Burnout: Impact of EPIC Sprint
Background

• Burnout:
  • “A syndrome of emotional exhaustion, loss of meaning in work, feelings of ineffectiveness, and a tendency to view people as objects rather than as human beings” ¹

• Maslach Burnout Inventory (MBI):¹
  • Emotional Exhaustion
  • Depersonalization
  • Low sense of personal accomplishment

• Physician burnout:
  • Currently estimated at 54% of physicians nationally ²
  • Impact on provider, colleagues, families, organization....
  • DOM: ~200 physicians, 54% burnout rate, 7%/year turnover = 4.9 physicians/year lost to burnout ³
  • Replacement cost/physician $500,000 = $2.5M/year ³
  • Patients...

Faculty Practice physician engagement:

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Highly engaged”</td>
<td>26.5%</td>
<td>41.5%</td>
</tr>
<tr>
<td>“Moderately engaged”</td>
<td>29.5%</td>
<td>30%</td>
</tr>
<tr>
<td>“Passive”</td>
<td>26.5%</td>
<td>14%</td>
</tr>
<tr>
<td>“Actively disengaged”</td>
<td>17.5%</td>
<td>15%</td>
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³https://edhub.ama-assn.org/steps-forward/module/2702510
Physician Burnout & Patient Care Metrics

What Contributes to Internists’ Burnout?

- Too many bureaucratic tasks (eg, charting, paperwork): 62%
- Spending too many hours at work: 40%
- Insufficient compensation: 24%
- Lack of respect from administrators, employers, colleagues, or staff: 23%
- Increasing computerization of practice (EHRs): 23%
- Feeling like just a cog in a wheel: 23%
- Lack of control/autonomy: 20%
- Lack of respect from patients: 18%
- Emphasis on profits over patients: 15%
- Government regulations: 15%
- Maintenance of Certification requirements: 12%
- Decreasing reimbursements: 11%
Clinician EHR Burden and Burnout

• “Computer-based clerical work associated with patient care”

• Major cause of clinician burnout

• Physicians spend 2h on EHR and deskwork for every hour of direct patient care during the workday

• Physicians routinely take 1–2h of EHR/paperwork home each night

1 Arndt, et al, Ann Fam Med 2017;15:419-26
Family physicians’ EHR use by time of day.

Date nights and the EHR


NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society
Epic Usage Data
Department of Medicine: Epic Time of Use, April – Sept, 2017
What can we do about this?

The KLAS Study...
Correlation between Satisfaction & Duration of User EMR Experience

KLAS: Arch Collaborative EMR Best Practice Study, November 2017
Correlation between User Satisfaction & Use of Personalized Settings

KLAS: Arch Collaborative EMR Best Practice Study, November 2017
User Satisfaction and Effect of Upfront Training

**User Satisfaction—After Less Than 12 Months**

- Users Who Strongly Agree Initial Training Prepared Them Well
- Users Who Strongly Disagree Initial Training Prepared Them Well

**User Satisfaction—After 5+ Years**

- Users Who Strongly Agree Initial Training Prepared Them Well
- Users Who Strongly Disagree Initial Training Prepared Them Well

KLAS: Arch Collaborative EMR Best Practice Study, November 2017
What can we do to help “legacy” users?
The University of Colorado Experience

• “EHR Sprints”:
  • Intensive, on-site, in-context EHR training and workflow optimization

• Net promoter score (NPS): -100 to +100
  • For provider satisfaction with EHR:
    • NPS for Sprint itself was +52

• Clinician burnout: 39% → 34%

• UVM DOM team visited UC in June ‘18
EHR Sprint Schedule

Sprint

90d Pre-huddle  60d Pre-huddle  30d Pre-huddle

Week 1  Week 2

Kick-off  Wrap-up
UVM EPIC Sprint: Structure

• Pre-huddles: Clinic workflow, Epic pain-points, decompression of schedules
• Kick-Off: 1.5h basic small group training/personalization
• Every clinician and staff member:
  • 3 x 1 hour 1:1 training sessions
  • Dragon, Haiku, Canto training (optional)
• Daily inter-professional huddles:
  • Clinic physician leadership & supervisor, super-users for each staff role led by Sprint team
  • Redesign and standardize Epic workflow and integrated team work
  • Identify priorities for Epic fixes/builds
• Drop-in question/training sessions available throughout
• Wrap-Up: 1h session to reinforce operational changes and highlight successes
UVM EPIC Sprint Team

- Physician Informaticists (1-2)
- Operational Leader
- Epic and Medical Group Trainers (2)
- Project Manager
- Epic Ambulatory Analysts (1)
- Clinical Leaders (Clinic Director, Clinic Supervisor)
- Clinic-specific Super-Users (by job type)
- Providers and staff

IT + Clinicians + Operations = ONE Sprint Team
Where did we start?
Overall EMR Satisfaction
All clinicians (n=59,713)

Vermont (July '18)

KLAS
Overall EMR Satisfaction
Physicians and advanced practice clinicians only (n=27,427)

Vermont (July '18)

All Organizations (n=129)

Epic Deployments (n=80)

Academic Health Systems (n=28)
Agreement That EMR Enables Efficiency
All clinicians (n=58,801)

Vermont (July '18)

KLAS™
Agreement That User Has Learned EMR Well
All clinicians (n=58,963)

Vermont (July '18)

- Strongly agree: 1
- Agree: 6
- Indifferent: 10
- Disagree: 6
- Strongly disagree:

All Organizations (n=135)

Epic Deployments (n=83)

Academic Health Systems (n=31)

Percent That Agree or Strongly Agree
Level of EMR Personalization
Physicians only (n=19,474)

Vermont (July '18)
Where did finish?
What we did...

• 157 training sessions + many informal sessions
• 20 Sprint huddles
• Personalized Epic for all users
• Improved Clinic Flow: Check-out, In-Basket, Refills, Scheduling...
• Worked to understand each other’s roles
Overall EMR Satisfaction
All clinicians (n=59,713)

Vermont (Sep '18)

Vermont (July '18)
Overall EMR Satisfaction
Physicians and advanced practice clinicians only (n=27,408)

Vermont (Sep '18)

All Organizations (n=128)

Epic Deployments (n=79)

Academic Health Systems (n=27)

Percent Satisfied or Very Satisfied

0% 100%

96th Percentile
(39th)

91st Percentile
(15th)

100th Percentile
(36th)
Agreement That EMR Enables Efficiency
All clinicians (n=58,801)

Vermont (Sep '18)

Vermont (July '18)
Epic Provider Metrics Improved

User Proficiency and Efficiency

Proficiency

Efficiency

p = 0.1439

p = 0.0654

Reviewed Patient Calls within 24 hours (%)

Reviewed Result Messages within 24 hours (%)

F/u on patient advice requests within 48h (%)

May/June 2018

Aug/Sept 2018
Afterhours Epic Use Was Reduced

![After-hours Epic Use](chart.png)

- **Clinic days**: May/June 2018 vs. Aug/Sept 2018, with a significant reduction in Epic use, $p < 0.0001$
- **Other days**: May/June 2018 vs. Aug/Sept 2018, showing a significant reduction in Epic use, $p = <0.0001$
Thanks to:

• Polly Parsons & the DOM
• Doug Gentile & UVMMC IT
• UVMMG
• SB PC: Especially Jen Gilwee, Marie Sandoval, and Malick Guisse
• ID Clinic: Especially Kemper Alston, Cindy Noyes, and Casey Darling
• All the SuperUsers and Ninjas
• Sprint Team: Rachel McEntee, David Ziegelman, Chelsey Carpenter, Scott Woytowick, Sue Lee, and Ben Suratt
The *Sprint* Team

South Burlington Adult PC

Infectious Disease Clinic
Quotes from Sprinters:

“I think that we should expand this to other clinics because I really do think that the value added is great!”

“I feel I have much more control with using Epic, instead of feeling like Epic is controlling me! Thank you everyone!”

“The most useful aspect of the Sprint was that it increased hope about how the EMR can work for me instead of against me.”

“During the Sprint, I enjoyed coming in every day.”

“I like the fact that the whole team enjoyed their time in clinic and was engaged and ready to give feedback on how we could do better.”

“Wow! I just completed my first ever Dragon note! Thank you so much - so great!”