

Abstracts from the 2022 Annual Meeting of the Society of General Internal Medicine



J Gen Intern Med 37(Suppl 2):S129-S664

DOI: 10.1007/s11606-022-07653-8

© The Author(s), under exclusive licence to Society of General Internal Medicine 2022

SCIENTIFIC ABSTRACT

Scientific Abstract - Ambulatory Medicine

A 30-DAY AUTOMATED SMS PROGRAM TO SUPPORT POST-DISCHARGE TRANSITIONS OF CARE

Eric Bressman^{1,2}; Judith A. Long¹; Robert E. Burke^{2,1}; Katherine Honig¹; Nancy P. McLaughlin¹; Ashley Brooks¹; Anna U. Morgan¹

¹Medicine, University of Pennsylvania, Perelman School of Medicine, Philadelphia, PA

²Medicine, Philadelphia VAMC, VA Medical Center Corporal Michael J Crescenzo, Philadelphia, PA, US, hospital, Philadelphia, PA. (Control ID #3710742)

BACKGROUND: The period after discharge from the hospital is a vulnerable time for patients. Health systems and primary care practices struggle to address the drop-off in medical supervision that occurs when patients transition home. The prevailing model of post-discharge care management is built on nurse-led calls soon after discharge, which are time intensive, limited in scope, and frequently not answered. We hypothesized that automated hovering using SMS messaging could significantly scale up patient touches and create a low-friction medium through which patients could proactively make needs known. This, in turn, could increase identification of post-discharge needs, enabling earlier intervention and improving outcomes.

METHODS: We designed and piloted a 30-day post-discharge intervention using an automated SMS platform. Patients receive check-in messages from their primary care practice on a tapering schedule, and are also able to message in any time outside of these check-ins. Messages are handled by the practice care management team and the program is integrated into their usual workflow. We tracked process measures, including rate of response to messages, mean daily number of escalations, and patient satisfaction. We also conducted a quasi-experimental analysis using a difference-in-difference approach with a matched control practice and adjusting for patient demographics, clinical severity, and hospitalization factors. We looked at the likelihood of any acute care utilization (a composite, binary outcome of at least one ED visit or readmission) within 30 days (primary outcome), the likelihood of an ED visit within 30 days, and the likelihood of a readmission within 30 days (secondary outcomes).

RESULTS: In a single site pilot (n = 461), we demonstrated a high rate of patient engagement (83% response rate) and high patient satisfaction (Net Promoter Score of +65). We were able to address a large number of patient needs (1.9 patient escalations per day). In a difference-in-difference analysis, we found a significant reduction in the likelihood of readmission associated with the intervention (aOR 0.44, 95% CI 0.21-0.93, p = 0.032). While not statistically significant, we also observed a trend in decreased overall acute care utilization (aOR 0.61, 95% CI 0.36-1.03, p = 0.064) and ED visit (OR 0.86, 95% CI 0.46-1.60, p = 0.63).

CONCLUSIONS: An automated SMS platform to support post-discharge transitions of care in the primary care setting demonstrated high feasibility and acceptability. It was also associated with a significant reduction in the likelihood of a 30-day readmission. The reductions seen in the likelihood of any acute care use and ED visits were not statistically significant, however this pilot study was not powered for the measured outcomes. A prospective study is being conducted to confirm these findings and further explore the net effect on staff workload.

ACCEPTABILITY AND USABILITY OF SLEEP MONITORING TECHNOLOGY AMONG SPANISH AND ENGLISH SPEAKING PATIENTS SEEN AT A SAFETY-NET CLINIC

Larissa Purnell²; Kim H. Nguyen¹; Maribel Sierra¹; Kristan Olazo¹; Marika Dy¹; Sarah Lisker¹; Melissa S. Lim^{3,4}; Emma Bailey³; Urmimala Sarkar¹; Courtney R. Lyles^{1,5}

¹Medicine, University of California San Francisco, San Francisco, CA

²Public Health, University of California Berkeley, Berkeley, CA

³Redwood Pulmonary Medical Associates, Redwood City, CA

⁴Somnology, Redwood City, CA

⁵Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA. (Control ID #3714695)

BACKGROUND: Inclusion and engagement of diverse adult patients throughout digital health development and implementation is critical to achieving health equity. We evaluated the usability and acceptability of a wearable technology and accompanying mobile application for monitoring sleep patterns (SomnoRing®, “Ring” below), focused on culturally and linguistically diverse adults with low income seen at a safety-net sleep clinic.

METHODS: We conducted in-depth interviews with patients recruited from a mid-sized pulmonary and sleep medicine practice serving Medicaid patients and low-income adults without other insurance in the San Francisco Bay Area. All patients were English or Spanish speaking currently undergoing home sleep study who had agreed to simultaneously test the Ring home device over a 1-week period. Interviews included questions about perceptions about the device, motivators and barriers to use, as well as experiences and preferences with digital technology. We used both inductive/deductive processes to establish the codebook and key themes informed by the Technology Acceptance Model.

RESULTS: All participants (22/22) reported owning a smartphone and almost all (20/22) felt either “comfortable” or very comfortable using their phone. The majority reported using mobile apps and general comfort using a mobile device on their own. In contrast, less than half (6/22) owned wearable technology. Almost all participants interviewed wore the Ring for all seven nights of study and found it very comfortable, especially in comparison to standard home polysomnogram technology. The primary barrier to usability for the Ring was confusion about the clinical information presented on the mobile application accompanying the device, such as oxygen levels and stages of sleep. Many participants cited inability to understand metrics, acronyms, and clinical concepts such as REM sleep or oxygen level reporting. Human support (often by clinical staff) played a key part in device use, including supporting effective onboarding, interpretation of data, and ongoing technical support.

CONCLUSIONS: Overall, diverse patients who tested a home sleep monitoring device were interested in digital technology to improve their everyday sleep health, including patients who had never tried a wearable previously. Patient interviews uncovered barriers related to ease of use and usefulness of

COMPLEX CARE COORDINATION (CCC): A MULTIDISCIPLINARY APPROACH TO REDUCE OVERUTILIZATION OF ACUTE CARE SERVICES AMONG MEDICAL PATIENTS AT A FEDERALLY QUALIFIED HEALTH CENTER

Joseph Kim¹; Matthew Adams¹; Luther Arms¹; Anastasiya Haponyuk¹; Veronica J. Njuguna³; Kirti Malhotra²; Christine de Belen-Wilson⁴

¹Internal Medicine & Psychiatry, University of California Davis Department of Internal Medicine, Sacramento, CA

²General Internal Medicine, University of California Davis, Sacramento, CA

³School of Medicine, University of California Davis, Sacramento, CA

⁴School of Nursing, University of California Davis, Davis, CA. (Control ID #3716184)

STATEMENT OF PROBLEM/QUESTION: Multi-visit patients contribute to significant healthcare burden due to overutilization of acute care services.

DESCRIPTION OF PROGRAM/INTERVENTION: The Complex Care Coordination (CCC) clinic was founded in 2019 to help identify and address care gaps experienced by multi-visit patients (MVP). MVPs, also known as “super utilizers”, often struggle with multiple comorbidities and psychosocial stressors making navigation of the healthcare system arduous and leading to inappropriate utilization of emergency departments. The Agency for Healthcare Research and Quality (2018) reported that the top 1% of super utilizers was responsible for 21% of all healthcare expenditures.

Each enrolled patient receives a comprehensive assessment of their medical and psychiatric history as well as their social determinants of health. Interventions include healthcare maintenance, psychiatric care, medication reconciliation, subspecialty referrals, substance use navigation, linkage to community resources, and housing/transportation/food resources. Over time the clinic has expanded to include nurse practitioners, nursing students, therapists, case managers, connections with community-based organizations, and substance use services. Through this evolution and network of providers that provide multiple points of contact for patients, we have started seeing a significant increase in outpatient engagement.

MEASURES OF SUCCESS: The number of ED visits and/or hospitalizations after CCC enrollment.

FINDINGS TO DATE: Since July 2021, there have been 38 patients who have enrolled in the program. The overall average ED visits and hospitalizations in the 6 months prior to CCC enrollment was 2.63 and 1.16 respectively. To compare, after enrollment, patients had an average of 0.5 ED visits and 0.45 admissions. We further stratified the data as this clinic is on a rolling basis to 3-month and 6-month periods. For those who had intakes in July/August, we evaluated ED visits and hospitalizations 6 months prior and 6 months since intake. There was an average reduction of ED visits by 51.5% and admissions by 42.3%. For those who had intakes in September/October, the reduction was 87.1% and 83.6% respectively.

KEY LESSONS FOR DISSEMINATION: - Care Coordination can be an effective model utilizing a multidisciplinary team and a biopsychosocial lens to identify and understand important health care gaps in our underserved, indigent populations.

- How to build programs that provide impactful care despite being in a resource-limited setting.

CONTAINING PHARMACEUTICAL COSTS IN A STUDENT-RUN FREE CLINIC IN A RESOURCE-LIMITED SETTING

Celestine He¹; Roshini Kalagara¹; Uchechukwu O. Amakiri¹; Suvrta S. Iruvanti¹; Jennifer Shmukler¹; David Skovran²; David C. Thomas³; Yasmin S. Meah¹

¹Medical Education and Medicine, Mount Sinai School of Medicine, New York, NY

²Internal Medicine, Mount Sinai Health System, New York, NY

³Medicine, Icahn Scholl of Medicine at Mount Sinai, New York, NY. (Control ID #3709810)

STATEMENT OF PROBLEM/QUESTION: How can prescription drug costs be contained and/or reduced in a student-run, free clinic that continues to expand in number of patients and medical coverage?

DESCRIPTION OF PROGRAM/INTERVENTION: Accessible and affordable prescription drug coverage is the one of the cornerstones of successful medical management and preventative care, with far reaching consequences in improving health outcomes, especially in chronic care management. In particular, this is true for the uninsured population, for whom socioeconomic constraints can present as a barrier to care. Our institution's student-run free clinic, based in an urban city, has been able to offer medication at no out-of-pocket cost to all patients since it opened in 2004.

However, providing pharmaceuticals can be a steep financial undertaking, as drug costs rise and the clinic expands in number of patients served and patient visits. To this end, the clinic has employed two main ways to manage prescription drug costs while simultaneously increasing medication coverage: 1) using Patient Drug Assistance Programs (PDAPs) and 2) developing an institutional-level partnership with pharmaceutical charities for medication subsidization. In this study, we aimed to analyze the financial impact of these measures on the clinic.

MEASURES OF SUCCESS: Prescription types, number of prescription drugs provided, and cost savings were assessed for PDAPs 2017-2021 and the pharmaceutical charity subsidization program in 2021. Analysis was limited to patients enrolled in our clinic and to the medications for which full prescription history was available.

FINDINGS TO DATE: A query of clinic data over the past 5 years identified 310 active PDAPs, corresponding to 310 fully-subsidized prescriptions. In 2017, there were 35 active PDAPs, increasing to 52 (2018), 70 (2019), and 85 (2020) before a decline to 68 PDAPs in 2021. The company affiliated with the most PDAPs varied annually: GlaxoSmithKline (2017), Lilly (2018, 2019, 2020), and both GlaxoSmithKline and Lilly (2021). The most frequent medications were Januvia (2017), Insulin (2018, 2019), Albuterol (2017, 2018), and Trulicity (2020, 2021).

In addition, data extracted from the private company subsidization program was analyzed for January-November of 2021. Program membership was \$12,500 for institution-wide medication subsidization for all uninsured patients in the hospital system. In total, the clinic was able to acquire 219 medication prescriptions, the market value of which was \$52,401.51. The most frequent medications prescribed were Atorvastatin, Basaglar, and Metformin.

KEY LESSONS FOR DISSEMINATION: Utilization of free drug acquisition programs and partnerships with pharmaceutical charities allowed for an increase in cost-savings and medications provided. Although the process for applying for medication assistance programs is complex, these programs serve as powerful tools for providing medications that may otherwise be unavailable. Other clinics and healthcare settings with uninsured patients should consider these programs as a way to ease medication cost burden.

CONTRACEPTION ON DEMAND IN VA: A DEMONSTRATION PROJECT

Deirdre A. Quinn¹; Jennifer Chin^{2,3}; Lisa S. Callegan^{3,2}; Sonya Borrero^{4,1}

¹Center for Health Equity Research & Promotion, VA Pittsburgh Healthcare System, Pittsburgh, PA

²Department of Obstetrics & Gynecology, University of Washington, Seattle, WA

³VA Puget Sound Health Care System Seattle Division, Seattle, WA

⁴Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA. (Control ID #3716047)

STATEMENT OF PROBLEM/QUESTION: Consistent contraceptive use is the most effective way to prevent pregnancy; however, gaps in contraceptive coverage due to access issues or refill delays are major barriers to consistent use.

DESCRIPTION OF PROGRAM/INTERVENTION: Over one-third of pregnancies among Veterans using VA health care are unintended. VA offers all FDA-approved contraceptive methods but has a 3-month dispensing limit for all prescriptions and does not support pharmacist prescription nationally. As the largest integrated healthcare system in the US with a robust mail order pharmacy model, VA offers an ideal environment for simultaneous evaluation of pharmacist prescribing and 12-month dispensing.

A multi-disciplinary team of physicians, pharmacists, and researchers conducted the *Contraception on Demand (COD)* demonstration project at

two VA sites (Pittsburgh and Puget Sound) from July–December 2021. Primary care clinical pharmacy specialists were trained to conduct patient-centered contraceptive counseling and to prescribe hormonal contraception using a shared decision model; local pharmacy approval to order and dispense 12-month supplies as appropriate was secured. Veterans accessed the program via multiple pathways, including (1) direct calls to COD pharmacists, (2) provider referrals, and (3) pharmacist-initiated calls to patients eligible for refills of existing hormonal contraception prescriptions. Pharmacists provided contraceptive counseling via telephone and, where appropriate, prescribed contraception and offered a 12-month supply.

MEASURES OF SUCCESS: Guided by the RE-AIM framework, we collected data via a custom note template in the electronic medical record on key domains including reach, program effectiveness/safety, patient and provider acceptability, and barriers and facilitators to program success and maintenance. We conducted follow-up interviews with 12 participants.

FINDINGS TO DATE: Pharmacists completed 58 COD consults and prescribed hormonal contraception to 41 Veterans (13 new prescriptions, 28 refills). Ten patients were referred to women's health providers for additional counseling around contraindications and/or long-acting reversible contraception. Of the 28 patients receiving refills, 26 opted for a 12-month supply.

On multiple occasions pharmacists identified possible contraindications to patients' current contraceptive methods and recommended safer alternatives. Patient interviewees described the program as "quick and easy" and "convenient" and highlighted pharmacists' attention to patient preferences and safety.

KEY LESSONS FOR DISSEMINATION: Key factors for successful implementation include: (1) Engaging local physician and pharmacist champions; (2) Enabling multiple access points to the service; (3) Employing multiple marketing strategies; and (4) Adapting processes for different organizational settings.

Expanding the practice of pharmacist-led prescribing and 12-month dispensing offers the opportunity to support reproductive autonomy, improve access to essential services, and meaningfully expand clinical pharmacists' role in reproductive health care.

COVID-19 VACCINE EQUITY – A TELEPHONE OUTREACH INITIATIVE

James F. Wu, Brian C. Hilgeman, Ann Maguire, Anna Beckius, Mandy Kastner, Martin Muntz

Medicine, Medical College of Wisconsin, Milwaukee, WI. (Control ID #3708827)

STATEMENT OF PROBLEM/QUESTION: When COVID-19 vaccine notification and scheduling is largely driven by patient portals, how can clinics and health systems ensure that vaccine distribution is equitable?

DESCRIPTION OF PROGRAM/INTERVENTION: The COVID-19 pandemic has disproportionately impacted minority communities, evidenced by higher rates of infection, hospitalization, and mortality. Elderly, minority, and socially vulnerable populations are less likely to enroll in patient portals. Our urban academic General Internal Medicine (GIM) practice serves a high proportion of Black and socially vulnerable patients. For patients 65 and older in our clinic, significant disparities exist in patient portal access between white and Black patients (85.3% versus 35.3%) and those living in high versus low social vulnerability zip codes (45.3% versus 82.1%). The larger health system deployed a method of patient outreach largely driven by patient portal notification and scheduling. Our GIM practice mobilized community health workers and students to engage in telephonic outreach to patients aged 65 and older without patient portal access. Our team provided outreach to 1575 GIM clinic patients from February 5 to March 10, 2021. During that time, 903 GIM patients completed their first dose of the COVID-19 vaccine; 51.9% had been contacted through our outreach.

MEASURES OF SUCCESS: A pre-post analysis of demographics of patients receiving vaccination from the GIM clinic was completed to understand rates of vaccination by race/ethnicity, social vulnerability, and portal access with a sub-analysis of those who received outreach. A more robust comparative analysis is being completed to understand the impact compared to

other health system internal medicine clinics where additional outreach was not completed to understand differences in relation to race/ethnicity, social vulnerability, and portal access. This analysis will be available by the time of presentation.

FINDINGS TO DATE: Compared to the first week of vaccine availability when no outreach was conducted, the intervention resulted in significant increases in the vaccination rates among vulnerable populations. After 4 weeks of telephone outreach, the proportion of vaccine recipients who were non-Hispanic Black increased from 7.1% to 43%, the proportion with inactive EMR status increased from 2.8% to 36.4%, and the proportion from high social vulnerability zip codes increased from 13.9% to 44.7%. For the subset of patients for which outreach resulted in vaccination, 65% were Black, 69.9% had an inactive EMR, and 64.2% lived in a high social vulnerability zip code.

KEY LESSONS FOR DISSEMINATION: This intervention has shown that a telephonic outreach program targeting elderly individuals without patient portal access can measurably improve not only access to vaccine for those without patient portals but equity in COVID-19 vaccine access for Black and socially vulnerable communities. This type of population management strategy will be important to ensure equity in access to not only vaccines but other preventative services for vulnerable communities.

CROSSING THE DIGITAL DIVIDE: A VETERANS AFFAIRS PROGRAM TO DISTRIBUTE VIDEO-ENABLED DEVICES TO PATIENTS IN A SUPPORTIVE HOUSING PROGRAM

Charlie Wray^{1,2}; James Van Campen³; Jiaqi Hu³; Cindie Sligham⁴; Leonie Heyworth⁵; Donna Zulman³

¹Medicine, University of California San Francisco, San Francisco, CA

²Medicine, San Francisco VA Health Care System, San Francisco, CA

³Ci2i, VA, Menlo Park, CA

⁴Research, VA Palo Alto Health Care System, Menlo Park, CA

⁵General Medicine, VA San Diego Healthcare System, La Jolla, CA. (Control ID #3702582)

STATEMENT OF PROBLEM/QUESTION: During the pandemic, the Veterans Health Affairs (VA) shifted large portions of care from in-person to virtual-based formats to maintain safe and consistent access. The VA recognized that this shift in the provision of care had the potential to exacerbate the digital divide among certain vulnerable populations, including individuals experiencing homelessness and housing instability.

DESCRIPTION OF PROGRAM/INTERVENTION: In September 2020, individuals in VA's Housing and Urban Development-VA Supportive Housing (HUD-VASH) program were offered either a video-enabled tablet or cellphone to support their communication and health care engagement needs.

MEASURES OF SUCCESS: We first examined sociodemographic and clinical characteristics of device recipients, and then described and compared engagement in in-person, telephone, and video-based visits (categorized as primary care, specialty care, rehabilitation, HUD-VASH, mental health care, and other) for 6-months prior to (March 1, 2020–August 31, 2020) and following (September 1, 2020–July 30, 2021) device receipt.

FINDINGS TO DATE: In total, 5,127 Veterans received either a tablet (n=4,454) or a cellphone (n=673). After receiving either device, most individuals (99%) engaged in a telephone or video encounter in the following six months, however fewer than two-thirds (65%) had a video visit. Compared to the six months prior to device receipt, in the six months following receipt, in-person and video engagement increased by an average of 1.4 visits (8%) and 3.4 visits (125%), respectively, while telephone engagement decreased (-5.2 visits; -27%). Both tablet and cellphone recipients had increased in-person visits (+1.3 visits [8%] and +2.1 visits [13%], respectively); while tablet users had a substantially larger increase in video-based engagement (+3.2 visits [+110%] vs. +0.9 [+64%]). Similar trends were noted across all assessed types of care.

KEY LESSONS FOR DISSEMINATION: Following receipt of video-enabled devices, Veterans in a supportive housing program experienced increased rates of health care engagement. VA's device distribution program offers a model for expanding access to health-related technology and telemedicine to individuals in supportive housing programs.