

NAPCRG 52nd Annual Meeting — Abstracts of Completed Research 2024.

**Submission Id:** 6479

**Title**

*Nested order panels for primary care medication and laboratory orders: adoption and impact on ordering efficiency*

**Priority 1 (Research Category)**

Healthcare Services, Delivery, and Financing

**Presenters**

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**Abstract**

Context: Electronic health record (EHR) order preference lists and order sets potentially improve efficiency but have limited utility in complex primary care settings.

Objective: We assessed adoption, impact on time spent in orders, and clinician perceptions of a comprehensive set of nested order panels (xOrders) for adult primary care.

Study Design and Analysis: Observational study capture utilization with descriptive statistics and compared low, moderate, and high utilizers with t-tests and mixed effect time series. A one-time survey was also conducted.

Setting: Primary care clinics partnered with an academic health center.

Population Study: Primary care clinicians including MD/DO and advanced practice providers (i.e., nurse practitioners and physician assistants).

Intervention: We introduced a comprehensive collection of pre-configured nested order panels (xOrders) for the top 80% medication and laboratory orders in adult primary care. In Phase 1 (gradual

implementation), 404 xOrders were released between 11/39/2020 and 9/25/2021. Beginning of Phase 2 (rapid implementation), 630 xOrders were released with an additional 253 xOrders added between 9/26/2021 and 6/24/2023.

Outcome Measures: Three outcomes captured clinician adoption: xOrders used per week; number of clinician users per week; and percent of xOrders of all orders. Impact of xOrders on times in orders per encounter per clinician. Clinicians' perceptions were captured via survey in November 2022.

Results: xOrders were used  $536 \pm 245$  (SD) times/week and by 57 ( $SD \pm 15$ ) clinicians/week in Phase 2. xOrders as a percent of all orders ranged from 0% to 31% across clinicians. Time spent in orders per encounter decreased by  $14 \pm 5$  seconds ( $p=0.01$ ) from Phase 1 to 2 for high utilizers, decreased by  $7 \pm 3$  seconds ( $p=0.05$ ) for moderate utilizers, and increased by  $1 \pm 3$  seconds for low utilizers ( $p=0.81$ ); low and high utilizers were significantly different ( $p=0.02$ ). Most (77%) survey respondents agreed or strongly agreed that xOrders improved ordering efficiency.

Conclusions: Despite showing modest time savings and receiving positive clinician feedback, the intervention for EHR ordering efficiency showed limited adoption and impact, suggesting the need for expanded content and increased adoption to realize larger efficiency gains.

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