Addressing Pain, Reducing Opioid Therapy Risk: System-Wide Quality Improvement (QI) Primary Care Intervention

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Introduction

- Implementation of opioid prescribing guidelines can reduce opioid-related harms. A large academic health system rolled out a policy on opioid therapy management in its primary care (PC) clinics. We tested if adding a clinic-level QI intervention to usual rollout increased guideline-concordant care among patients with opioid-treated chronic pain.

Methods

- Design: Stepped-wedge
- Target population: Adult PC patients with opioid-treated chronic non-cancer pain
- Intervention: 1 academic detailing session; two online educational modules (opioid prescribing; shared decision making); 4-6 practice facilitation sessions delivered over 4-6 months to each clinic’s clinicians
- Assessment period: Jan 2016 (baseline) - Dec 2017 (exit)
- Outcome measures: Clinic-level EHR data on % target population with: signed treatment agreement (primary), completed urine drug test, PDMP check, depression and opioid misuse risk screen, co-prescription of benzodiazepines, BZD (secondary); % clinic panel; morphine-equivalent dose (MED)

Results

- Clinics: 9 clinics received the intervention (3 waves of 3 clinics); 17 other health system’s clinics did not receive an intervention (‘comparison clinics’)
- Intervention clinics’ clinicians: 219 providers (70 prescribers; 149 other), a subset of the clinics’ staff, participated in the intervention.
- At baseline, they reported discomfort with, and need for more education about, management of target population.
- Post-intervention, they reported satisfaction with, and usefulness of, the intervention.
- Target patient population at baseline:

<table>
<thead>
<tr>
<th>Clinic-level data: January 2016</th>
<th>Intervention (N=1,431)</th>
<th>Comparison (N=1,717)</th>
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</thead>
<tbody>
<tr>
<td>% adult clinic panel</td>
<td>2.0</td>
<td>2.1</td>
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<tr>
<td>% treatment agreement</td>
<td>24.8</td>
<td>29.2</td>
</tr>
<tr>
<td>% urine drug test</td>
<td>24.7</td>
<td>31.3</td>
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<tr>
<td>% co-prescribed BZD</td>
<td>19.9</td>
<td>24.7</td>
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<tr>
<td>% MED ≥ 90 mg/day</td>
<td>23.0</td>
<td>15.5</td>
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<td>MED/patient/day, mg</td>
<td>82.9</td>
<td>57.5</td>
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<td>Total MED/month, mg</td>
<td>3,560,727</td>
<td>2,644,896</td>
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- Change from baseline to exit:
  - Both groups of clinics ↑ guideline-concordant practices (Fig.1), ↓ opioid prescribing and ↓ BZD co-prescribing (Fig.2).
  - The magnitude of change (Cohen’s d effect size) favored the intervention clinics on several outcomes, particularly those related to opioid prescribing.
  - The total MED/month ↓ by 0.92 kg (25.7%) in the intervention and by 0.55 kg (18.6%) in the comparison clinics from baseline to exit.
  - The stepped-wedge analysis did not show a statistically significant change in outcomes in relation to the specific timing of intervention delivery.

Conclusions

- Usual health system wide rollout of complex policy on opioid prescribing can increase guideline-concordant care.
- Tailored, clinic-level QI intervention was well-received by clinicians and can offer further gains, especially for reducing opioid prescribing.

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