Healthduct Academic Paper

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1 BACKGROUND & SIGNIFICANCE

There's surprisingly little communication between mental and physical health providers, mainly due to the little amount of connecting channels between them and the differences in their knowledge-base. Physicians may prescribe drugs that can increase chances of mood and mental disorders, such as depression or anxiety, and the patient's therapist or mental care provider may never know, making psychological treatment more difficult. Often enough, the physical providers may not even wish to explain their reasoning for specific treatments or what those treatments can do. Even if mental health providers put in the extra effort to learn of a prescription's effects, they'll still struggle to get a hold of a primary care provider to detail what it's doing to their patient mentally. A study done in 2011 by Amy M. Kilbourne (presented as follows by Susanne Hemple) performed telephone interviews with various primary care and mental health providers to determine a list of communication barriers and possible facilitators, as shown in Table 1.

Table 1—Kilbourne 2011. Respondents include 32 MH clinicians (psychiatrists, psychologists, social workers, nurses) treating Veterans with Serious Mental Illnesses (SMI), 4 providers per site; 4 high-performing and 4 low-performing MH programs across the U.S.

Barrier's Topic	Perceived Barriers	Facilitator's Topic	Facilitator's Perceived
Lack of communication with PCPs	- Lack of opportunities to interact on a face-to-face basis - Lack of opportunities to have team meetings	Building informal relationships with PC providers	- Formal meetings, routine meetings - More informal, in-person communication, communication through notes in medical records
Responsibility for medical problems (which provider is responsible), uncertainty regarding management of routine medical issues (could be addressed withinMH or PC)	- Lack of clarity who was responsible for general medical care for patients with SMI - Potential 'dumping' of PC responsibilities onto MH providers	Formal agreements or procedures might be helpful in delineating responsibilities	N/A

Perception and stigma of SMI patients by PCPs	- PC providers don't want to deal with MH patients - MH providers don't want to deal with medical problems - PC doesn't want to hear from MH providers - MH providers think that PC providers think MH patients just want to obtain pain medication (consequently patients are senddirectly to MH even if presenting to the ER)	Each specialty should try to understand how they approach clinical problems differently in order to facilitate communication	e.g., awareness of medical versus bio psychosocial model or that MH have more time with patients
General	Challenges to hiring enough support staff to facilitate coordination of medical and psychiatric care		

2 THE PROBLEM

Mental and primary care providers don't seem to have many opportunities to connect with a patient. Even if there were, providers are busy and don't wish to spend too much time interacting with every patient's out-of-network providers.

3 A SOLUTION

Healthduct is a web application that allows mental and primary care providers to collaborate for a more effective treatment for their shared patients without needing to spend too much time in communication. Specifically, Healthduct can act as a collaborative note-board for treatment plans and an informant on prescribed medication for those without a background in medications. The current proof-of-concept is focused on the mental health provider's perspective and use.

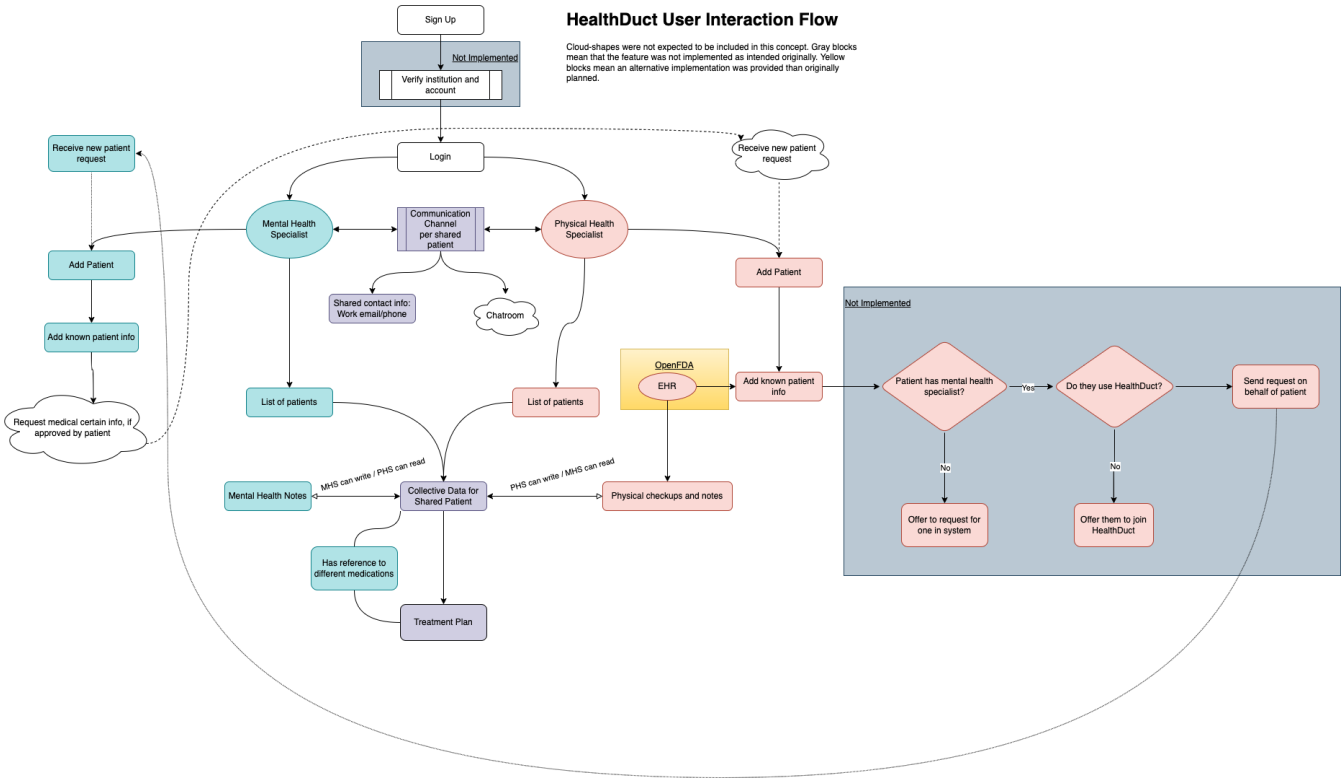
4 COMPLEXITY

4.1 Tools & Technology

Healthduct is built using a Docker container, bundled with webpack.js, uses Python for server and database management via Django and React.js for the front-end.

4.2 Architecture

Healthduct uses a client-server model architecture. Below is the diagram of user flow.



4.3 Research

4.3.1 *Legal*

Research into the legality of sharing patient medical information between providers resulted in two acceptable situations: medical information may be shared between involved providers so long as the patient does not object or if deemed necessary to by the patient's provider for the patient's best interest.

4.3.2 *Mental health provider perspective*

The project actually came about once when a mental health provider expressed frustration to me. She said that navigating treatment with her patients becomes difficult if they cannot get into contact with a patient's primary care provider,

which is fairly often. She also was the one to tell me that a medicated patient may not feel comfortable disclosing their prescriptions, which can cause treatments to head in a misled direction. After reading papers on the communications between mental and physical providers, it was decided to focus on the mental health provider's perspective for Healthduct's proof of concept.

5 REFERENCES

1. Office for Civil Rights (OCR). (2020). HIPAA Privacy Rule and Sharing Information Related to Mental Health. U.S Deptartment of Health and Human Services.
2. Hempel, Susanne. (2011). Communication between Primary Care and Mental Health Providers. 10.13140/RG.2.2.27631.07848.
3. Kilbourne, A. M., D. E. Greenwald, M. S. Bauer, M. P. Charns, and E. M. Yano. (Jul 7, 2011). Mental Health Provider Perspectives Regarding Integrated Medical Care for Patients with Serious Mental Illness. Adm Policy Ment Health.
4. Edwards, B. G. (2016, March 10). "Why Collaboration is essential in Mental Health Care. GoodTherapy.org. Source.