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BACKGROUND
Physician burnout and distress is a growing problem due to a complex combination of loss of autonomy, increased administrative tasks, & inefficient work environments. The EHR and information technology (IT) systems are often cited as major contributors due to many factors including:

• lack of integration with other systems
• inefficient keyboard/mouse user interface
• many mandatory compliance/billing fields
• too many hard stops causing alert fatigue
• frequent log outs interrupting workflow

GOAL
To identify effective, time and click saving IT strategies to help physicians have “less time typing and more time caring.”

METHODS
We identified a strategy of IT interventions and evaluated the impact of each including:

1. Secure Messaging Application
2. Tap & Go
3. Speech Recognition
4. EHR Integration w/External (CT-PMP)
5. Clinical Decision Support Curation
6. Virtual Scribes

RESULTS
To date, results show promising progress made by each IT strategy to save a little time or improve clinical workflow and decrease time spent at computer.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Impact and Benefits</th>
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<tr>
<td>Secure Messaging App (n=5,500)</td>
<td>Asynchronous communication enabled, &gt;2 million messages/month, J-pages, phone-tag, wasted time</td>
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<tr>
<td>Tap &amp; Go (n=21,000)</td>
<td>Tap w/ID badge to log into EHR, Saving &gt;37 million clicks/month, Saving 20,000 taps/day</td>
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<tr>
<td>Speech Recognition (n=2,400)</td>
<td>Speech to text integrated w/EHR, 87% visits closed same day (vs. 57%), Notes completed 33.6 hours (avg) faster, 25% less copied content, Very high physician satisfaction</td>
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<td>Virtual Scribe Pilot (n=58)</td>
<td>↑ RVU 0.1 per visit, ↑ 0.5 patients per day, ↑ 2x more Clinical Review time, ↑ Encounters closed same day, ↓ After hours time &amp; time in notes/orders, ↓ Days to close encounters: “4 days to 1.5 days, ↓ % Notes manually written by providers by 60%</td>
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<tr>
<td>EHR-Rx Monitoring Program &amp; eRx (n=7,000)</td>
<td>EHR integration w/multi-State controlled Rx DB, ↑ compliance w/checking database, Save time doing right thing, Saves ~5-15 min/day</td>
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<tr>
<td>Clinical Decision Support Curation (n=28,000)</td>
<td>Data driven: review overridden, ↑ volume, ↓ overall alerts 30%, ↓ med alerts 15.8%</td>
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DISCUSSION
While the EHR and supporting systems are understandably often viewed as barriers to patient care due to design and implementation decisions made to support billing, compliance, and data security, IT also plays an important role in mitigating these frustrations and contribution to physician burnout. Individually, each strategy may not be as impactful, but as a collective strategy it has been noticed and appreciated. Highest satisfaction and perceived impact has been from speech recognition and virtual scribe program.

FUTURE DIRECTIONS
Continue to evaluate IT methods to mitigate inefficient workflows, clicks, and time spent in the EHR such as::

• Expansion of virtual scribe program
• Piloting cloud speech recognition solution
• Enables off-campus, Mac, thin client access
• Review & improve security log off timings
• Continue CDS curation to decrease alert fatigue
• Develop chatbots, assistive intelligence tools
• Advocate for documentation billing reform

CONCLUSION
While EHR and electronic systems are perceived as a major contributor to burnout, information technology solutions can also help mitigate or lessen the impact. Continued evolution and application of mitigating IT solutions is critical in supporting physicians facing more pressures than ever before.