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Background

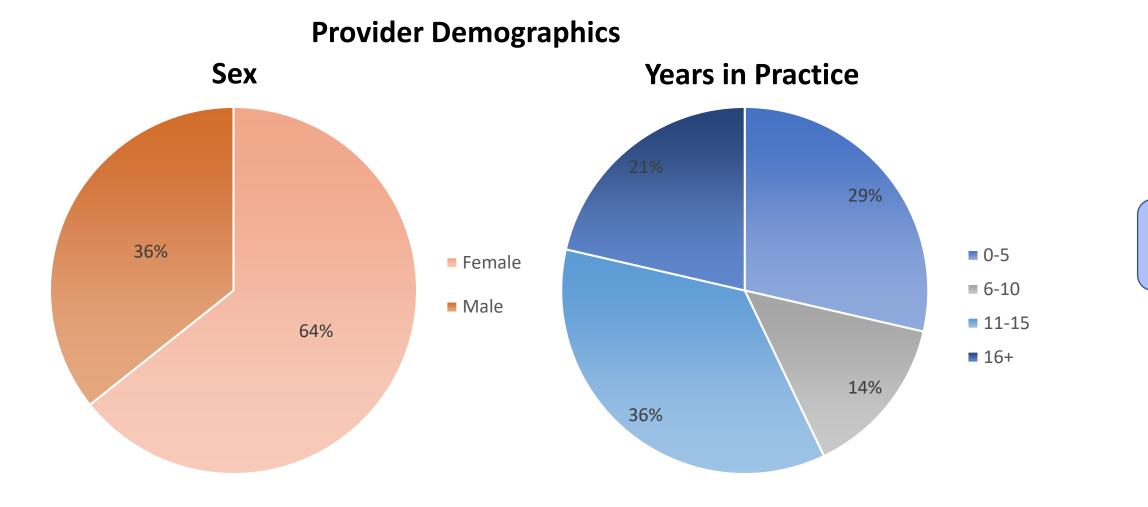
- Time on electronic health records (EHR) affects the quality of life of primary care providers (PCPs)
- Family physicians spend 5.9 hours on EHRs per workday
- Workload is increasing and professional satisfaction may be decreasing as PCPs spend more time on non face-toface patient care activities including InBasket tasks
- Understanding PCP workload by EHR task is critical in helping clinicians achieve the Quadruple Aim

Objective

- Directly observe PCPs in family medicine (FM) and general internal medicine (GIM) to assess time and usage patterns of EHR InBasket management
- Categorize EHR direct observations by InBasket task to make future correlations to EHR user action log data

Design and Setting

- Participants included 14 PCPs from FM (n=7) and GIM (n=7) clinics at UW Health in Madison, WI
- Observational time motion study, summer 2019
- Each PCP was observed for one half-day clinic session with focus on EHR InBasket management
- Common InBasket events were defined by 2 PCPs and built into WorkStudy+ App on iPad for tracking



Assessment of PCP InBasket Burden Using Direct Observation Time Motion Study Rutvi Shah¹; Mark Micek, MD MPH^{2,4}; Wen-Jan Tuan, MS MPH³; Brian Arndt, MD^{3,4}

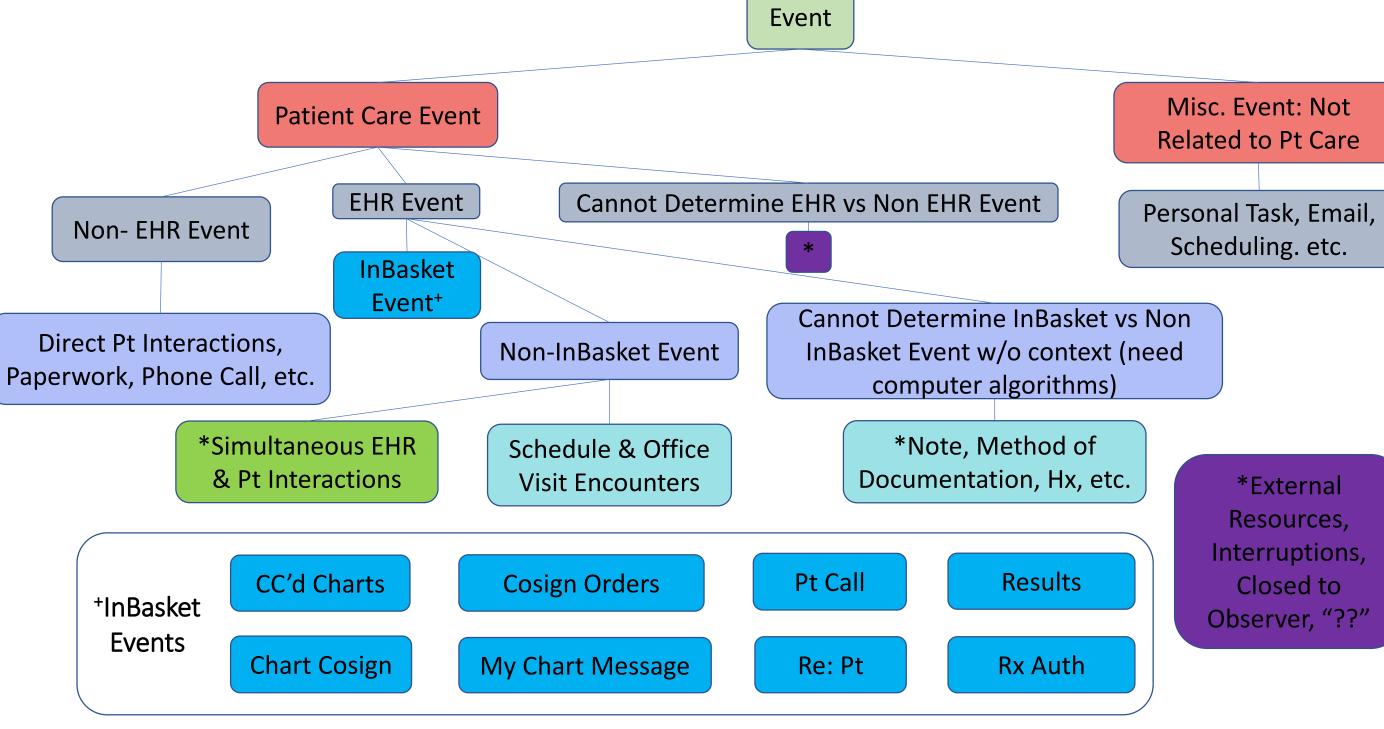
Data Collection

A medical student observed PCPs using WorkStudy+ App on an iPad to track time in InBasket tasks

| Physician_iPad | | | | | |
|-----------------------------|----------------------------------|----------------------------------|--------------------|-----------------------------|-----------------------------|
| In pt room | Interruption | Create Telephone encounter | Re: pt | Imaging | Take action |
| ?? | Controlled meds auth | Canceled orders | Routing | Labs | WIR/ Health Maintenance |
| Admin/Misc pt care tasks | External resources | CCd charts | Rx auth | Letters | Order entry |
| Misc | Alert/ error message | Chart cosign | Staff message | Meds | Note |
| Schedule | Sign/approve/ accept click | Cosign clinic orders | Unsent letters | Mark as reviewed | Edit problem list/ FHx |
| Office visit encounter | Done | E-consults | Rooming | Update med/ prescription | Select/update pharm |
| New pt | Batch (done/sign/app rove) | MyChart Message | Care everywhere | Message intake | Dx association |
| Exit Screen | Quick action inbasket letter | MyChart reply | Chart Review | Open orders | Visit dx |
| Return to open pt | View inbasket | Pt call | Encounter | Order review | Schedule F/U |
| Pt chart search | Admit/ discharge visit | Pt unread messages | History | Problem list | Wrap Up/ Pt instructions |
| Smart Sets | Quick Note | Results | Snapshot | Release | Method of documentation |
| Security | Create encounter | Results action | Synopsis | Results review | <add></add> |
| Element List Properties | | | | | |
| Done Edit | | | | | |

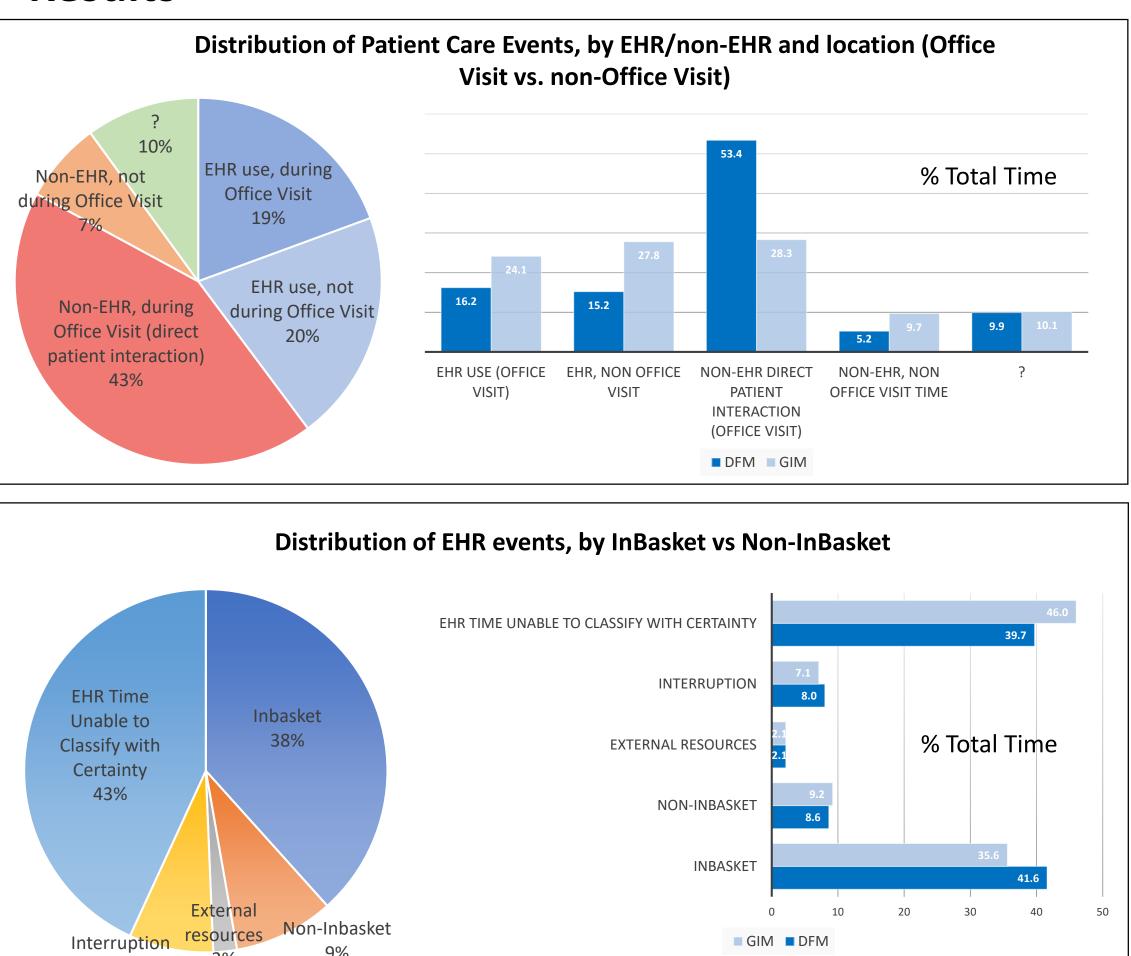
Classification of Events

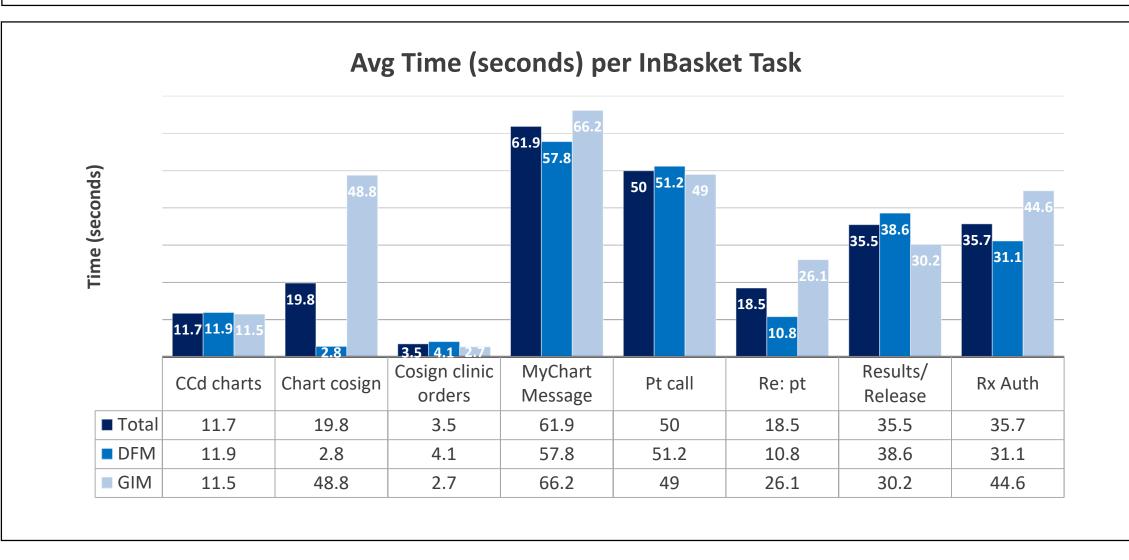
EHR time by InBasket task category was allocated with sequencing algorithms





Results





Conclusions

- PCPs spend substantial in-clinic time completing non face-toface tasks in the InBasket
- InBasket activities that take the most time per task include responding to MyChart messages and patient calls
- Because of the link between physician well-being and InBasket volume, workflow redesign is needed to reduce PCP's burden of InBasket tasks
- Further study is needed to assess concordance between direct observations and EHR user action log data



