



# How much is burnout among primary care teams associated with staffing and workload?

Christian D. Helfrich, MPH PhD - Organization & Management Working Group VA Patient Aligned Care Team (PACT) Demonstration Laboratory Coordinating Center

# Background: VHA Patient-Centered Medical Home

- April 2010, Veterans Health Administration patient-centered medical home initiative
- Patient-centered medical homes thought to:
  - Improve quality, especially for those with chronic, complex conditions
  - Potential mechanism to better use limited resources, or control costs
  - Decrease burnout, attract doctors to primary care

# Background: Medical home changes to VHA primary care

- Areas of focus
  - Expanded access (non face to face visits, secure messaging)
  - Team based care (formation of “teamlets”)
  - Continuity
- Electronic tools
  - Secure messaging
  - Referral management (specialty care); electronic consultation
  - Population health tools
- Increased primary care support staff for team-based care
  - from 2.3 per FTE to 3.0 per FTE primary care provider
  - >1,000 RN case managers hired since 2010

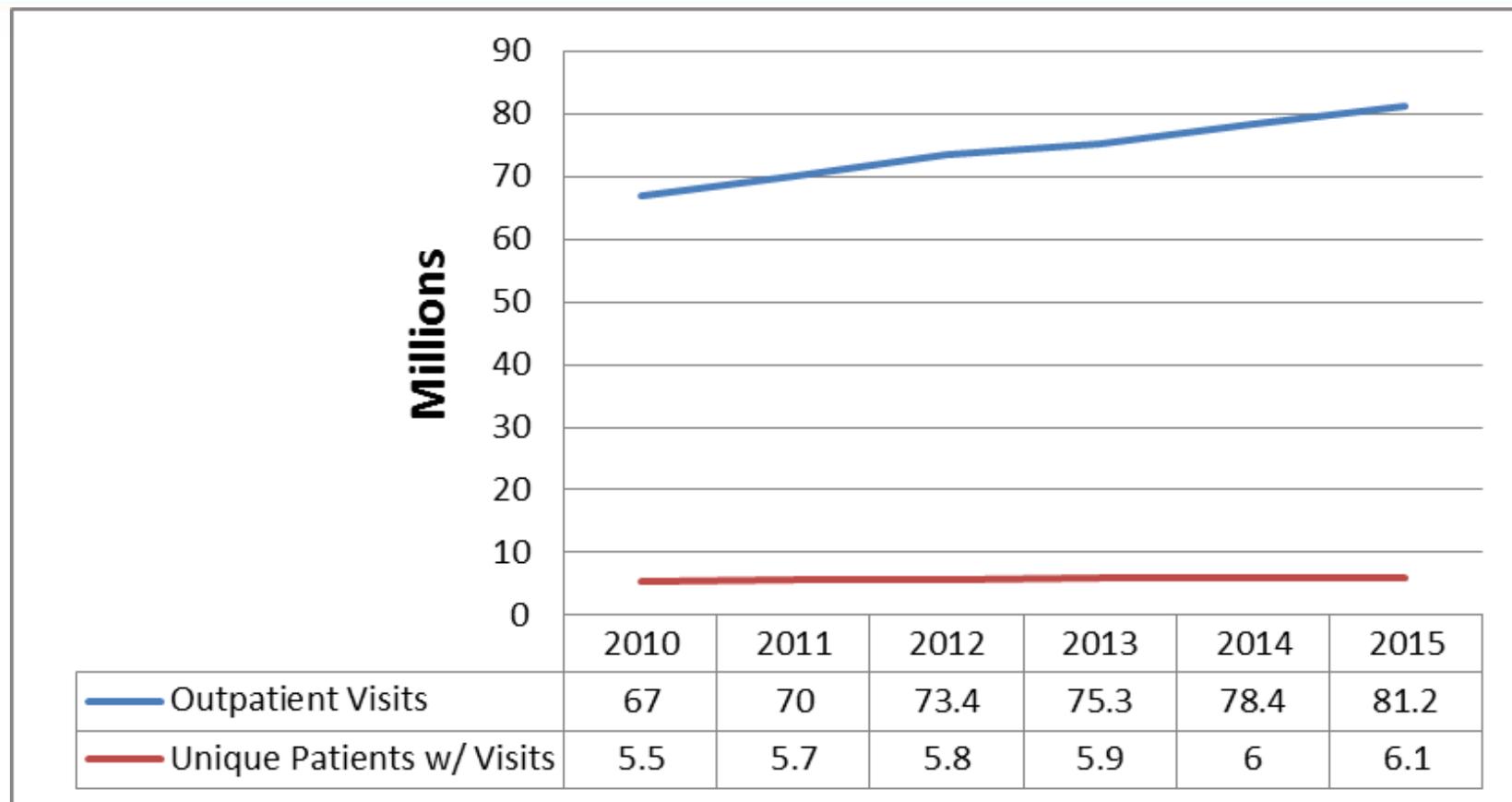
# Background: Assessing burnout as part of medical home evaluation

- Particular interest in employee burnout
- Burnout is occupational condition characterized by
  - Emotional exhaustion
  - Depersonalization
  - Low sense of personal accomplishment or professional self-efficacy

# Background: Reasons for assessing burnout

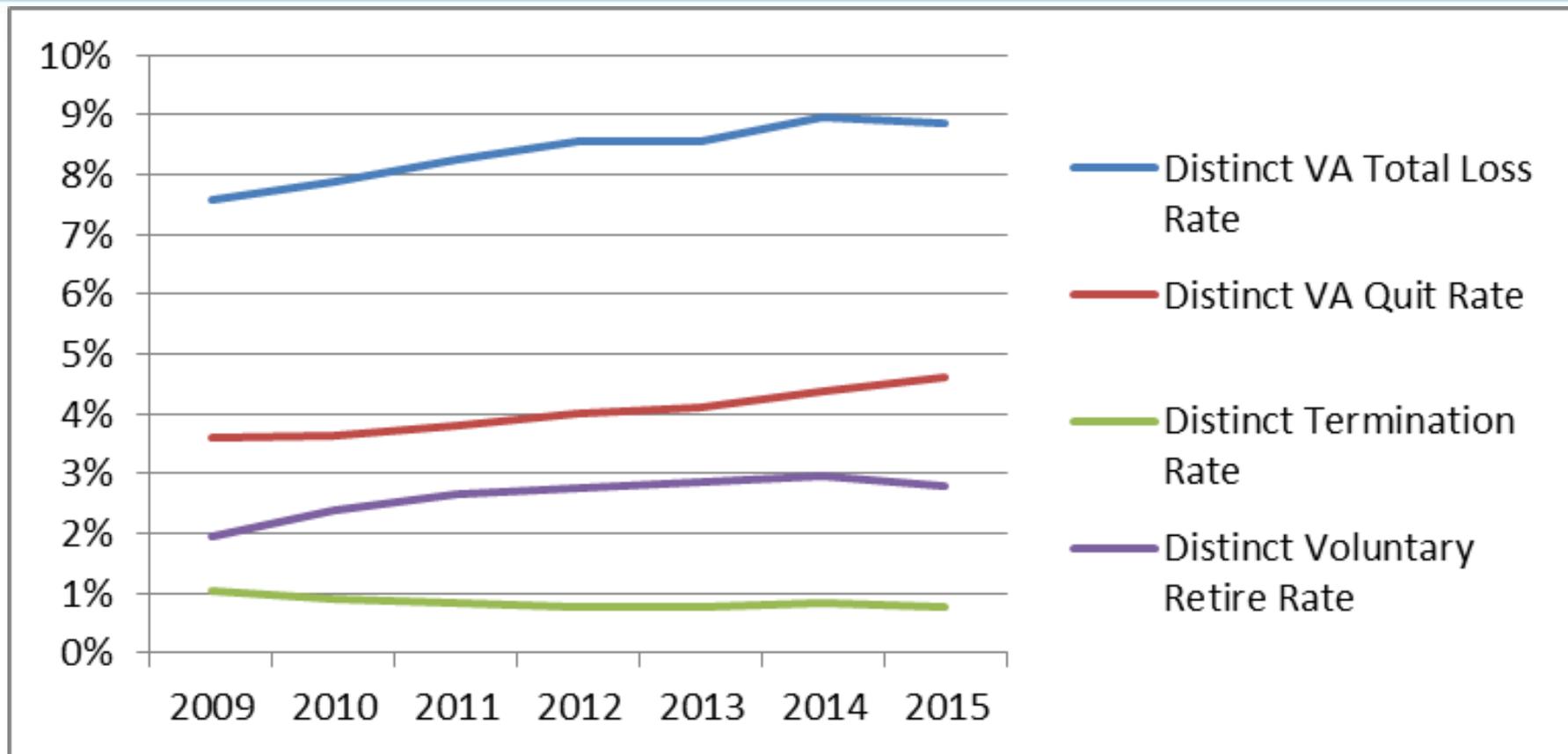
- Work-related burnout common in US primary care; prevalence may exceed 50% among physicians
- Working on a team, & good physician-nurse relationships protective
- Conversely, disruptive change in workplace can contribute to burnout (change fatigue)
  - Working overtime
  - Insufficient clinical staffing to manage workload

# Background: Annual increases in VA outpatient visits and unique patients seen



Source: VHA Support Service Center (VSSC): New Outpatient Visits & Uniques Trend, 10/7/15

# Background: VHA employee turnover (“loss”) rate increasing



Source: VA Workforce Planning Service; VHA Support Service Center (VSSC) HR Turnover Cube for all VHA

# Background: Reasons for assessing burnout

- Associated with worse patient safety and lower patient satisfaction
- Burned-out employees more likely to leave jobs, take sick leave, and suffer relationship problems & depression

# Background: Evaluation of VHA patient-centered medical home

- 2012 conducted national survey of VHA primary care
  - Found measures of team-based care protective
  - Teamlet staffing had strong association with burnout
  - No association with panel size or patient comorbidity
- However, several limitations:
  - Could only link burnout and workload (e.g., panel size, comorbidity of patients on the panel) at the clinic-level
  - Did not measure turnover on teamlet, or working overtime
- Repeated survey in 2014

# Background: 2012-2014

Burnout (unadjusted) has increased for PCPs in the VA:

	<b>2012</b>	<b>2014</b>
<b><i>All</i></b>	<b>39%</b>	<b>40%</b>
Provider	45%	50%
Nurse Care Manager	40%	42%
Clinical Associate	31%	32%
Administrative Associate	37%	37%

While PACT implementation has been advancing:

- More teamlets fully staffed to 3:1 ratio
- Increasing delegation: PCPs saying they rely on their staff “a great deal”
- Nurse care managers & admin clerks spend more time on work that is well-matched with training

# Improving PACT Implementation: Fully staffed teamlets

More PACT teamlets are staffed to 3:1 ratio

	<b>2012</b>	<b>2014</b>
<b><i>All</i></b>	<b>50%</b>	<b>65%</b>
Provider	44%	58%
Nurse Care Manager	48%	62%
Clinical Associate	58%	70%
Administrative Associate	61%	78%

# Improving PACT Implementation: Delegation

**Significant increase in PCPs saying they rely on their staff “a great deal” for:**

	<u>2012</u>	<u>2014</u>
Receiving messages from patients	59%	73%
Resolving messages from patients	45%	57%
Responding to prescription refill requests	39%	46%
Educating patients about disease-specific self-care	33%	39%
Encouraging lifestyle modifications	34%	40%
Assessing patient lifestyle factors	37%	43%
Screening patients for disease	50%	57%
Gathering patient preventive services utilization Hx	43%	55%

# Improving PACT Implementation: Working at top of competency

Greater percentage of time is spent each week on work that is well-matched with training

## Percentage of time spent on work well-matched to training

	50-74%		≥75%	
	2012	2014	2012	2014
Provider	32%	32%	50%	51%
Nurse	28%	21%	48%	60%
Clinical Assoc.	16%	17%	64%	68%
Admin. Assoc.	15%	12%	58%	71%

# Analysis objectives

- With 2014 survey, possible to assess workload & staffing association with burnout at teamlet level
- Test how much burnout is associated with teamlet staffing & workload using teamlet-level staffing and workload data

# Measures – Dependent variable

## **Burnout Measure (PACT Survey)**

5 categories, Dichotomized: {1 and 2 = No}, {3, 4 and 5 = Yes}

Q19. Overall, based on your definition of burnout, how would you rate your level of burnout at work?

1. I enjoy my work. I have no symptoms of burnout.
2. Occasionally I am under stress, and I don't always have as much energy as I once did, but I don't feel burned out.
3. I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion.
4. The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot.
5. I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help.

# Measures – Independent variables

<b>PACT Survey items:</b>	
Q2: How long have you worked for the VHA?	8 categories
Q3: How much total experience have you had working in PACT?	4 categories
Q4: Are you currently on more than one PACT?	Yes/No
Q7: Is your PACT currently staffed at the recommended 3:1 ratio?	Yes/No
Q9: Does your PACT teamlet have provider appointments available outside the traditional business hours?	Yes/No
Q9a: How often does your PACT work extended hours on the weekends?	4 categories- Dichotomized to Yes/No
Q9c: How often does your teamlet work extended hours together (at least 80% of the time)?	4 categories- Dichotomized to Yes/No
Q13: Has your PACT teamlet had any changes in, or loss of, staff in the past 12 months?	Yes/No

# Measures – Independent variables

- Primary Care Management Module (PCMM):
  - Panel over capacity: Yes/No ( $\geq 100\%$ , ratio of adjusted panel size to adjusted capacity)
- PACT\_CC SQL Db:
  - Gagne score: Comorbidity score based on 20 disease indicators (Gagne et al. Journal of Clinical Epidemiology 64.7 (2011): 749-759)
- VAST:
  - Is this a VA Medical Center (or CBOC)? (Yes/No)

# Analysis

- Multivariable analyses used a maximum-likelihood logistic mixed effects to predict likelihood of burnout for respondents.
- Analysis was performed at the respondent level on survey responses and administrative data for the respondent's teamlet.
- We clustered the logistic analysis at the teamlet level.

# 2014 Survey Sample

- 4,610 respondents in 4 teamlet occupations (out of 5,862 respondents total).
  - 2,809 of 8,114 (34.6%) teamlets in PCMM had at least 1 respondent.
  - 687 of 935 (73.5%) clinics had at least 1 respondent.

# Model Results: 5 variables associated with burnout

Variable	Odds Ratios (95% CI)	P value
<b>On a fully-staffed teamlet (Q7)</b>	<b>0.56 (0.48-0.65)</b>	<b>&lt;0.001</b>
<b>Change on teamlet in past year (Q13)</b>	<b>1.62 (1.40-1.87)</b>	<b>&lt;0.001</b>
<b>Working extended weekend hours (Q9a)</b>	<b>1.63 (1.21-2.19)</b>	<b>&lt;0.001</b>
<b>Have a panel-overcapacity (PCMM)</b>	<b>1.21 (1.05-1.41)</b>	<b>0.01</b>
<b>Working extended hours w/ teamlet (Q9c)</b>	<b>0.74 (0.59-0.93)</b>	<b>0.01</b>
Assigned to multiple teamlets (Q4)	1.10 (0.93-1.29)	NS
Working extended hours during week (Q9b)	1.15 (0.91-1.45)	NS
Gagne score (comorbidity)	1.03 (0.79-1.34)	NS
VAMC-based clinic (vs. CBOC) (VAST)	0.93 (0.80-1.09)	NS

# Predicted Probability of Burnout: main predictors

		PCPs	Nurses	CA	AA	All Roles
<b>Adjusted Probability of Burnout:</b>		<b>0.41</b>	<b>0.34</b>	<b>0.26</b>	<b>0.33</b>	<b>0.33</b>
Fully Staffed (p<0.001)	Y	0.34	0.28	0.21	0.27	0.27
	N	0.48	0.41	0.32	0.40	0.40
Team Change (p<0.001)	N	0.35	0.29	0.22	0.28	0.28
	Y	0.46	0.40	0.31	0.39	0.39
Panel-Overcap (p< 0.05)	N	0.39	0.32	0.25	0.31	0.31
	Y	0.43	0.36	0.28	0.36	0.36
Work Extended Weekend Hours (p<0.001)	Never work extended hrs	0.30	0.24	0.18	0.24	0.24
	No weekend extended hrs	0.41	0.34	0.26	0.34	0.34
	Work extended weekend hrs	0.53	0.46	0.37	0.45	0.45

# Predicted Probability of Burnout for main predictors

	PCPs	Nurses	CA	AA	All Roles
<b><i>Adjusted Probability of Burnout:</i></b>	<b>0.41</b>	<b>0.34</b>	<b>0.26</b>	<b>0.34</b>	<b>0.34</b>
Fully Staffed + No Team Change	0.28	0.24	0.21	0.18	0.23
Not Fully Staffed + Team Change	0.52	0.48	0.43	0.39	0.46
Not Overcapacity + Fully Staffed	0.30	0.26	0.23	0.20	0.26
Overcapacity + Not Fully Staffed	0.48	0.44	0.39	0.35	0.43
Not Overcapacity + No Team Change	0.32	0.27	0.24	0.21	0.26
Overcapacity + Team Change	0.48	0.43	0.38	0.34	0.41
FST + No Team Change + Not Overcapacity	0.27	0.22	0.16	0.21	0.21
Non-FST + Team Change + Overcapacity	0.57	0.49	0.40	0.49	0.49

CA = Clinical Associate

AA = Administrative Associate

# Predicted Probability of Burnout: PACT Experience

		PCPs	Nurses	CA	AA	All Roles
<b><i>Adjusted Probability of Burnout:</i></b>		<b><i>0.41</i></b>	<b><i>0.34</i></b>	<b><i>0.26</i></b>	<b><i>0.33</i></b>	<b><i>0.33</i></b>
Length of experience w/PACT	< 6 months	0.32	0.27	0.20	0.26	<b>0.22</b>
	6 mo – 1 year	0.38	0.32	0.24	0.31	<b>0.30</b>
	1-2 years	0.44	0.37	0.29	0.37	<b>0.41</b>
	2+ years	0.50	0.43	0.35	0.43	<b>0.42</b>

CA = Clinical Associate

AA = Administrative Associate

# Limitations

- No controls, cross-sectional analysis.
- Non-response bias.
  - Non-responding teamlets had higher patient complexity (Gagne scores), VAMC location and adjusted panel size
  - Possible selection bias at teamlet level:
    - 65% of teams in our sample represented by one respondent.
    - 67% of teams had respondents in just one role ( e.g. 2 Nurses responded to the survey from a team).

# Summary

- Burnout is significantly lower for primary care employees when:
  - They are on a teamlet staffed to the 3:1 ratio
  - There has been no turnover on the teamlet in previous 12 months
  - The panel is within capacity
  - They are newer to PACT (i.e., have less experience)
  - They do not work extended weekend hours
  - If they do work extended hours, they work these together with their teamlet
- The most significant effects - **burnout risk cut in half** for employees on a fully-staffed teamlet, with no-turnover and a panel within capacity.
- Burnout is not associated with
  - Patient comorbidity
  - Working on multiple teamlets
  - Working extended hours during the week

# PACT Organization & Management Workgroup Contacts

G. Blake Wood, MS, Program Coordinator

[Gordon.Wood@va.gov](mailto:Gordon.Wood@va.gov), 206-277-4167

Walter L. Clinton, PhD, Analyst

[Walter.Clinton@va.gov](mailto:Walter.Clinton@va.gov), 206-287-5705

Christian D. Helfrich, PhD

[Christian.Helfrich@va.gov](mailto:Christian.Helfrich@va.gov), 206-277-1655