

Pearls from the North American Primary Care Research Group (NAPCRG)

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What is NAPCRG?

- Multidisciplinary organization for primary care researchers
- Founded in 1972
- The world's largest organization devoted to research in family medicine, primary care and related fields, including epidemiology, behavioral sciences, and health services research.
- NAPCRG provides a forum for presenting new knowledge to guide improvement, redesign and transformation of primary care.

Goals of NAPCRG

- Promote primary care research and quality
- Nurture novice researchers
- Develop and support practice-based research networks and the voices of community clinicians and patients
- Promote patient engagement in improving patient care and research

NAPCRG's Community Clinicians Advisory Group (CCAG)

- NAPCRG committee representing primary care physicians in practice
 - Many are involved with primary care research networks
 - Many also attend NAPCRG annual meeting
- Pearls process
 - CCAG members review all abstracts and nominate all favorites
 - Nominated abstracts are then ranked 1-5 by CCAG members and scores are tallied.
 - Top 10 abstracts make the Pearls list

The Research Pearls

The Research Question

- **Title:** PCMH Implementation and Primary Care Provider and Staff Burnout: A Process Analysis

Authors: Diana Carvajal MD, MPH, Elizabeth Alt MD, MPH, Claudia Lechuga MS, Stephanie Neves BS, MA, Arthur Blank PhD, M. Diane McKee MD, MS

- **Question:** What is the relationship between the *PCMH Implementation* process (change in care processes & staffing levels) and staff & provider burnout?
- **Relevance:**
 - The PCMH is a model for advanced primary care, achieved through a team-based approach.
 - Implementation involves changes in care processes, staff roles, and staffing levels.
 - Implementation can directly impact provider and staff burnout.

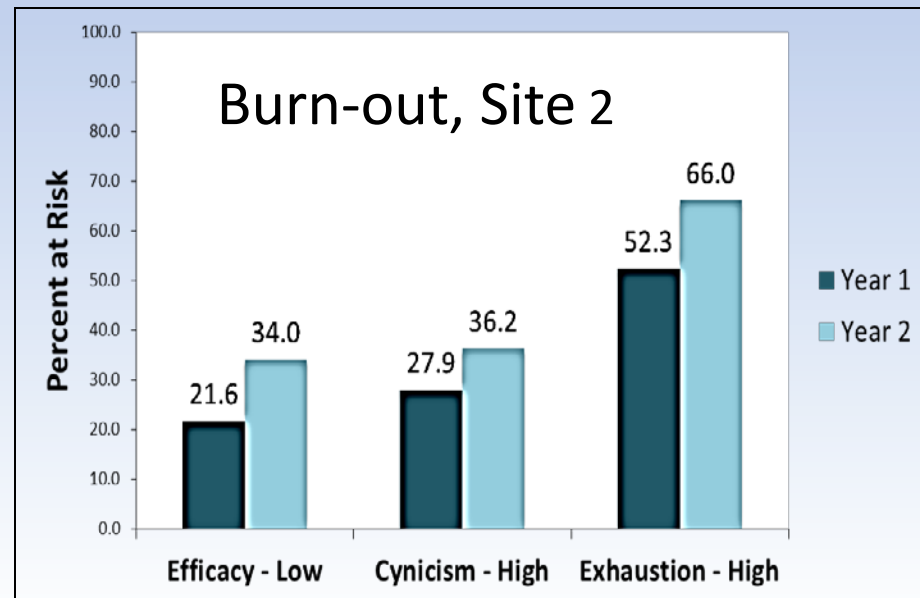
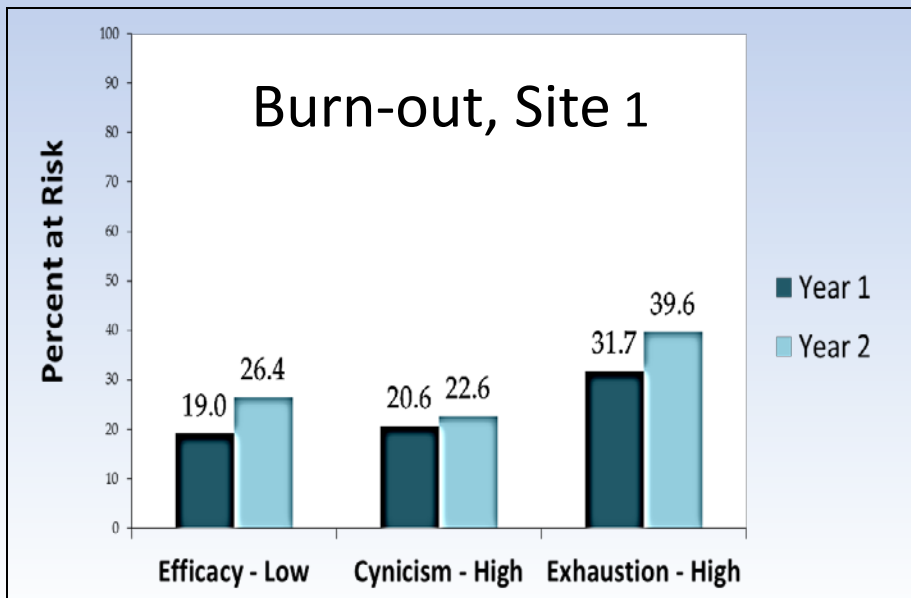
What the Researchers Did

- PCMH implementation process evaluation of 2 primary care sites in the Bronx, NY:
 - Site 1: Internal Med/Peds; non FQHC; non-teaching facility; 90,000 unique pts/yr
 - Site 2: Family Medicine; FQHC; teaching facility; 52,000 unique pts/yr
- Methods: survey at 1 and 2 years post-implementation
- Measures:
 - Burn-out: survey utilized the Maslach Burnout Index: measures professional efficacy, cynicism, & exhaustion
 - Change in care processes: reflected in the # of care delivery workflows implemented
 - Staffing levels: obtained from Human Resources & site administrators



What the Researchers Found

- Many workflows created, moving toward team-based care.
- Implementation involved a planned increase in staffing:
 - Site 1 achieved and sustained the planned staffing levels
 - Site 2 briefly achieved but did not sustain planned levels



What This Means for Clinical Practice

- Lack of improvement in burnout is likely multifactorial, including:
 - Concurrent demands related to meaningful use
 - Increasing responsibilities (workflows) and workload without a matched increase in staffing ratios.
- ***Maintenance of adequate provider and staffing ratios is crucial to mitigate burnout during PCMH implementation.

The Research Question

PCMH Transformation

- Rachel Hope, MD, The Christ Hospital/University of Cincinnati Family Medicine Residency ; Miranda Moore, PhD, & Andrew Bazemore, MD, The Robert Graham Center

- **The Question:** What is the cost to primary care practices of PCMH transformation?
- **Why this is important?**

Although many studies have measured and calculated the long term cost savings of the Patient Centered Medical Home (PCMH), there is a lack of data on the estimated costs that primary care providers (PCPs) face in transforming how they deliver care to their patients.

What the Researchers Did

- **Design:** Studies detailing cost of transformation were selected from comprehensive searches in PubMed and WebScience, supplemented by reference lists. These studies were reviewed for minimum and maximum costs per practice.
- **Data Source:** PubMed and WebScience, supplemented by reference lists
- **Methods:** lit review, NCQA PCMH elements divided into categories, min and max in each of 5 categories added together to define and a cost range of transformation

What the Researchers Found

- We grouped the 27 elements of the NCQA PCMH into 5 categories
 - Electronic Medical Records, After Hour Access, Culturally and Linguistically Appropriate Services, Quality Measure and Improvement, Reporting Performance
- 12 studies total that each fell into one of these 5 categories
- **Estimation of Cost of Transformation:
\$119,000 - \$419,000 (Median: \$262,000)**

What This Means for Clinical Practice

- **This estimation does not include all 28 elements of the PCMH, so the range likely reflects a minimum cost to practices**
- **These results are helpful for determining the financial incentives needed for PCMH transformation**

The Research Question

The Reduction in ED and Hospital Admissions From Medical Home Practices is Specific to Primary-Care-Sensitive Chronic Conditions

Green LA, Markovitz A, Chang HC, Paustian M

- Are the outcome improvements for the PCMH specific to what the PCMH does?
- Why this is important?
 - Much effort goes into transforming practices for the PCMH
 - Some studies find benefit, others not
 - Benefit could be just overall better management, improved access, attention or Hawthorne effect

What the Researchers Did

- 2218 primary care practices in Michigan participating in PCMH incentive program (5425 practice-years)
- Prospective intervention study
 - Scored practices on PCMH criteria (scale 0 to 1)
 - Adjusted for many covariates
 - Measured ED and hospital use and cost for PCMH-targeted conditions {COPD, asthma, CHF, DM, HTN, CAD} vs all other conditions according to practices' PCMH scores

What the Researchers Found

- Typical patient population, averaging ~200 ED visits & ~75 admits per 1000 pts per year
- ED visits and hospitalizations decreased with increasing PCMH score
- Effect 3-4x as strong for PCMH-targeted vs other conditions
- For increase in PCMH score from 0.34 to 0.68:
 - Hospital admits decreased 13.9% for targeted vs 3.8% for other
 - ED visits decreased 11.2% vs 3.7%
 - Costs similar

What This Means for Clinical Practice

- There is a small general effect of PCMH on improving cost and quality
- Most of the PCMH effect is on PCMH-targeted conditions, supporting hypothesis that the PCMH has the specific effect intended
- Very large sample (10x most PCMH studies), “in the wild”
 - Private practices, not an HMO or centrally-managed integrated delivery system
 - This can work in your practice

The Research Question

Clinical Effectiveness of Collaborative Care Management For Depression Over Time

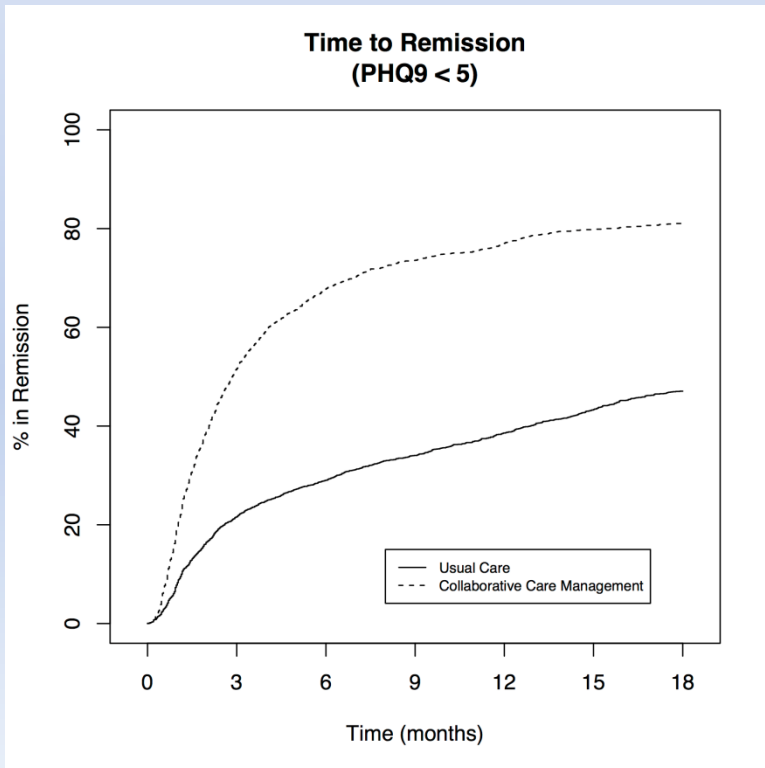
Garrison, GM; Angstman, KB; O'Connor S; Williams MD; Lineberry TW

- How much more quickly do depressed patients treated with Collaborative Care Management (CCM) improve when compared to usual care (UC)?
- Why this is important?
 - We know CCM is superior to UC at 6 and 12 months
 - But, patients care about how quickly treatments improve symptoms
 - Survival analysis can tell us how quickly patients treated with CCM vs. UC improve

What the Researchers Did

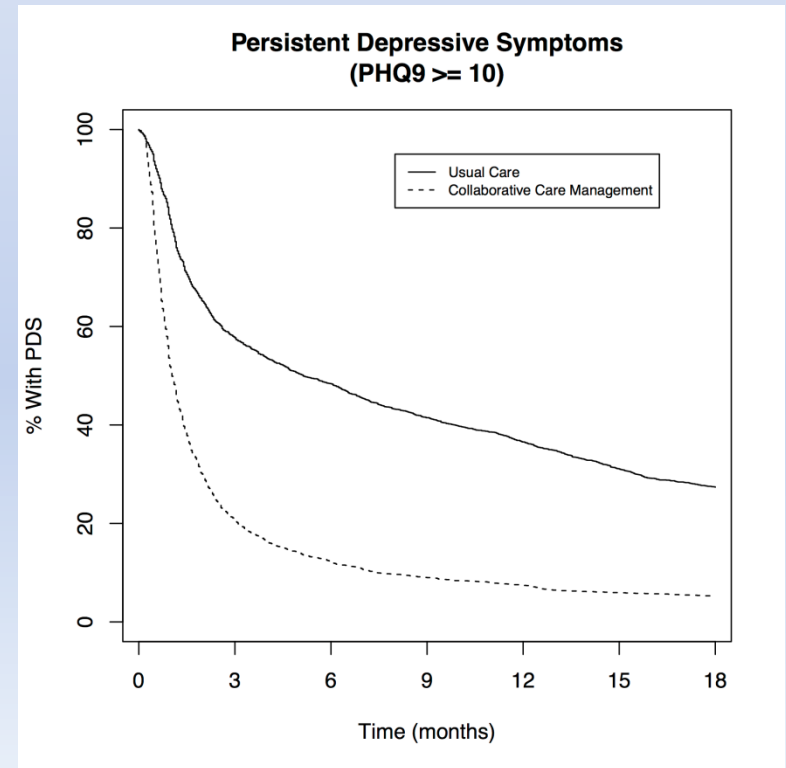
- Retrospective Cohort of 7,340 patients diagnosed with major depression or dysthymia from 3/08-6/13
 - Taken from primary care practice of over 100,000
 - Bipolar disorder excluded
 - Enrollment in CCM was patient/primary MD decision
- Survival Analysis of subsequent PHQ-9 scores
 - Remission: PHQ9 < 5
 - Persistent Depressive Sx: PHQ9 ≥ 10

What the Researchers Found



Median Time-to-Remission ($p < 0.001$)

- CCM: 86 d (95% CI: 81-91)
- UC: 614d (95% CI: 565-692)



Median Time-with-PDS ($p < 0.001$)

- CCM: 31 d (95% CI: 30-33)
- UC: 154 d (95% CI: 138-182)

What This Means for Clinical Practice

- Patients care about how quickly they improve
- CCM shows improvement over UC within 1st month
- Non-randomized study may be biased due to self-selection and sampling
- Survival Analysis may be superior to Logistic Regression at fixed endpoint for comparison of many chronic disease treatments

The Research Question

Shared Decision-Making in Palliative Care: Clinical Implications for the Practice of Family Medicine

Bélanger E, Rodríguez C, Groleau D, Légaré F, & Marchand R.

- **The Question:** How do patients and health care providers construct patient participation in palliative care decisions through their discourse in a community hospital-based palliative care team?
- **Why this is important?**
 - Health care providers find end-of-life communication challenging.
 - Palliative care decisions involve uncertainty and are preference-sensitive.
 - Family physicians deliver a large part of palliative care in North America, yet few studies have directly observed their interactions with palliative care patients.

What the Researchers Did

- Methodology
 - Organizational ethnography (one year of participant observation) & discursive psychology
- Participants: 18 patients and 1 palliative care team (6 family physicians, 2 pivot nurses)
- Methods of data generation:
 - Field notes, audio-recordings of consultations, field journal
- Methods of data analysis:
 - how decision-making conversations are initiated in context
 - how patient participation occurs in clinical conversations

What the Researchers Found

- Organization of care: early referral and discussions ensured patient opportunity to participate in decisions
 - Re symptom control: direct questions, routine history
 - Re patients' death: indirect questions & explanations (patients retain control on whether to discuss end-of-life issues)
- Patient participation was facilitated by:
 - exposing uncertainty (present options as equal/justifiable)
 - co-constructing treatment preferences (discuss treatment modalities in daily life, prompt for opinions/experiences)
 - affirming patient autonomy (state right to express opinion)
 - and resisting patients' attempts to uphold HCP authority (refer back to uncertainty/autonomy)

What This Means for Clinical Practice

- Examples of how to introduce decisions early and how to talk in a way that promotes patient participation
 - Explanations about the need to discuss end-of-life care options before patients can no longer participate
 - References to previous experiences and daily treatment modalities were part of patient expertise
- Promote awareness of the impact of discourse and better understanding of clinical communication guidelines
 - Use clinical discourse that enables patient participation if appropriate, coherence between ethical/clinical stance
 - Reflect on arguments that can achieve patient participation without abandoning vulnerable population



The Research Question

Continuity of care: does having the same primary care provider over time matter?

S.T. Wong, A. Katz, Peterson, S., & Taylor, C.

- Does high continuity of care predict:
 - a) patient reported experiences of care?
 - b) patient reported impacts of primary care?
- Why this is important?
 - Important measure of primary care performance
 - Previous data: Associated with lower health care costs and improved outcomes (e.g. fewer hospitalizations, better medication adherence, disclosure of behavioral concerns)

What the Researchers Did

- Population/Subjects:
 - 2176 adults aged 18-90 years who spoke English, French, Chinese, or Punjabi living across British Columbia and Manitoba
- Design: retrospective population-based cohort
- Methods:
 - Random digit dial survey (patient experience)
 - Linked survey to patient's administrative data (to derive a continuity of care -CC- index), N=1609 agreed to linkage

What the Researchers Found

- Majority of patients have high CC; ↑CC associated with older age, chronic conditions, higher score on ADG and female gender
- ↑CC predictive of
 - doctor's knowledge of patient
 - shared decision-making
 - confidence & satisfaction
- No predictive for interpersonal processes of care or patient activation

What This Means for Clinical Practice

- Higher continuity of care is important for influencing:
 - Some patient experiences
 - Confidence that people can obtain and use care when needed
- Higher continuity of care won't necessarily help patients acquire the skills, knowledge, or confidence to manage their health on a day-to-day basis

The Research Question

Does an Increase in Opioid Dose lead to an Increase in Depression?

Scherrer JF, Salas J, Lustman PJ, Burge S, Schneider FD, for the Residency Research Network of Texas Investigators. Pain. 2015;156:348-355

- Over a 2 year follow-up, do chronic pain patients who increase opioid analgesic use to >50mg morphine equivalent dose (MED) have a greater probability of depression over time?
- Why this is important?
 - Depression is associated with greater pain sensitivity ¹
 - Depression is known to contribute to opioid use and misuse ²
 - One study reported that longer use of opioids increased depression risk³
 - More knowledge of temporal associations of opioids and depression may inform pain management

1. Fishbain et al Clin J Pain 1997, 2. Sullivan et al. Arch Intern Med 2006

3. Scherrer et al. JGIM 2014

What the Researchers Did

- Eligible patients: non-cancer chronic low back pain patients who used family medicine clinics in the Residency Research Network of Texas (RRNeT)
- Prospective cohort recruited from clinic patients
 - Baseline (2008-2009), n=362;
 - Wave 2: 12 month follow-up, n=337
 - Wave 3: 24 month follow-up, n=199
- Opioid data from chart abstraction
- Depression from survey using PHQ-2
- Statistical testing of change in dose and change in depression over time

What the Researchers Found

- Compared to no use, increasing opioid use to >50mg MED per day was associated with more than a 2-fold (OR=2.65; 95%CI: 1.17-5.98) increase in probability of depression over time
- An increase to 1-50 mg MED was not significantly associated with an increased probability of depression (OR=1.08; 95%CI: 0.65-1.79)
- (Adjusted for pain severity, pain duration, health related quality of life, # of comorbidities, anxiety, obesity and social support/social stress)

What This Means for Clinical Practice

- Providers and patients should consider examining the dose of opioids being used when chronic pain patients report depression and discuss risks before increasing dose
- Routine screening for depression among opioid using patients may detect depression at an early stage