PyraMED (Medical Services) and Titanium (Counseling) Application

General

Account/Department
STUDENT HEALTH - WELLBEING SVC

Priority
Based on steering committee score

Created
Fri 3/2/18 3:58 PM

Dates/Times Resources Not Available
Intentionally left blank

Divisional VP
Wayne Brumfield - Enrollment Management & Student Affairs

Estimated initial costs
0

Estimated on-going costs
PyraMED costs $47,000 annually and Titanium costs $1,615 annually. Both services come with tech support. Both vendors have been made aware of the potential project and agreed to assist where possible. This project will not incur any additional costs.

Explanation of evidence of impact.
Student health is the priority of the Wellbeing team. We seek to improve our process to provide services by reducing the manual entry of information into our patient records applications and decreasing student frustration/delay. According to economist Daniel Eisenberg, Ph.D. (on behalf of the Healthy Minds Network team - full report available at wellbeing.humboldt.edu/data) more than seventeen hundred students face untreated mental health issues at HSU. The university loses more than one hundred students a year due to health barriers that could be retained if they receive services. We know from settled science that frustrating experiences with health services leads to reduced use, and this use reduction is greater among historically under-represented groups. Once someone has been brave enough to seek services, we don't want them to leave because of human error or processing time that means information isn't transferred in a timely and accurate way -- causing them lose hope or spend twice as long in the center as they need to. We know that those who get adequate services are more likely to persist at a rate of 6.48/100 treated. Full details with references to document the connection between improved health and counseling are all available at wellbeing.humboldt.edu/data
See especially: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC37... (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3708204/)
Students who make it to counseling reduce their risk for suicide by as much as 600% according to a Journal of American College Health study, and most research has consistently confirmed this dramatic protective decrease in risk through use of counseling services. Nationally, 70% of students admit their personal and medical issues negatively impact their academic performance. Research has also shown that students who receive counseling services have higher retention rates than students who did not despite requesting services, and the odds of students who received counseling registering in their third semester is as much as 3x times higher than for students who do not.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC27... (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2709750/)

https://eric.ed.gov/?id=EJ621105 (https://eric.ed.gov/?id=EJ621105)

http://psycnet.apa.org/record/1997-04729-007 (http://psycnet.apa.org/record/1997-04729-007)

Lee, Olson, Locke, Michelson, & Odes, The effects of college counseling services on academic performance and retention, Journal of College Student Development 50(3), 305-319, (January 2011).
Efficient campus wellness services and seamless student experiences in seeking help are also force-multiplier in the campus-wide battle for student success. That is, just as an army with certain weapons can exhibit 4 or 5x the effectiveness as a similarly sized force without these tools, campus investment in health and wellness services doubles or even triples the impact of resources invested elsewhere (e.g. in academic areas) on campus to support student success.
In this proposal we seek to create efficiencies that bolster our capacity for our mental and medical health providers to meet the service needs of our campus. Integration of PyraMED and Titanium will decrease the data entry workload on staff and providers and allow us to automate patient information in ways that reduce hours of manual entry and investigation, and free those hours for direct service to students, as well as reducing the total time students spend in the center (often an extra hour, repeating the same assessments in CAPS and medical services).
We will use log information in both systems. PyraMED and Titanium have built in audit functionality and we will use the databases to log and create reports. We will be able to periodically monitor the success and failure of the transfers and what information got transferred.

Funding Availability?
Fully Funded - includes initial and on-going costs

Need to Know
Brian Mistler, Jen Sanford

Portfolio Type
Infrastructure & InfoSec: Activities involving the admin, operation and maint. of campus IT sys.

Portfolio Type Alignment
This project will include IT systems and personnel and seek to modify the PyraMED and Titanium applications to optimize the medical and psychological services that rely on accessing their collective data.

Requestor name
Jen Sanford, Director of Counseling and Psychological Services (CAPS)

Project Champion
Brian Mistler, Executive Director of Student Health and Wellbeing Services.

Primary Customer(s)
Campus-wide

What problem are you looking to solve?
Eliminate and replace the current manual data entry exchange process between PyraMED and Titanium.
This manual process is inefficient, is capable of human error, and causes a process delay which prevents access to vital information needed by providers to help make important treatment decisions. The potential for human error and delay creates significant legal and safety risk for the institution, and can negatively impact the student's experience increasing frustration, reducing use of services, and leading to a negative impact on student health and academic success.

As an example, a student may be seeing a therapist at CAPS and disclose that he has a history of addiction issues as well as current issues with anxiety and sleep. A referral is made to medical services at SHC for possible psychotropic medication. If the referral documentation (which includes notation of the past addiction problems) does not get copied from Titanium and placed into PyraMED, the medical provider may inadvertently prescribe a Benzodiazepine (addictive substance). This poses a threat to the student as well as a liability for the university if the prescription leads to dangerous use patterns or subsequent relapse.

Which departments or processes are affected?
Multiple departments within Student Affairs Health and Wellbeing Division and MBU, including three independent departments: medical services, counseling and psychological services (CAPS), health education, who all make decisions and prescribe health remedies and actions for students.

Information-sharing processes between SHC and CAPS via applications which affects timely access by being manual (currently). Provider access to key information in the PyraMED and Titanium applications for making important health decisions for students.

What is the consequence of not doing this project?

There is risk to our students if we do not improve the speed of information-sharing and availability of necessary information to medical and psychological providers at HSU. For example, when working with a high risk student (e.g., someone with addiction or suicide potential), it is imperative that each unit have timely access to information from the other unit about appointment attendance, changes in health status, and changes in treatment. For example, if suicide risk is elevated, the medical provider should know if there as a "no show" for the CAPS appointment the day prior to a planned appointment on the medical side. When data is not shared in a timely fashion (due to manual entry), there is a liability to both centers. Medical and mental health professionals are best able to evaluate and determine the most effective course of treatment when they have all the information. Health and Counseling utilize two different systems for documentation (PyraMED and Titanium) that are specialized for their respective fields. The continued use of separate systems is important for several reasons: confidentiality [CAPS has strict ethical and legal guidelines regarding the sharing of sensitive mental health information and shares only necessary data on a "need to know" basis], ease of use based on necessary and preferred data fields for each respective unit, data collection and analysis, etc. Due to the degree of turnover at CAPS (e.g., CAPS serves as a training site for graduate students and new professionals and has new therapists join the unit every semester), it is also important that CAPS uses a system that is easy to learn and is intuitive to use (neither of which is true of PyraMED). There is information in each system that the other unit does not (and should not) access (e.g., a therapist should not be privy to information about a client's STD that she does not wish to discuss, and a physician should not be privy to private conversations with a therapist about a client's past sexual abuse). On the other hand, there are times when information should be disclosed from one unit to the other-- when there is collaboration regarding treatment (e.g., medical and therapeutic management of depression) and when there is a health and safety risk posed by a lack of disclosure. The sharing of information in these latter cases can be critical to making safe and effective health decisions in the patient's care. Our current system (of manual entry) is problematic as there can be oversights (e.g., data is not entered at all) and delays. An electronic automated system that expedites this sharing of information is important to patient care.

Use cases include CAPS providers needing to know if students do not show up to their medical appointments, their appointment history with which providers, or when students do not complete the intake forms for the department they are being referred. This might also include what prescriptions are being administered to students, that based on CAPS information and history, should be avoided.

The worst case scenario would be if we were to do nothing and end up with a legal and/or financial liability from a lawsuit resulting from this information access and process delay causing any harm or affecting a student's well-being negatively.

The potential for human error and delay has negative impacts on the student's experience increasing frustration, reducing use of services, and leading to a negative impact on student success.

What would a successful solution look like?

Creating a technical process where PyraMED instantly (or as close to "real time" as possible) shares with Titanium targeted information in patient charts and appointment history and demographics; and Titanium shares with PyraMED referral, consultation, and appointment history information. The optimal solution would be if this were to happen at the transactional level, when services were provided and the specified fields/information was updated and saved into either application. The successful solution will allow service providers from the Student Health and CAPS to access and see the necessary information in their respective applications (PyraMED and Titanium) so the provide the best care to our students.

How else might you solve this problem?

We considered using a single EMR application system, but realized that the industry standard keeps the Medical records and the counseling/psychological services information separate to conform with information security laws and regulations (also see 11b above). This process is achieved by either using two separate applications, or by creating firewalls within single applications with the goal of preventing access to specific patient information. Titanium also has significant advantages for psychological trainees (which include nearly 30 rotating staff per year), which means giving up Titanium would cost more in training than we save.

We initially solved this problem by identifying the information that was needed to be be exchanged between the two applications to better serve students and manually keying in and uploading information from one system to the other and vise-versa. This process takes many manual hours of work to accomplish, so it is not efficient and is the main cause of delay.

What resources will this project require?
ITS Programmer resources for creating APIs between the two applications.
Technical assistance and coordination from both PyraMED and Titanium application vendors
Project Coordination form the ITS Project Office
CAPS and HSU Student Health staff and technical personnel to identify specific data points and information to be exchanged between the two systems, for user acceptance training, and any other testing associated with this project.

And is your deadline a hard deadline?
No

Explanation of annual estimates
No additional funding required.

Type
Customize

Affected or Related Systems/Modules
Pyramed/Propharm
Other

Other Affected or Related Systems/Modules
PyraMED EMR (Electronic Medical Records) application and Titanium Scheduler application

Information Technology (IT) Feasibility Statement
Brennen Rose spoke with Josh Callahan, Troy Buttolph and Sky McKinley. They decided it was feasible, secure and require a minimal amount of resources.

ADDITIONAL INFORMATION
ITS Staff, including Troy Buttolph, Sky McKinley, Josh Callahan, met with Brennen Rose to discuss feasibility and basic concepts related to the anticipated project work.
Titanium has provided Brennen Rose their data dictionary for reference.
Dr. Jennifer Sanford has identified and approved specific fields for read, write, and update to and from Titanium Database.