Providing Organized Knowledge in Chaotic Times:

Creating a Virtual Exam Room Drawer for HCA

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Background

- HCA is a large complex primary care practice at BIDMC
- 40,000+ patients with ~100,000 visits/year by 60+ MDs and NPs and 100+ residents with embedded mental health and support services
- Most resources printed and available only on-site (Fig. 1)
- In March 2020 in-person visit volume dropped rapidly as clinicians stayed home and the practice transitioned to virtual visits → no access to printed info or colleagues
- Rapidly evolving policies, procedures, and protocols related to new care models and COVID distributed via e-mail, some available (with delay) on the BIDMC portal, HMFP website, BILH website, BIDMC's public website, or elsewhere
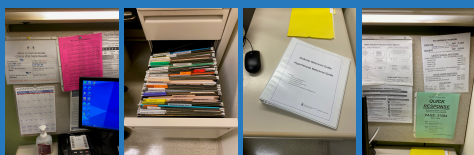- As a result, needed info not available (Fig. 2)

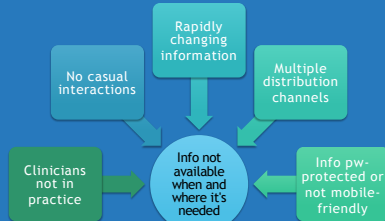**Figure 1: Printed Info in HCA Exam Rooms**

Figure 2: Factors leading to info gaps

Approach

- Author created a web portal for internal use, **HCAportal.net (Fig. 3)**
- Quick, easy, not password-protected, easily usable on mobile devices and off-site
- Search functionality to make it easy to rapidly find resources
- Uniform look and feel throughout
- Rapidly and easily updates from any location
- Platform initially WordPress with Google for document management
- Content:
  - Internal documents and databases and some links to external
  - Created database of personal fax numbers that was user-updated
  - COVID-related documents
  - Telehealth education
  - No PHI or other confidential information permitted (no password protection)
- Editing and curation:
  - Initially by one person (poster author), which proved inefficient and burdensome
  - Later created federated authoring/editing using Google Apps, so key stakeholders could control content and organization for designated sections of portal (Fig. 4)
  - Author (exec editor) responsible for educating and onboarding, as well as promulgating style standards
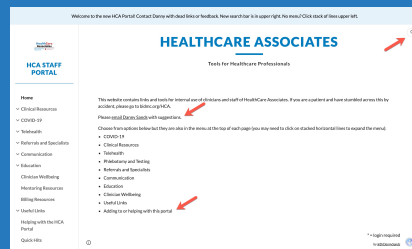

Figure 3: HCAportal.net
   Search function
   Editor identified on each page
   Info and training for editors

Figure 4: Federated Authorship Model

Results

- Platform evolution:
  - Wanted simpler editor, search function, and platform consolidation, so migrated to Google Sites
- Content evolution:
  - Many other resource needs identified
  - Added many useful resources from exam rooms transitioned to digital formats
  - Expanded to include new tools and resources, including directories, referral guidelines, billing resources, and conference handouts
- Editorial/curation evolution:
  - Single editor proved inefficient and burdensome
  - Created federated authoring/editing, so key stakeholders could control content and organization of sections of portal (Fig. 4)
  - Author responsible for educating and onboarding, as well as promulgating style standards
  - Onboarding starts with "Helping" page on portal
- ~500 website uses per week at peak

Discussion

- Pandemic highlighted inefficiencies in access to info resources in HCA → encouraged innovation
- Although started with COVID and remote-care related resources, through faculty feedback we identified many other needs
- Federated authorship model key to sustainability
- Online resources make it possible to practice virtually
- The portal has allowed us to think differently about tools and resources we use in HCA
- The portal remains in heavy use and continues to expand in scope
- HCA Portal can serve as a model for other clinical divisions