Controlled Evaluation of Group Health Integrated Group Practice Opioid Risk Reduction Initiatives (2006-2014)

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Presentation Goals

Review evaluation results of health plan opioid dose reduction and risk stratification/monitoring (RS/M) initiatives among chronic opioid therapy (COT) patients

Consider implications of evaluation results for future efforts to reduce risks of prescription opioid overdose and addiction, and to enhance the effectiveness of chronic pain care

Starting in the late 1990's, opioid prescribing for chronic pain by U.S. physicians increased dramatically

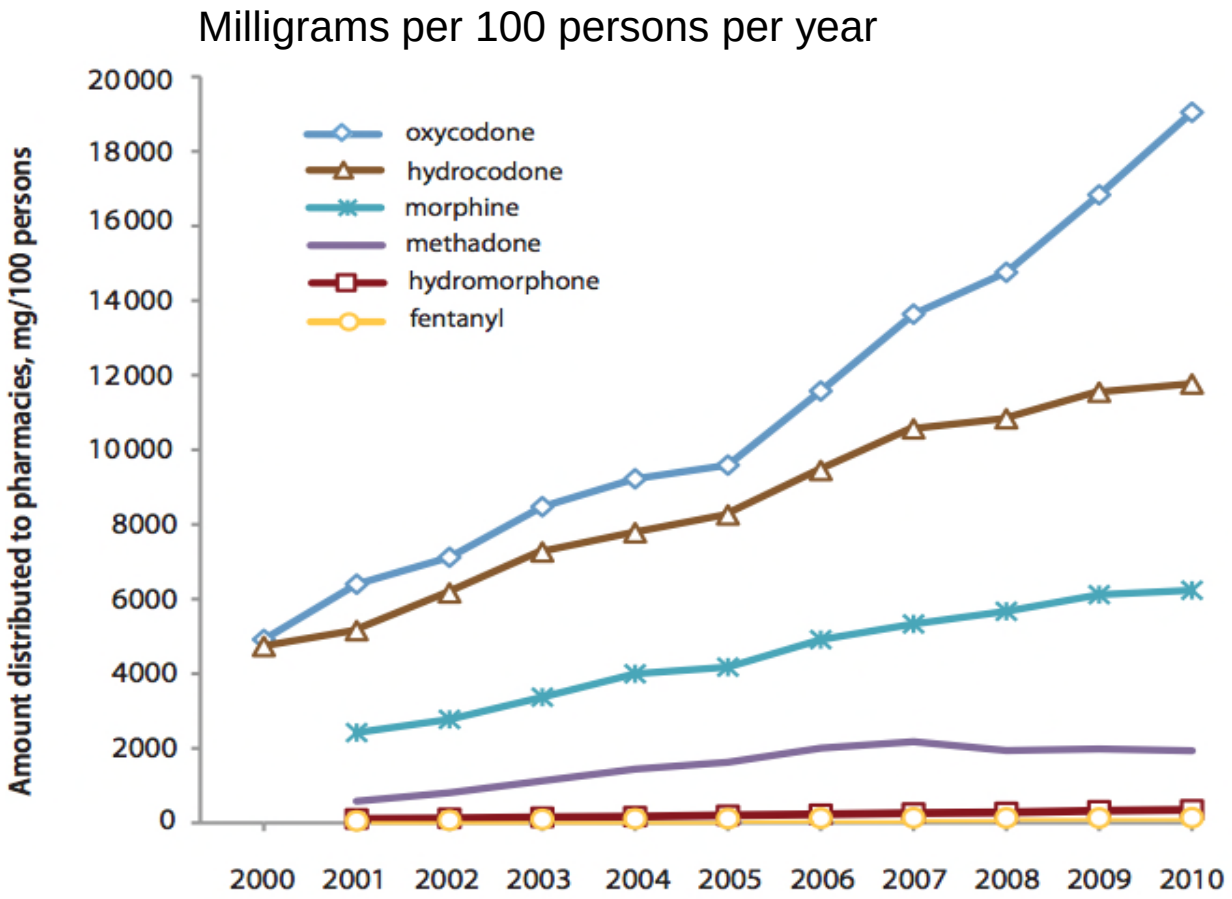

Figure 1
Distribution of selected opioids to US pharmacies (in milligrams per 100 persons). Based on data from the Automation of Reports and Consolidated Orders System, 2000–2010.

Source: Kenan K, Mack K, Paulozzi L. Open Medicine 2012; 6:e41.

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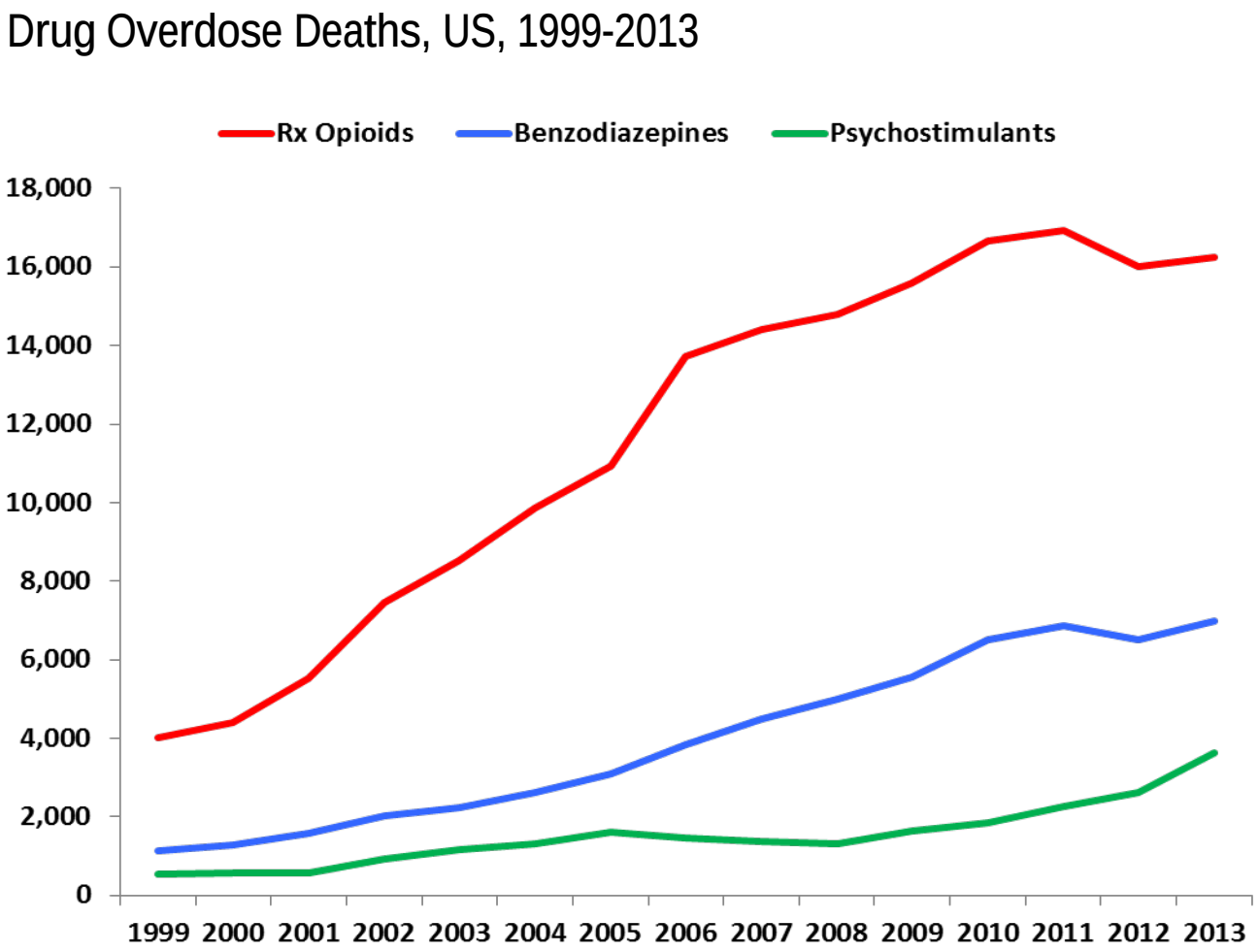
This change in practice resulted in a four-fold increase in drug overdose deaths involving prescription opioids



Source: Centers for Disease Control and Prevention, NVSS, 2013

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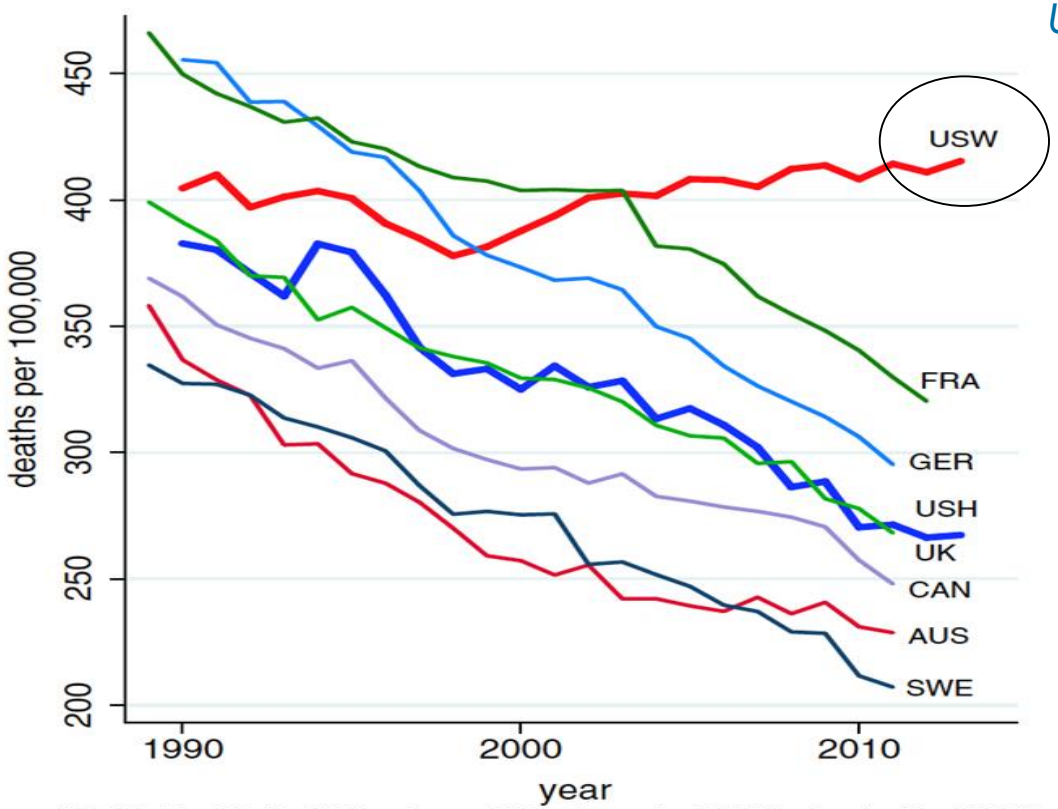
Increased opioid prescribing contributed to an unprecedented rise in all-cause mortality among working age White Americans

All-cause mortality, ages 45–54 for US White non-Hispanics (USW) , US Hispanics (USH)

U.S. Whites



France (FRA), Germany (GER), the United Kingdom (UK), Canada (CAN), Australia (AUS), and Sweden (SWE).

1

Source: Anne Case, Angus Deaton. Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences*. November 2, 2015 (online ahead of print).

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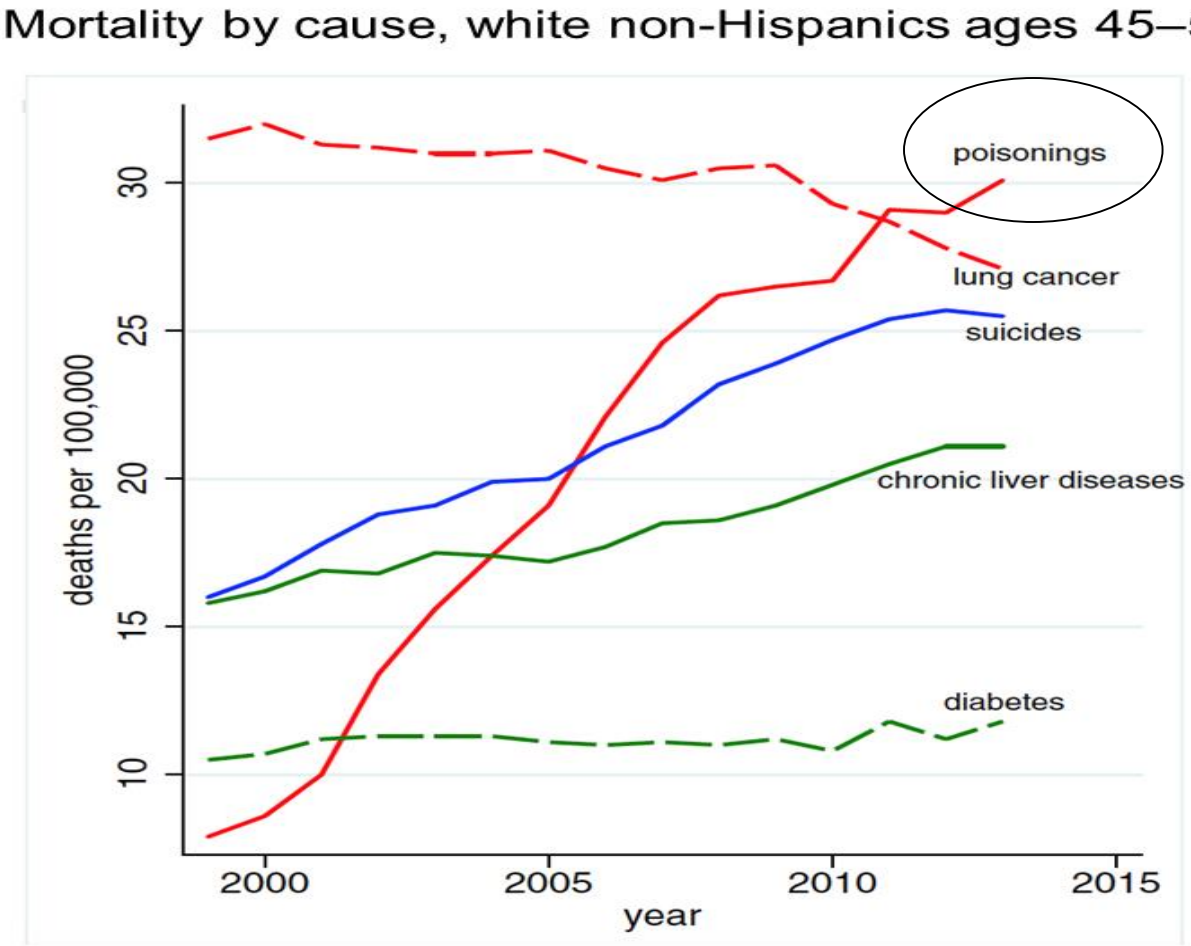
Increased mortality was caused by increased poisonings, driven largely by increases in prescription drug overdose deaths



Increased poisonings driven by prescription drug overdose

Source: Anne Case, Angus Deaton. Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceedings of the National Academy of Sciences*. November 2, 2015 (online ahead of print).

Group Health Chronic Opioid Therapy (COT) Risk Reduction Initiatives

- COT risk reduction initiatives were implemented in 26 Integrated Group Practice clinics (Intervention setting) but not in contracted care clinics serving similar COT patients (Control setting).

- Health plan opioid dose and risk reduction initiatives:
  - Reduce high-dose opioid prescribing (2008 – 2010)
  - Implement risk stratification & monitoring (RS/M) initiatives (October 2010 – 2014)

Group Health COT Risk Reduction Initiatives

Dose Reduction

- Keep COT doses as low as possible (below state recommended 120mg morphine equivalent dose (MED) threshold)

Risk Stratification/Monitoring (RS/M)

- Single primary care prescriber for each COT patient
- Collaborative care plan for all COT patients:
  - Prescription instructions and treatment agreement
  - Risk-stratified frequency of follow-up visits and urine drug screening
- Standardized processes for refills, cross-coverage, consultations
- Enhanced clinician and patient education

Evaluation Design

Group Health COT risk reduction initiatives

Initiatives	Dates	*Intervention Clinics* GH Integrated Group Practice	*Control Clinics* GH Contracted Care
Dose reduction initiative	2008-10	YES	NO
Guideline-based Risk Stratification and Monitoring initiative	October 2010 and later	YES	NO

From 2006-14, we compared process and outcome trends among 31,142 COT patients from Intervention and Control clinics: A "natural experiment".

In 2014-15, we surveyed 1588 Intervention and Control COT patients, after the risk reduction initiatives had been sustained for many years.

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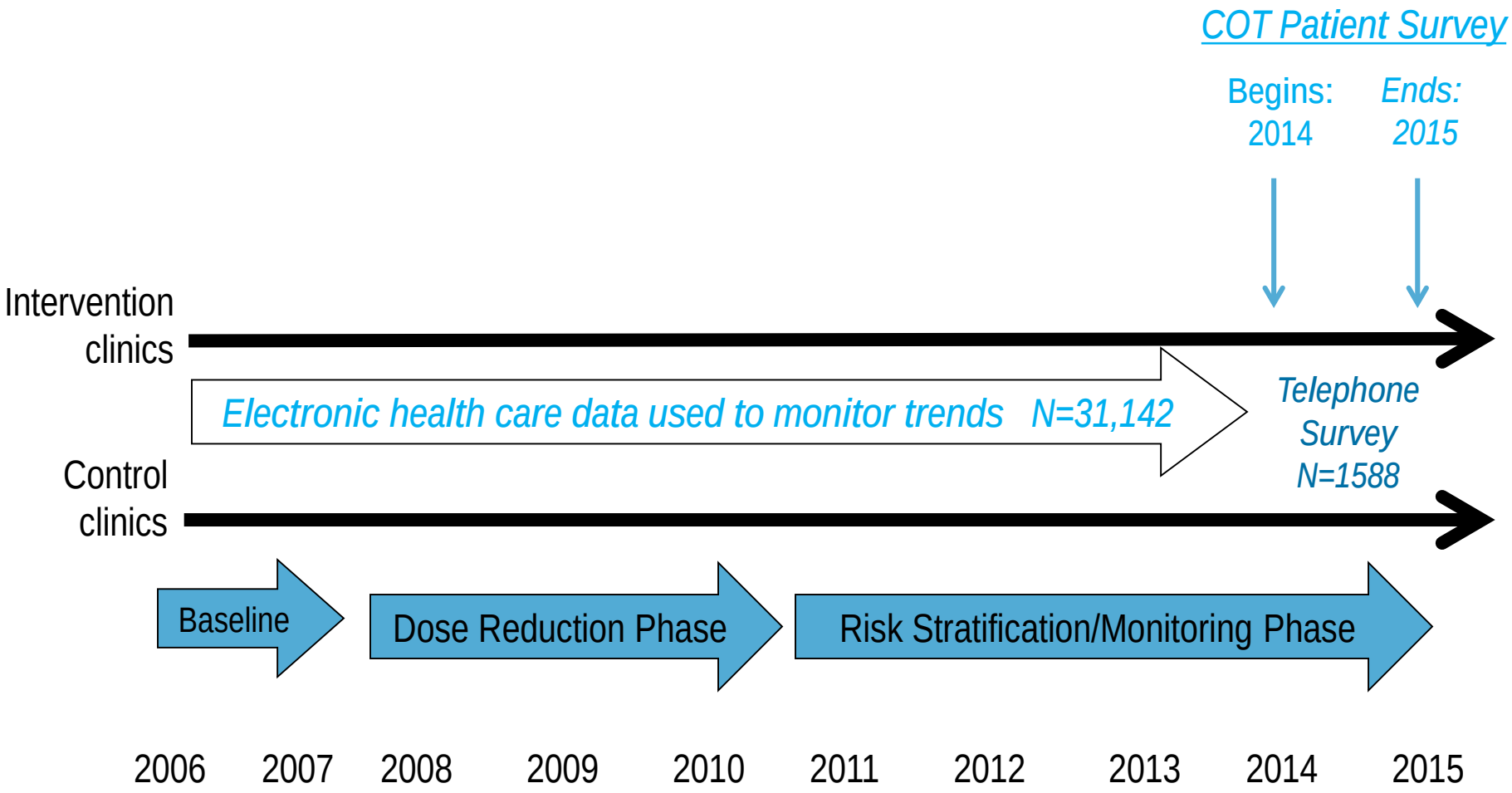
Evaluation Timeline



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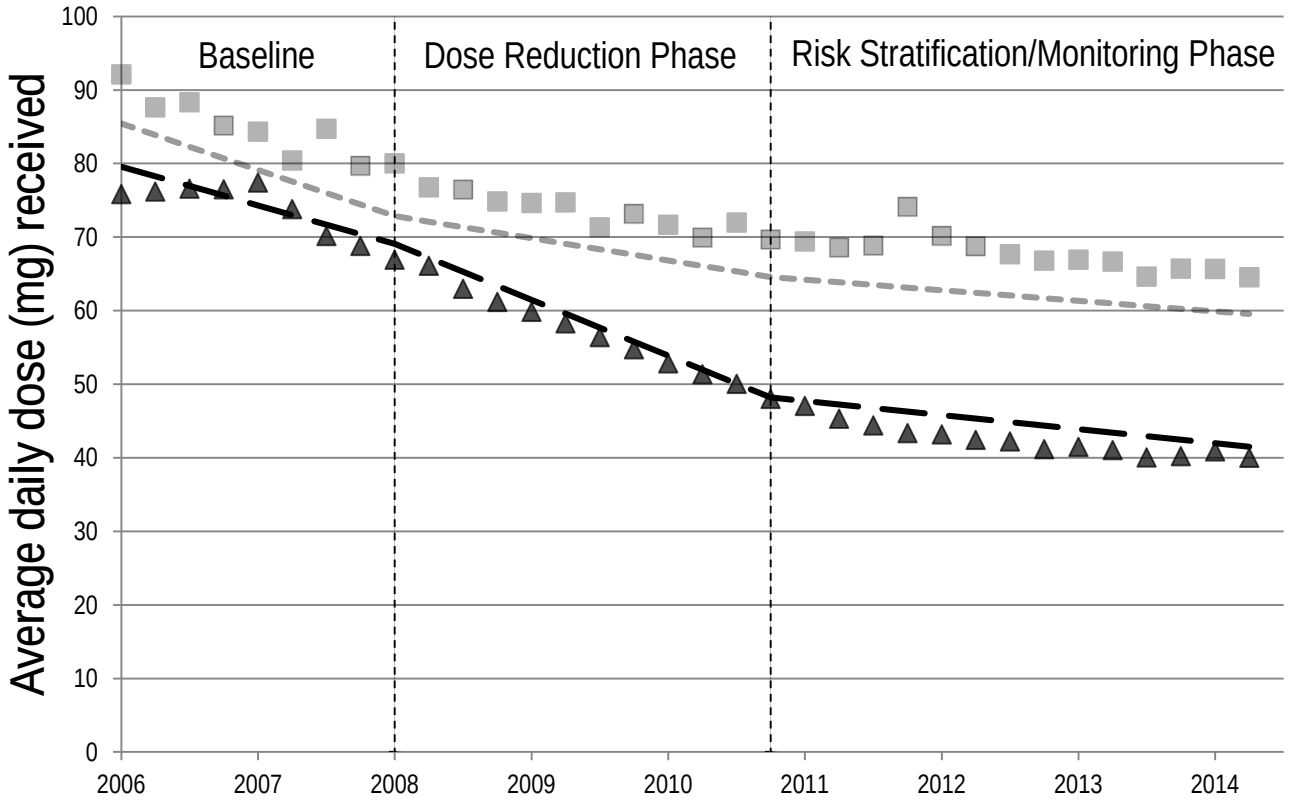
Results: Implementation Evaluation

Trends in average daily morphine equivalent dose (MED) among COT patients in Intervention clinics were significantly lower than in Control clinics



Control Clinic COT patients (N=8,469)

Intervention Clinic COT patients (N=22,673)

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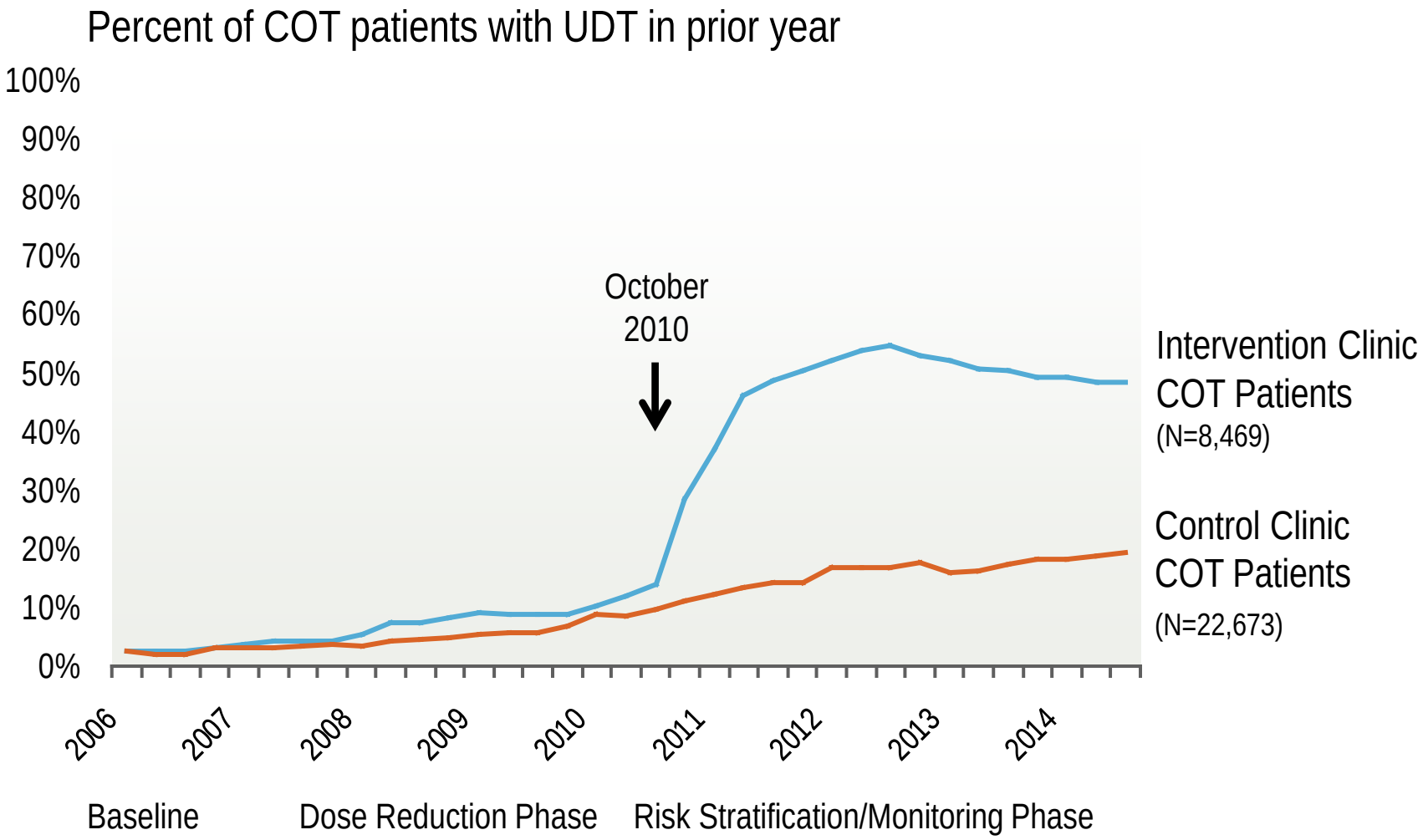
Percent of COT patients with Urine Drug Test in Year



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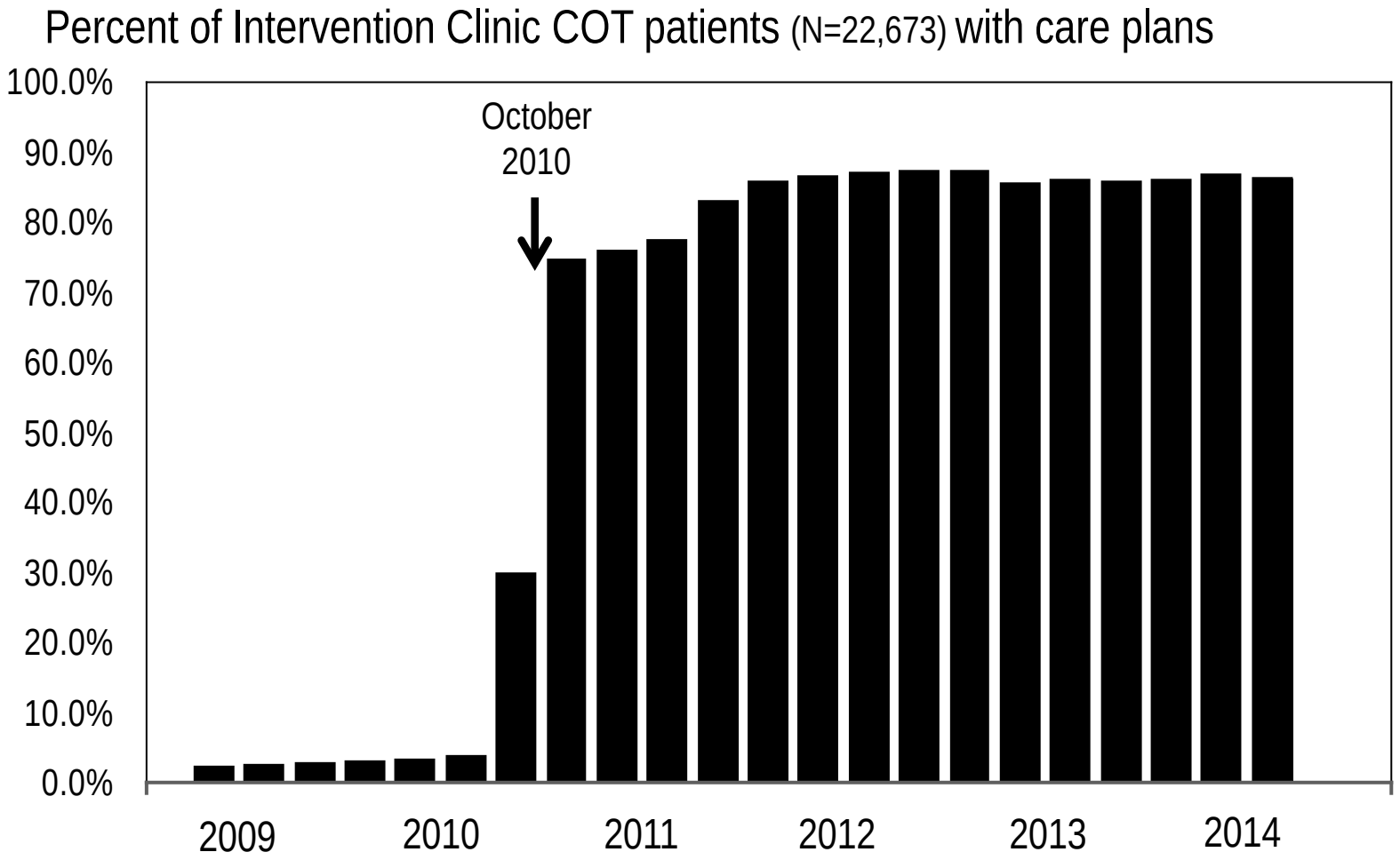
Trend in percent with COT care plans: Intervention clinic COT patients



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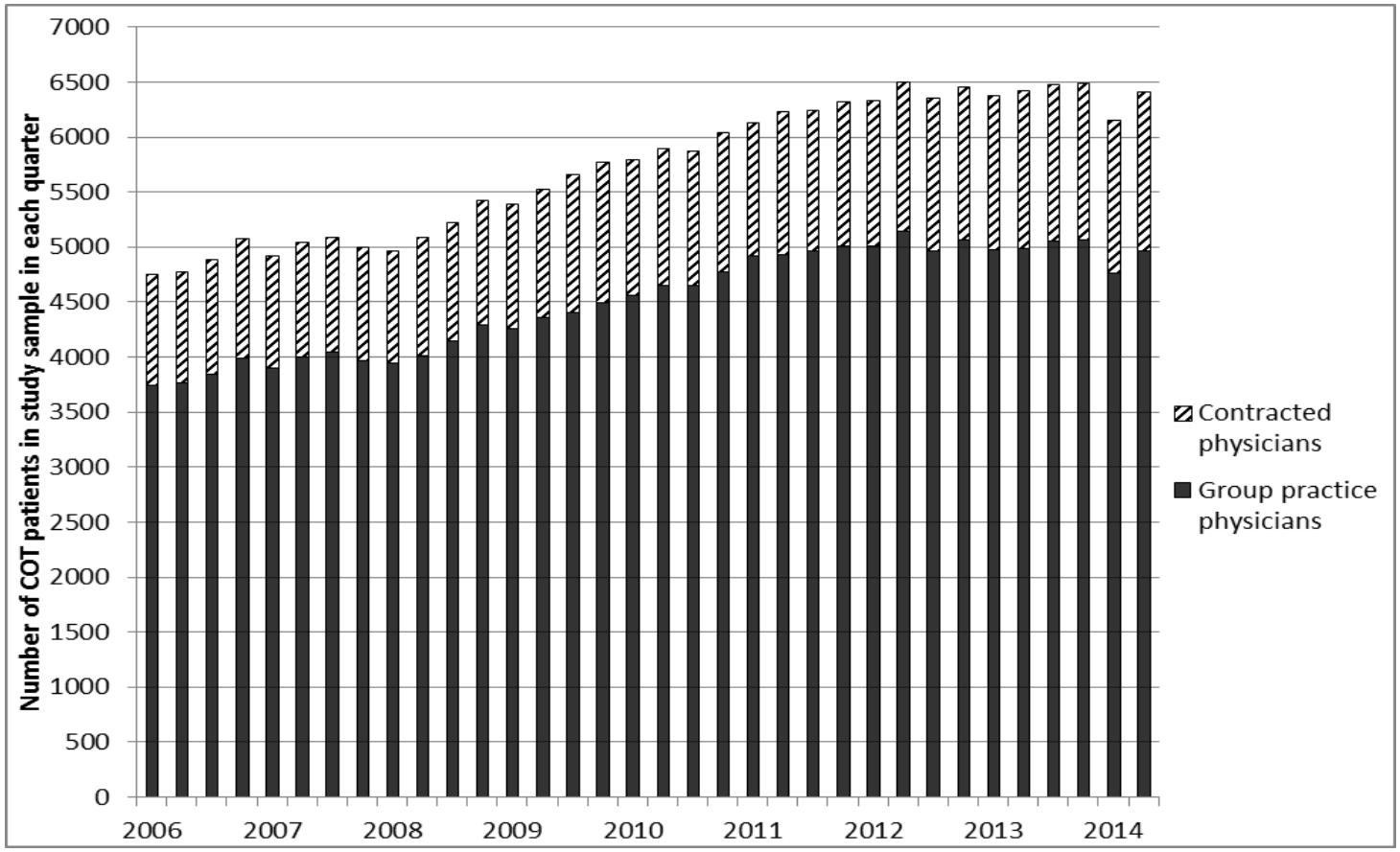
Trends in number of COT patients in the GH-IGP and GH-CC



From 2006 to 2014, the percent of adults receiving COT increased from 1.9% to 2.7% in the GH-IGP and from 1.4% to 2.8% in GH-CC.

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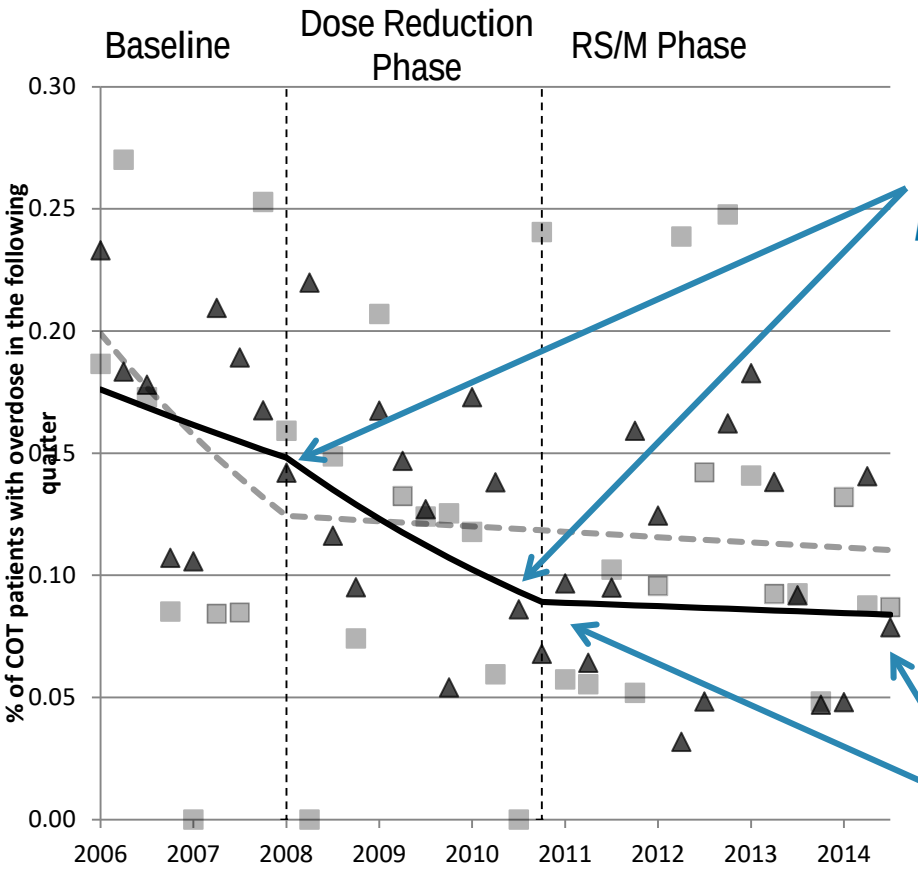
Results: Patient Outcomes Evaluation

Percent of COT patients with an opioid overdose (fatal or non-fatal) were significantly reduced during the GH-IGP dose reduction period (2008-10) but not during the risk stratification/monitoring period (2010-14).



The reduction in overdose rate within Intervention clinics during dose reduction phase was statistically significant (p=0.038)

Control clinic COT patients (N=8,469)

Intervention clinic COT patients (N=22,673)

There was no change in overdose rate within Intervention clinics during RS/M phase

The reduction in overdose rate between Intervention and much smaller Control clinic population during dose reduction phase was non-significant

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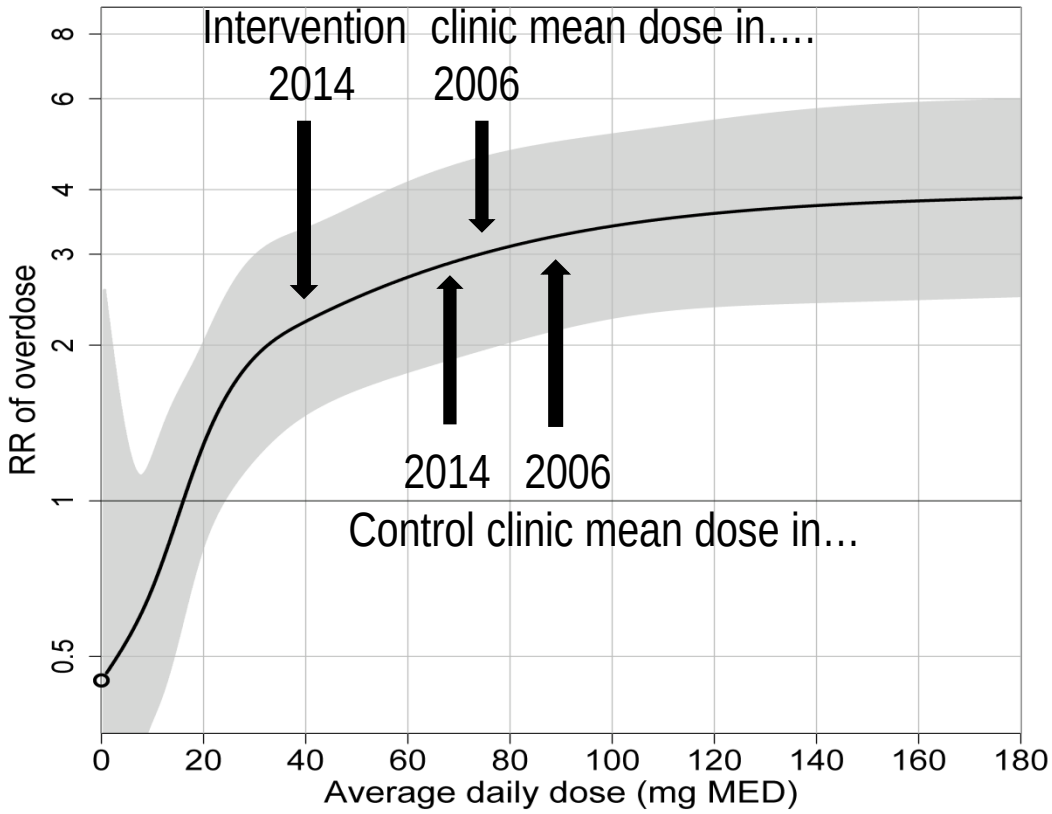
Relative risk of opioid overdose by average daily morphine equivalent dose



Dose reduction in Intervention clinics was not on a steep part of the dose-response curve for overdose risk

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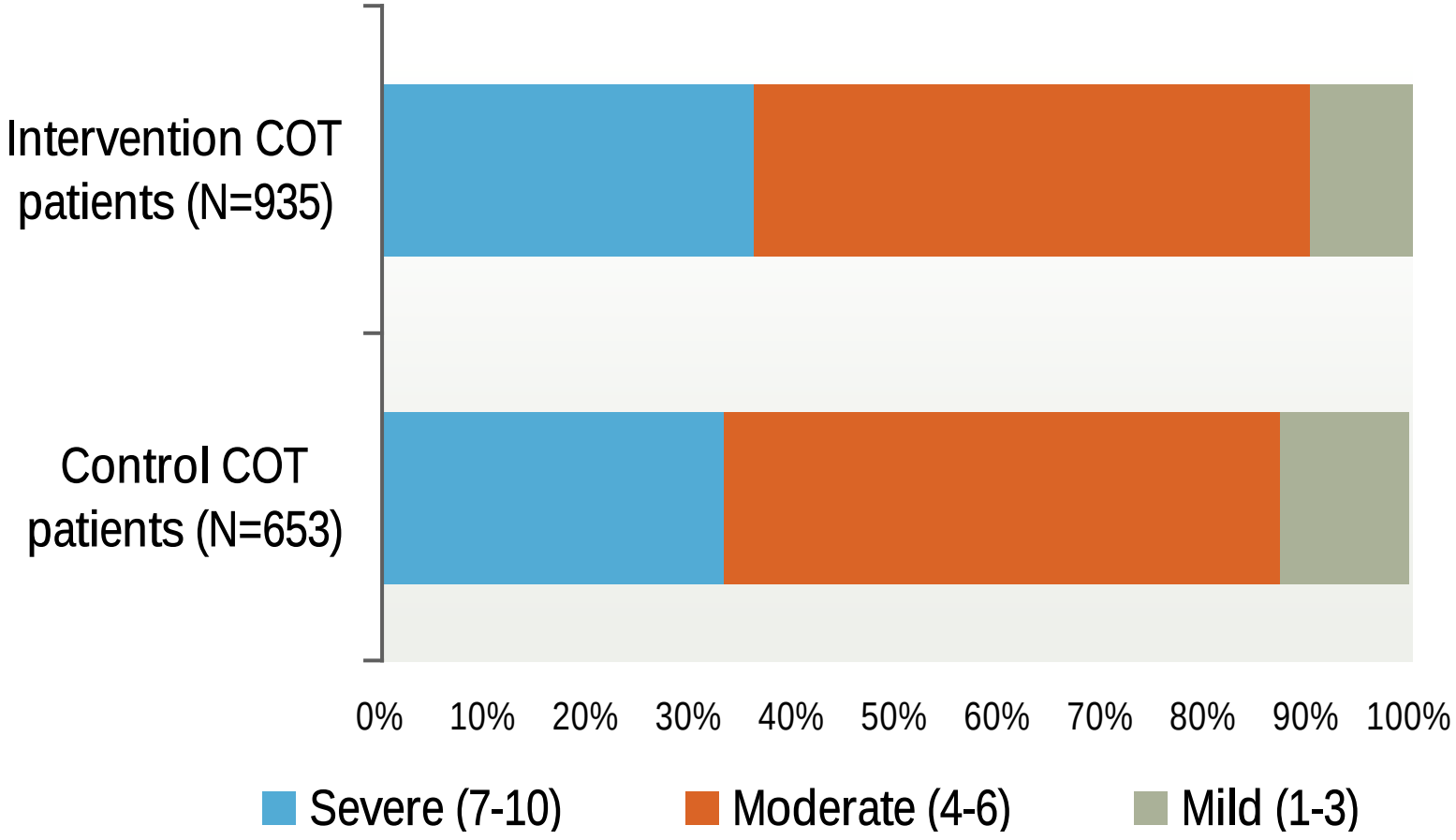
PEG pain severity ratings (0-10)



Covariate adjusted mean difference (Intervention minus Control) = 0.17 (95% CI= -0.02, 0.35)

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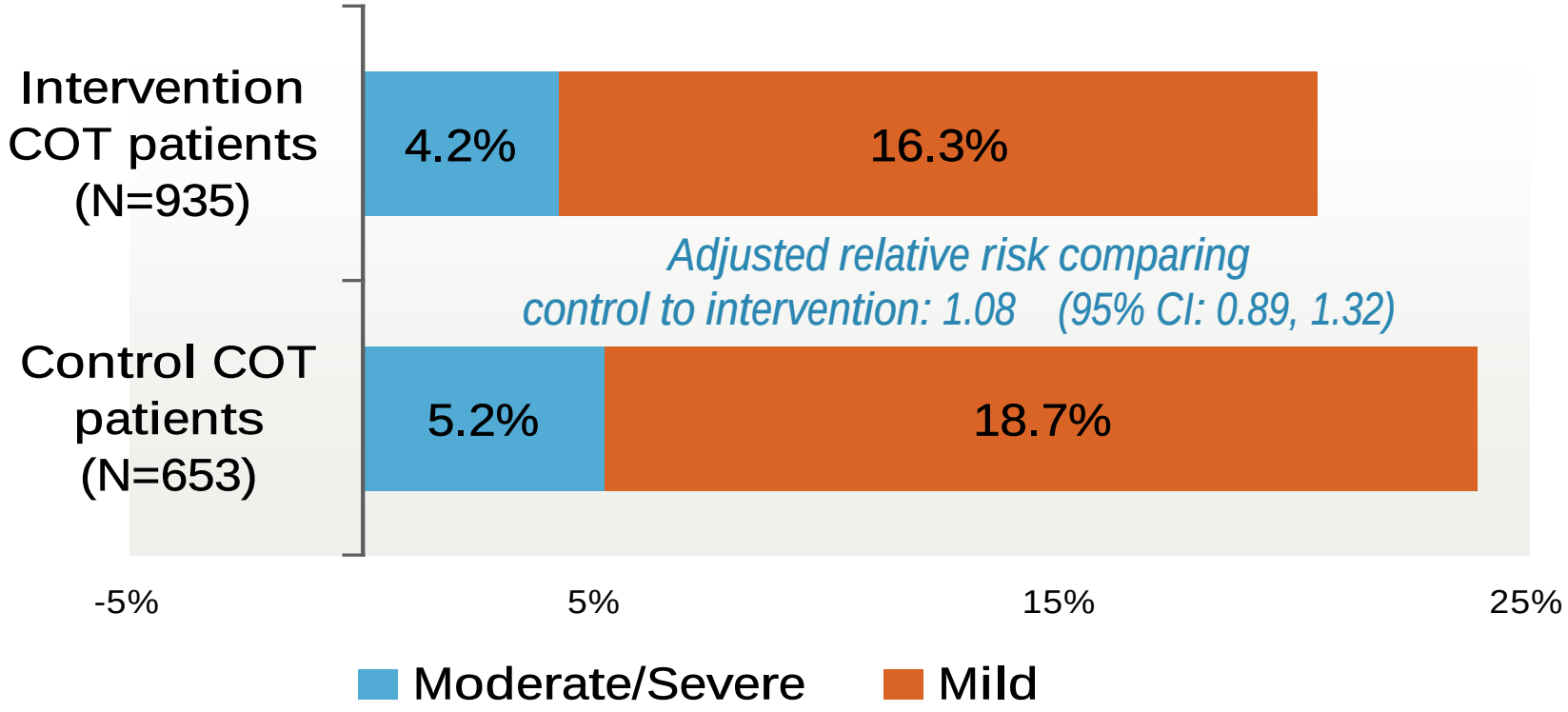
Percent with DSM5 prescription opioid use disorder



Mild to moderate prescription opioid use disorder was common among COT patients in the Intervention clinics after full implementation of both risk reduction initiatives.

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Conclusions

- Intervention clinics successfully lowered opioid doses and implemented RS/M initiatives and sustained changes long-term
- Dose reduction may have produced a modest reduction in opioid overdose rates, but dose reduction was insufficient to expect a large reduction in overdose rates
- COT patients on lower doses in Intervention clinics had similar pain ratings to Control COT patients on higher doses
- Neither dose reduction nor RS/M initiatives lowered addiction risks among COT patients.

Potential next steps to reduce risks of opioid overdose and addiction while enhancing chronic pain care:

- Increase access to safer and more effective therapies for chronic pain
- Curtail inappropriate transitions from short-term to long-term opioid use
- Reduce COT dose to low levels and taper patients off who are not benefiting
- Ensure access to medication assisted therapy & naloxone for COT patients unable to taper off opioids or to low dose

Multi-faceted Implementation

Dose Reduction Phase: 2008 – Sept 2010

- Operational definition of COT (near daily use for at least 90 days)
- Responsibility for opioid management placed in primary care
- Lists of high-dose (≥ 120mg MED daily) COT patients
- Supervisory guidance for PCPs with long lists of high-dose COT patients
- Specialty consult advised caution
- Voluntary CME

RS/M Phase: Oct 2010 – Sept 2014

- Rapid Progress Improvement Workshop defined changes for standard work
- Strong and sustained leadership for changes
- COT patient lists included risk stratification
- Single PCP responsible for COT management
- Standardized educational materials on-line
- Clinic peer experts (gurus)
- Prescribers notified of early refills
- EHR practice tools/smart sets
- Online training (87% participation)
- In-clinic meetings to review progress
- Targets for care plans set and monitored
- Financial incentives for achieving targets
- Patients notified of practice changes by letter