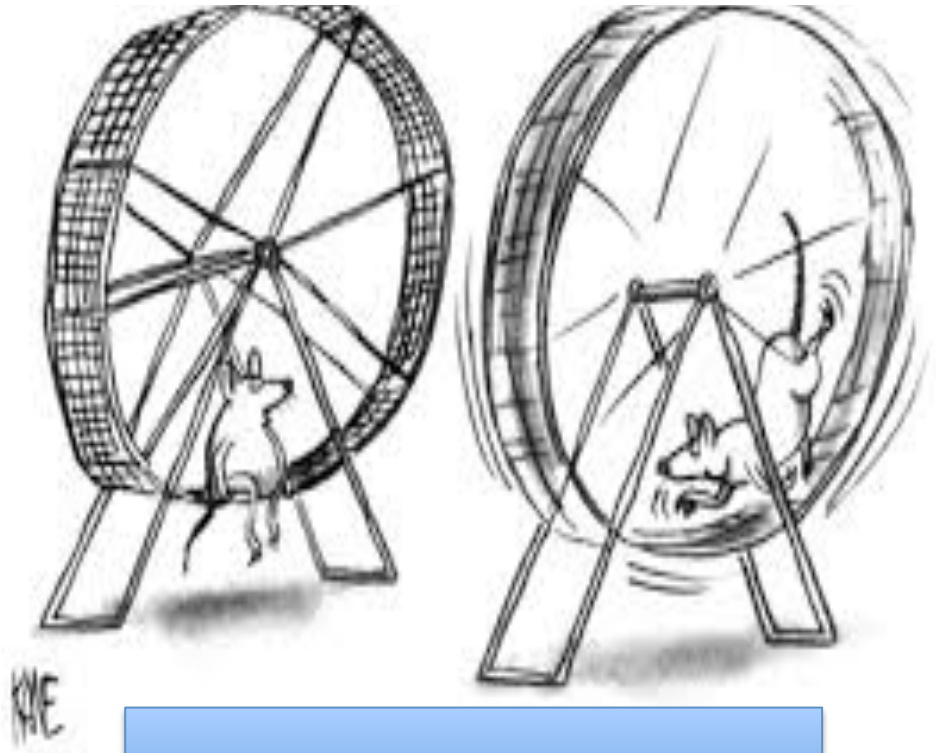
Social isolation, boredom, tension in the relationship, fatigue, resentment, restriction of personal freedom, anger, helplessness, guilt, depression, difficulty sleeping, anticipatory grieving, loss of self-identity, and panic.

Simpson AC, Rocker GM
Advanced COPD: Impact on informal caregivers. J Palliat Care, Mar 2008

Simpson AC, Rocker GM
Advanced COPD: Rethinking models of care. QJMed 2008

Bailey PH. The Dyspnea-Anxiety-Dyspnea Cycle Qual Health Res 2004;14:760

Epiphany Moment



I had an epiphany

"I'm not sure how much more distress I can listen to, or papers we write before I know we are going to do something meaningful about all of this"

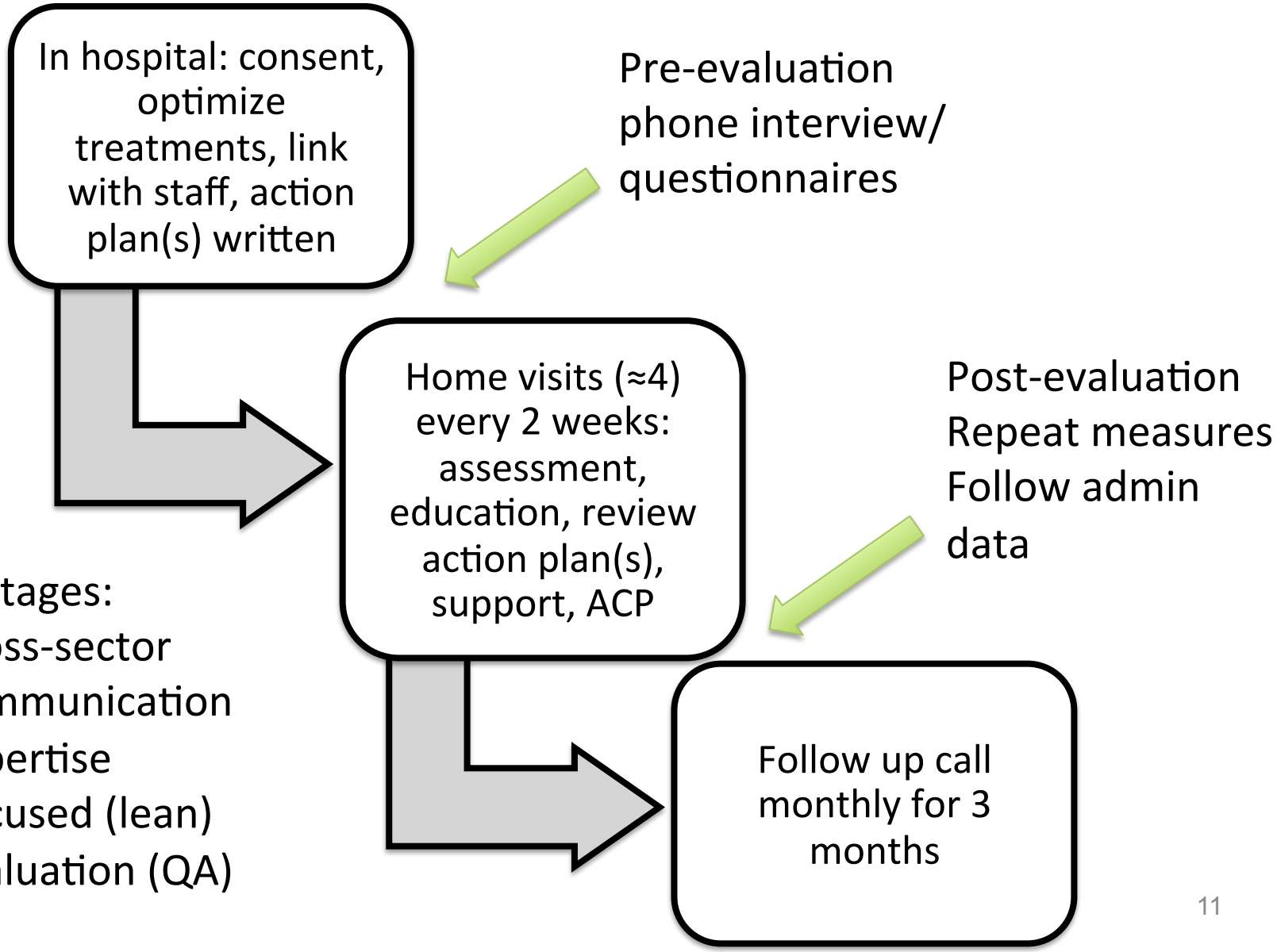
Joanne Young in research coodinator role pre INSPIRED

The road to acute care…

Evidence-based interventions

- Hospital/home-based support early discharge support
- Education based on need (patient and family focus)
- Written action plans (per CTS) for COPD exacerbations - self care
- Written action plans for "Dyspnea Crises" – video
- Advance Care Planning/ Written personal directive/ DNR orders

The Program (the mechanics of it all)



Advantages:

- Cross-sector communication
- Expertise
- Focused (lean)
- Evaluation (QA)

Experience: ACP in **INSPIRED**

- Critical element of program
- Builds on trust established by the team; communication about "goals" is part of the INSPIRED care process from outset
- Welcomed, sense of relief, breaking the silence
- Tackles lack of quality, or lack of any ACP

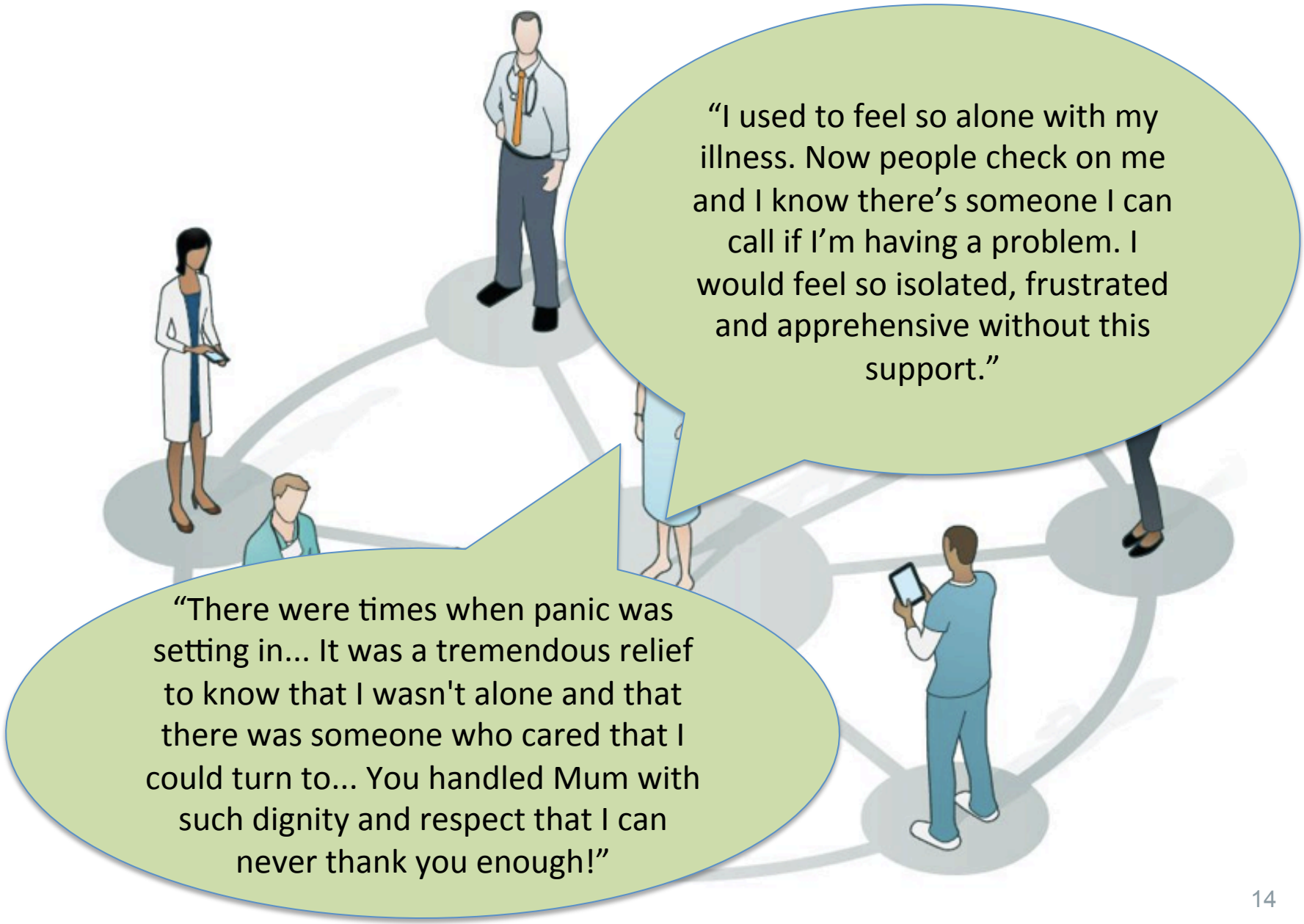
Outcomes

Qualitative interviews suggest participants felt:

- more confident in managing symptoms
- less anxious/stressed
- willing to discuss goals of care, including those related to end-of-life

Quantitative: Health related Quality of Life (CRQ), Hospital Anxiety and Depression Scale, Herth Hope Index Care Transition Measure

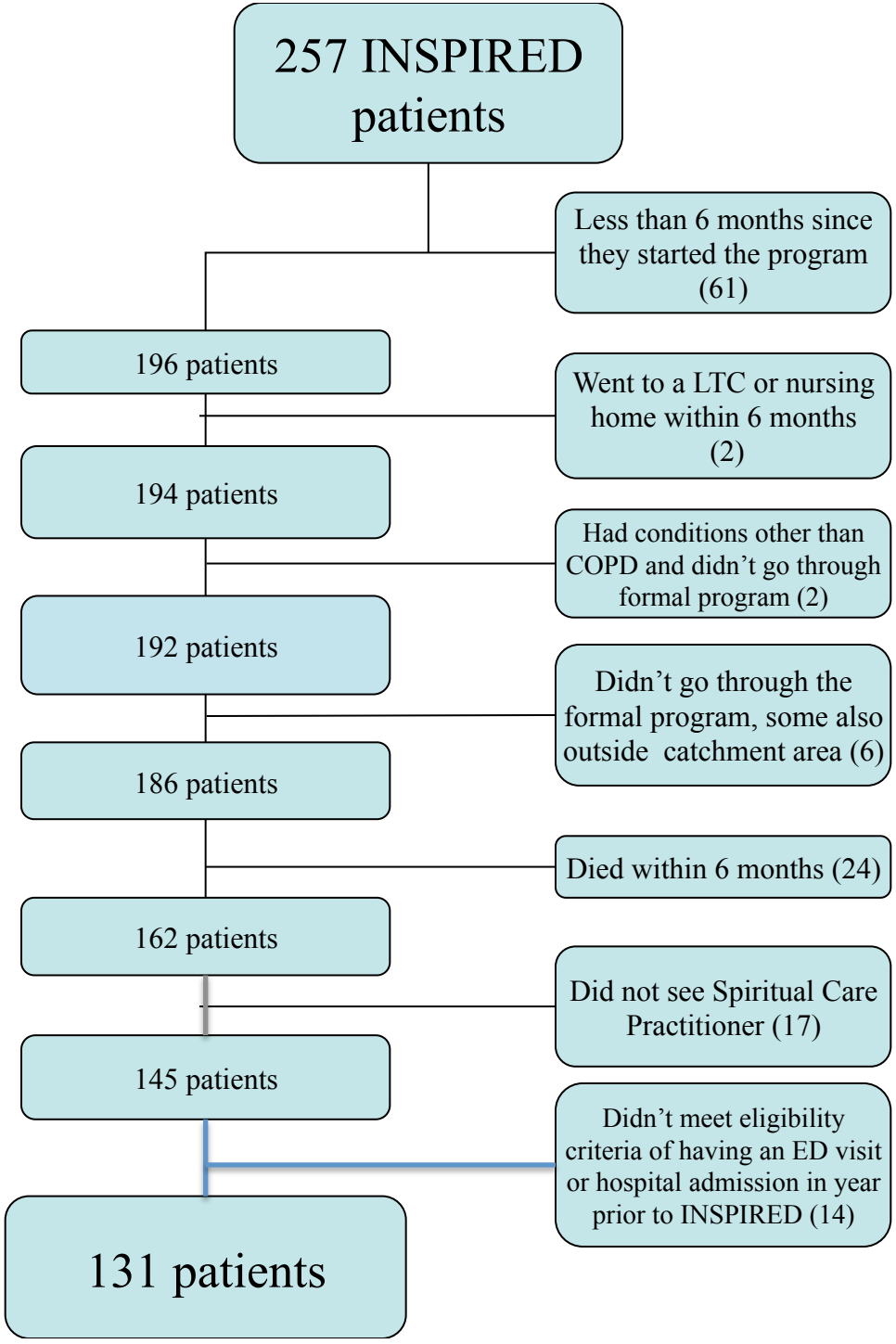
The second “I” in INSPIRED is *INDIVIDUALIZED*



INSPIRED interviews (n=18)

Top 5 Reasons INSPIRED helped (in order of frequency):

- Action plan/prescriptions and prednisone on hand or on order
- Accessible education/information/resources - patient booklet, hand-held fan, inspirometer,
- Better outcomes relevant to the patient/family, i.e., breathlessness, stamina, recognition and management of AECOPD, use of COPD medications (puffer technique, timing, oxygen use, etc)
- Someone to call/support/not feeling so alone
- Feeling cared for/caring, reliable, knowledgeable staff


257 INSPIRED patients
Less than 6 months since they started the program (61)
196 patients
Went to a LTC or nursing home within 6 months (2)
194 patients
Had conditions other than COPD and didn't go through formal program (2)
192 patients
Didn't go through the formal program, some also outside catchment area (6)
186 patients
Died within 6 months (24)
162 patients
Did not see Spiritual Care Practitioner (17)
145 patients
Didn't meet eligibility criteria of having an ED visit or hospital admission in year prior to INSPIRED (14)
131 patients

ER, admission data, length of stay

6 month pre/post data

	Pre-INSPIRED n=131	Post-INSPIRED n=131		
	6 /12	6/12	6 /12 (n, % reduction)	Cost savings
ER visits	282	113	-169 (60%)	-$84,500 @$500/visit
Admissions	154	57	-97 (63%)	
Bed Days	1573	596	-997 (62%)	$997,000 @$1000/day

Cost savings at 6 months ≈ 3x annual program costs

Care Transition Measure (CTM)

15 questions, Scored 1-4, scaled to a percentage, max score 100%

Label	Median	Min.	Max.	N
Pre INSPIRED CTM	71.00	25.00	96.00	27
Post INSPIRED CTM	83.00	69.00	100.00	27
	12.00	-3.00	75.00	27

No change in CRQ, HADS, Herth Hope index

$p < 0.0001$

TABLE 2. Six- and 12-months results pre/post-INSPIRED for ED visits, hospital admissions and length of stay (LOS) (n=93)*

	Pre-INSPIRED			INSPIRED	Post-INSPIRED				
	12 months total	6-12 months	0-6 months		0-6 months	6-12 months	0-12 months total	% change 6 months	% change 12 months
ED visits	266	71	195		54	73	127	-72%	**-52%**
Admissions	136	21	115		24	37	61	-79%	**-55%**
LOS (days)	1333	202	1131		235	284	519	-79%	**-61%**

*To provide a homogeneous group for this analysis we excluded patients who did not see the spiritual care practitioner, did not have an ED visit or admission in the year prior to INSPIRED, those who died, or went to a nursing home or long-term care facility within 6-months of starting INSPIRED, and those who live outside the catchment.

Rocker and Verma. INSPIRED COPD Outreach Program: Doing The Right Things Right. Clin Invest Med 2014 (in press)

Decedents' Length of Stay, PDs etc

	INSPIRED	non-INSPIRED
Decedents	n=20[1]	n=96
LOS median (interquartile range)	#2.5 (0-6)	7.0 (4-15)
ICU/IMCU use n (%)	4 (20%)	20 (21%)
ICU/IMCU LOS (mean)	3	8.9
Available PDs n (%)	11 (55%)*	10 (10%)
Palliative care involved n (%)	13 (65%)	38 (40%)

1. INSPIRED patients who died at home = 6/20 (30%)

 # p= 0.001 (Mann Whitney U test)

**p<0.0001 (Fishers exact test)*

Relationships

R *elationships*: fostered between patient, family, providers

E *mphasis* on wellbeing

L *ocations* are convenient

A *ccess* is optimized

T *ogether*: patient/family active partners

I *ntentional* redesign of system

O *utcome*/process measures evaluated continuously

N *ot complicated*, simple

S *ervices*: financially sustainable

H *ub* of system is the family

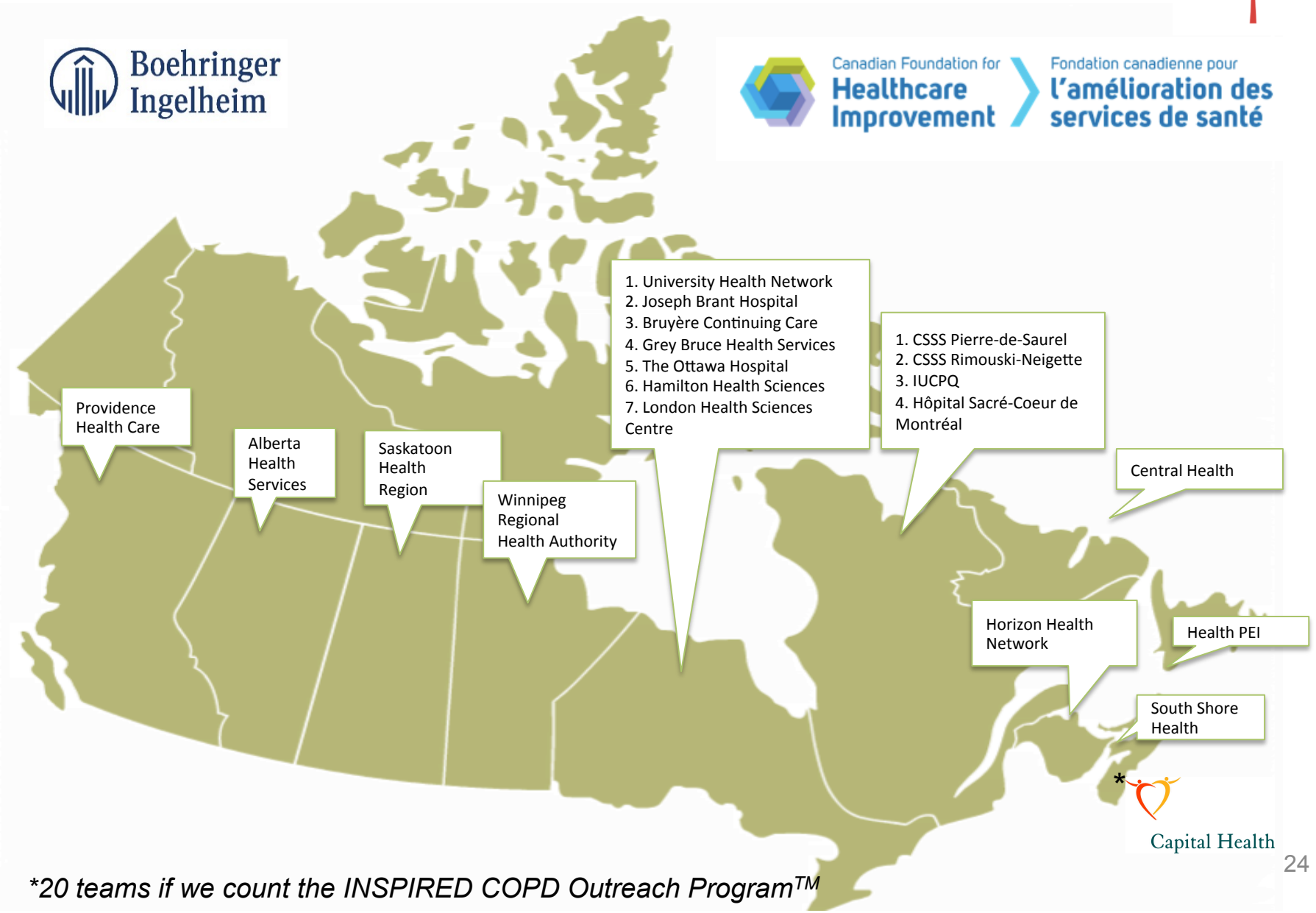
I *nterests* of patient drives what we do and how

P *opulation*-based system and services

INSPIRED: Funding and milestones

2007-2010 Pre INSPIRED	2010 INSPIRED Pilot	2012	2013	2014
Research Funding	Hybrid Funding for pilot phase	CDHA core program	CDHA core program CFHI appointment for GR as CIA	QEII Foundation TRIC grant (evaluation of move to the ED) Leading Practice (Accreditation Canada)
CIHR MRFNB NELS at DAL Various community based studies to understand burden of COPD in Rural NB and NS	ACCP Award (to GR) $10,000 QEII Foundation $10,000 Rocker $10,000 CDHA Innovation $25,000 GSK, $60,000	GSK On going support (expansion to DGH)	CDHA approves 0.5 FTE RRTs x 2 (expansion to the ED) On-going support GSK	March 2014 RTs x2 appointed for ED expansion CFHI –B CL Pan-Canadian INSPIRED 19 teams

2014: 19 teams across 10 provinces



20 teams if we count the INSPIRED COPD Outreach Program™

Video Link to Dyspnea Crisis manuscript and video

http://share.kaiserpermanente.org/article/helping-patients-with-advanced-disease-breathe-easier-expert-panel-issues-recommendations-for-dyspnea-crisis/