UCSF (University of California San Francisco) Daily Staff COVID-19 Screener: Collaboration and innovation to keep us safe

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Summary:
UCSF's daily employee health screener facilitating Occupational Health efforts to manage employee safety and meet California and national standards for clinicians, staff and learners evolved and pivoted at least as often as the virus itself. We built a system that allowed for flexibility in the screening questions and concrete data around vaccination, actual presence in buildings (through badge swipe data) by integrating multiple systems and a significant commitment to an iterative development process. Our tool combines user-friendly features (SMS reminders and quick daily returns) with accessible and multilingual features and a reporting system to deliver near real-time information about UCSF employee COVID exposures.

Project narrative:
March 2020 was a chaotic time. Navigating between shelter-in-place orders, uncertain public health recommendations, and courageous but nervous front-line workers, the UCSF Occupational Health Service (OHS) and the larger UCSF Health leadership team began screening visitors, employees, and staff entering our 85 buildings spread across 7 campuses. To supplement the initial in-person screening at key entry points, the COVID response leadership team quickly understood the need for a digital option. UCSF's Digital Recovery Team leveraged an existing technology partnership with a technology start-up focusing on virtual care, Conversa, to create a screener as a web-based chatbot available to patients, visitors, and employees in late summer 2020.

This screener was easy to use, and the SMS reminders were an immediate hit. Unfortunately, meaningful reports about where employees were on campus and integrating failed employee screens into the OHS workflow made the screening tool less useful as the pandemic continued. In February 2021, the Chancellor's Executive Team approved a project to create an employee screening that would minimize manual screening, make reporting easy and optimize a workflow for both employee screening

and the COVID Hotline operators within OHS. To keep costs low and development fast, UCSF leveraged Salesforce as the integrating system with a Qualtrics front-end.

The new screening tool went live in July 2021 and included language support in 4 of the main languages of UCSF staff and learners. The Qualtrics front-end allowed us to easily update the actual screening questions so we could be responsive to new symptoms or vaccination requirements. It also integrates employee directory data, badge swipe data from our security system, and data from our HR and Occupational Health systems to make sure anyone with a failed screen did not return to work. These integrations and accompanying policy changes had additional benefits – we now can easily report on employees within a building in case of an emergency. Most significantly, it integrated with existing systems used by our hotline team to manage employees with a failed screen or suspected COVID exposure.

The system continued through two more significant iterations with live updates to the system (both the Qualtrics front-end and additional reporting) going live during the January 2022 surge. Survey branches allowed employees to schedule and complete testing or fulfill clearance requirements without burdening the COVID Hotline. These enhancements reduced delays in timely testing and clearance of employees with recent COVID symptoms, exposures, or infections. Our last significant feature was an email reminder to employees and their managers when an employee entered a building without a valid daily screen. Post-implementation, our compliance with the daily screen has hovered at 90%.

With over 2.7 M screens completed, and weekly updates to the questionnaire screener itself, the success of the Employee Daily Screener has given UCSF additional confidence in our ability to return to the campus and lift COVID restrictions. Data is regularly reported during enterprise Town Halls keeping all employees informed.

Creating a new enterprise-wide digital product that borrows the best of consumer-facing functionality while integrating data from various campus entities (Facilities, HR, Clinical Systems, and Occupational Health) required new levels of collaboration. The Daily Screener itself needed to quickly reflect the best thinking of UCSF decision-makers around travel, quarantine times, and vaccination and booster requirements. By using an agile build methodology and digital product management process with distributed teams but aligned leadership, UCSF launched a truly innovative tool that continues to evolve to keep us safe.