When PCPs reduce clinical volume, they reduce EHR use by less

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Background

- A **lack of PCPs is already creating access barriers** for routine care
- As the PCP workforce ages, faces increasing EHR-driven administrative burden, and recovers from pandemic-era burnout, **many PCPs intend to reduce their clinical volume**[1]
- The **predictors of reduction in clinical visit volume** and consequences for **PCPs' EHR use patterns** are unknown

Study questions

- **What proportion of PCPs reduced** clinical effort (as measured by visit volume) post-COVID?
- **What EHR workload factors predicted** clinical effort reduction?
- **How did EHR workload change** after clinical effort reduction?

Data

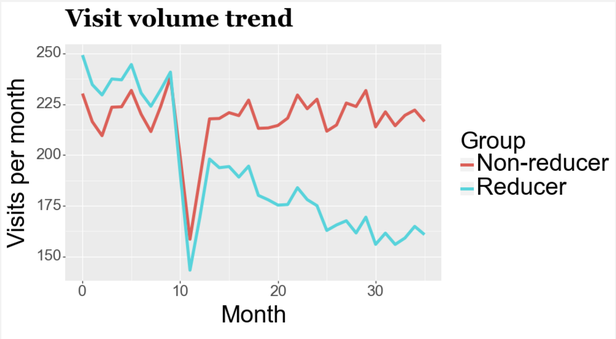
- **Monthly Epic Signal audit log data** from May 2019 to April 2022
- **23,203 PCPs across 259 health systems**
  - Included PCPs that were present in all months of data
- **EHR-use variables:** total time in EHR, patient In-Basket message volume, number of days off with EHR use
- **Patient panel variables:** Mean patient age, problems per visit; percent of visits billed to new patients, percent billed as level 5 complexity
- **Physician variables:** primary care subspecialty, health system type (e.g., "Catholic hospital"), number of physicians in system

Methods

- **Identify clinical effort reducers using t-tests,** comparing visit volume in Apr 2019 – Feb 2020 (pre-COVID) vs. Apr 2021 – Feb 2022 (post-COVID)
- **Determine predictors of reducing** using logistic regression
- **Estimate changes in EHR use** for reducers vs. non-reducers using difference-in-differences

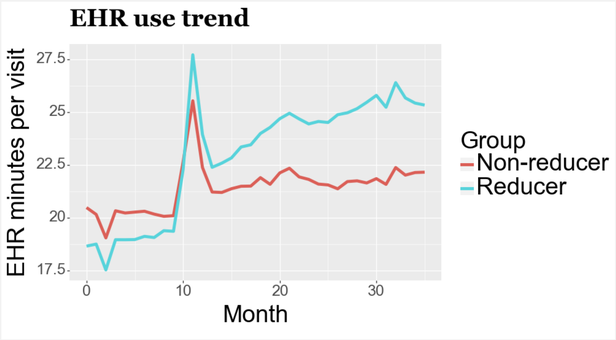
Results: Prevalence of reduction

- **9.1% of PCPs significantly reduced** visit volume
- **Median reduction was 30.0%** or 64 visits per month



Results: Changes in EHR use

- Relative to non-reducers,
  - **Reducers increased EHR time per visit by 30%**
  - **Reducers increased patient In-Basket messages by 12%**



Results: Predictors of reduction

- **Working more days** in a month, **EHR work on days off**, and belonging to an **academic medical center** predicted reduction
  - Covariates calculated in pre-period to avoid endogeneity

Conclusion

- **PCPs reducing clinical effort is common,** especially for those using the EHR on unscheduled days
- **EHR use declines more slowly** than clinical visit volume

Variable	Odds ratio	P>|z|
Specialty		
Family medicine (omitted)	-	-
Internal medicine	0.94	0.31
Geriatric medicine	0.87	0.50
Volume		
Total visits per month (quartile)	0.90	0.00
Total days worked per month (quartile)	1.24	0.00
Provider type		
Total physicians (quartile)	0.98	0.68
Total PCPs (quartile)	1.00	0.93
Academic medical center	1.20	0.03
Teaching hospital	1.04	0.53
Safety-net hospital	1.08	0.30
Catholic hospital	0.93	0.50
Patient characteristics		
Average patient age (quartile)	1.08	0.01
Average number of problems (quartile)	1.01	0.80
Percent of visits billed to new patients (quartile)	0.93	0.00
Percent of visits billed at level 5 (quartile)	1.04	0.11
EHR use		
Unscheduled days with EHR use (quartile)	1.13	0.00
In-Basket messages per visit (quartile)	0.91	0.00
Time in EHR per visit (quartile)	0.87	0.00