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A Patient Portal Push toward Acceptance and Utilization of the Technology

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The Centers for Medicare and Medicaid Services (CMS) have focused the definition of "meaningful use" as related to electronic health records and online patient engagement with current MACRA (Medicare Access and CHIP Reauthorization Act of 2015) and MIPS (Merit-based Incentive Payment System) legislation. MIPS will determine Medicare payment adjustments based on performance benchmark scores for eligible providers at eligible health centers beginning 2018. Providers may receive a payment bonus or payment penalty based on overall scoring. One part of the MACRA/MIPS score acknowledges the importance of "Meaningful Use of certified electronic health records" (patient portals). Performance measures begin January 1, 2017 and account for 25% of the weighted performance score (CMS, "The Medicare Access and CHIP Reauthorization Act, 2015). Benchmarks for online patient portals include; 5% of eligible patients are actively viewing, downloading and transmitting health information through their portals, 10% of eligible patients receive patient education materials online, 5% of eligible patients and providers are using secure electronic messaging to communicate relevant information through the portal, and 50% of unique patients registered for portal access.

The theoretical foundations for this study include the Technology Acceptance Model (TAM) designed to determine workers' perceived usefulness, ease of use, and intention to use early computer technology (Davis, 1989). The Patient Engagement Framework by the Health Information Management Systems Society (HIMSS) is a five-phase patient engagement continuum used to "inform, engage, empower, partner, and support online health information technology efforts with patients (2014). This program evaluation project based on the Center for Disease Control Program Evaluation Framework (2017). Three goals of this program evaluation include; market and educate patients about portal registration and utilization, assess portal registration and utilization numbers, and evaluate on-line patient-provider portal engagement and acceptance of the technology. Quantitative surveys and pre/post MU 90-day Summary reports seek to assess portal technology acceptance and utilization by patients, providers and clinical staff.

## Title:

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# **Keywords:**

online patient-provider engagement, patient online portals and technology acceptance and usability

#### References:

Ammenwerth, E., Schnell-Inderst, P., & Hoerbst, A. (2012). The impact of electronic patient portals on patient care: A systematic review of controlled trials. *Journal of Medical Internet Research, 14*(6), 325-337. doi:10.2196/jmir.2238

Ancker, J. S., Barron, Y., Rockoff, M. L., Hauser, D., Pichardo, M., Szerencsy, A., & Calman, N. (2011). Use of an electronic patient portal among disadvantaged populations. *Journal of General Internal Medicine*, *26*(10), 1117-1123. doi:10.1007/s11606-011-1749-y

Center for Disease Control. (2017). A framework for program evaluation. Retrieved from www.cdc.gov/eval/framework/index.htm

Center for Medicare and Medicaid Services. (2010). CMS finalizes definition of meaningful use of certified electronic health record technology. Retrieved from <a href="https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2010-Fact-sheets-items/2010-07-163.html">https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2010-Fact-sheets-items/2010-07-163.html</a>

Centers for Medicare and Medicaid Services. (2015). *Eligible professional's guide to stage 2 of the EHR incentive programs*. Retrieved from http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/Stage2-

Centers for Medicare and Medicaid. (2016). MACRA. Retrieved from www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs

Cronin, R. M., Davis, S. E., Shenson, J. A., Chen, Q., Rosenbloom, S. T., & Jackson, G. P. (2015). Growth of secure messaging through a patient portal as a form of outpatient interaction across clinical specialties. *Applied Clinical Informatics*, *6*(2), 288-304. doi:10.4338/ACI-2014-12-RA-0117

Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340. Retrieved from http://www.jstor.org

Goel, M. S., Brown, T. L., Williams, A., Cooper, A. J., Hasnain-Wynia, R., & Baker, D. W. (2011). Patient reported barriers to enrolling in a patient portal. *Journal of the American Medical Informatics Association, 18*(Supplement 1), I12. doi:10.1136/amiajnl-2011-000473

Goldzweig, C. L., Orshansky, G., Paige, N. M., Towfigh, A. A., Haggstrom, D. A., Miake-Lye, I., Shekelle, P. G. (2013). Electronic patient portals: Evidence on health outcomes, satisfaction, efficiency, and attitudes: A systematic review. *Annals of Internal Medicine, 159*(10), 677-687. doi: 10.7326/0003-4819-159-10-201311190-00006

HIMSS, Health Information Management Systems Solutions. (2014). *Patient engagement framework: National e-health collaborative* (NeHC). Retrieved from <a href="https://www.himss.org/himss-patient-engagement-framework">www.himss.org/himss-patient-engagement-framework</a>

HITECH Act. (2009). *HITECH act enforcement interim final rule*. Retrieved from <a href="https://www.hhs.gov/hippa/for-professionals/special-topics/HITECH-act-enforcement-interim-final-fule/index.html">https://www.hhs.gov/hippa/for-professionals/special-topics/HITECH-act-enforcement-interim-final-fule/index.html</a>

Holden, R., & Karsh, B. (2010). The technology acceptance model: Its past and its future in health care. *Journal of Biomedical Informatics*, *43*(1), 157-172. doi:10.1016/j.jbi.2009.07.002.

Irizarry, T., Dabbs, A. D., & Curran, C. R. (2015). Patient portals and patient engagement: A state of the science review. *Journal of Medical Internet Research*, 17(6), e148. doi:10.2196/jmir.4255

Irizarry, T., Shoemake, J., Nilsen, M., Czaja, S., Beach, S., & Devito-Dabbs, A.(2017). Patient portals as a tool for health care engagement: A mixed method study of older adults with varying levels of health literacy and prior patient portal use. *Journal of Medical Internet Research 14388871*, 19(3), 1-12.

- Kerns, J., Krist, A., Longo, D., Kuzel, A., & Woolf, S. (2013). How patients want to engage with their personal health record: A qualitative study. *BMJ Open*, *3*(7), e002932. doi: 10:1136/bmjopen-2013-002931.
- Ketikidis, P., Dimitrovski, T., Lazuras, L., & Bath, P. (2012). Acceptance of health information technology in health professionals: An application of the revised technology acceptance Model. *Health Information Journal*, *18*(2), 124-134. doi: 10.1177/1460458211435425
- Krist, A. H., Woolf, S. H., Bello, G. A., Sabo, R. T., Longo, D. R, . . . Cohn, J. (2014). Engaging primary care patients to use a patient-centered personal health record. *Annals of Family Medicine, 12*(5), 418-426. doi:10.1370/afm.1691
- Kruse, C. S., Argueta, D. A., Lopez, L., & Nair, A. (2015). Patient and provider attitudes toward the use of patient portals for the management of chronic disease: A systematic review. *Journal of Medical Internet Research*, *17*(2), e40. doi:10.2196/jmir.3703
- Luxford, K., Safran, D. G., & Delbanco, T. (2011). Promoting patient-centered care: A qualitative study of facilitators and barriers in healthcare organizations with a reputation for improving the patient experience. *International Journal for Quality in Health Care*, 23(5), 510-515. doi:10.1093/intqhc/mzr024
- Lyles, C. R., Allen, J. Y., Poole, D., Tieu, L., Kanter, M. H., & Garrido, T. (2016). "I want to keep the personal relationship with my doctor": Understanding barriers to portal use among African Americans and Latinos. *Journal of Medical Internet Research*, 18(10), 165-174. doi:10.2196/jmir.5910
- Miller, D., Latulipe, C., Melius, K., Quandt, S., & Arcury, T. (2016). Primary care providers' views of patient portals: Interview study of perceived benefits and consequences. *Journal of Medical Internet Research*, *18*(1); e8. doi: 10:2196/jmir.4953
- Naser, R. (2012). Electronic record adoption as a function of success: Implications of meaningful use: unpublished dissertation. (Doctoral dissertation, Capella University). Retrieved from Proquest Dissertation Publishing. (UMI No. 3505748).
- Nash, D., Fabius, R., Skoufalos, A., Clarke, J., & Horowitz, M. (2016). Population health: Creating a culture of wellness. Jones & Bartlett Learning LLC, Burlington MA.
- Otte-Trojel, T., de Bont, A., Rundall, T. G., & van de Klundert, J. (2014a). How outcomes are achieved through patient portals: A realist review. *Journal of the American Medical Informatics Association*, *21*(4), 751-757. doi:10.1136/amiajnl-2013-002501
- Otte-Trojel, T., de Bont, A., van de Klundert, J., & Rundall, T. G. (2014b). Characteristics of patient portals developed in the context of health information exchanges: Early policy effects of incentives in the meaningful use program in the United States. *Journal of Medical Internet Research*, *16*(11), e258. doi:10.2196/jmir.3698
- Siegel, D. (2008). Accepting technology and overcoming resistance to change using the motivation and acceptance model. (Doctoral dissertation, University of Central Florida). Retrieved from Proquest Dissertations and Theses database. (UMI no. 3319274).
- Tavares, J., & Oliveira, T. (2016). Electronic health record patient portal adoption by health care consumers: An acceptance model and survey. *Journal of Medical Internet Research*, *18*(3), e49. doi:10.2196/jmir.5069

Tieu, L., Sarkar, U., Schillinger, D., Ralston, J. D., Ratanawongsa, N., Pasick, R., & Lyles, C. (2015). Barriers and facilitators to online portal use among patients and caregivers in a safety net health care system: A qualitative study. *Journal of Medical Internet Research*, 17(12), e275. doi:10.2196/jmir.4847

Tulu, B., Trapp, A. C., Strong, D. M., Johnson, S. A., Hoque, M., Trudel, J., & Garber, L. (2016). An analysis of patient portal utilization: What can we learn about online patient behavior by examining portal click data? *Health Systems*, *5*(1), 66-79. doi:10.1057/hs.2015.5

Turner, A. M., Osterhage, K., Hartzler, A., Joe, J., Lin, L., Kanagat, N., & Demiris, G. (2015, November 5). Use of patient portals for personal health information management: The older adult perspective. *AMIA Annual Symposium Proceedings* 2015, 1234. PMID 26958263

Wolff, J. L., Berger, A., Clarke, D., Green, J. A., Stametz, R., Yule, C., & Darer, J. D. (2016). Patients, care partners, and shared access to the patient portal: Online practices at an integrated health system. *Journal of the American Medical Informatics Association*, *23*(6), 1150-1158. doi:10.1093/jamia/ocw025

#### **Abstract Summary:**

This DNP program evaluation highlights the results of a 90-day "Patient Portal Push" marketing and education initiative on overall patient portal registration and utilization numbers, provider "Meaningful Use" portal benchmark attainment, and survey outcomes of patients and providers acceptance and utilization of online portals.

### **Content Outline:**

**Purpose**: Enhance patient portal registration and utilization through marketing and education efforts. Assess the impact on providers' Meaningful Use benchmark attainment, and survey patients and providers on acceptance and utilization of the technology.

**Background**: In 2017, eligible providers and health centers are required to attest to Meaningful Use (MU) benchmarks through a 90-day reporting period. The Center for Medicare and Medicaid (CMS) MU benchmarks and The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) is bipartisan legislation signed into law on April 16, 2015. MACRA combines parts of the Physician Quality Reporting System and the Medicare Electronic Health Record (EHR) incentive program into one program called the Merit-based Incentive Payment System (MIPS). MIPS legislation supports patient-centered care through online portal utilization benchmarks.

**Initiative**: Enhance marketing and 1:1 education efforts in this low income, racial and ethnic minority population to enhance online portal registration and utilization across multidisciplinary providers.

**Methods of Assessment**: The *CDC Program Evaluation Framework* provides the foundation for this descriptive survey study. Evaluation of online patient-provider engagement employing a *Patient Portal Engagement Survey* and a *Provider/Clinical Staff Portal Engagement Survey*. The purpose of these surveys is to assess level of interest in portal technology acceptance. In addition, comparison of CMS portal benchmark attainment using two 90-day *NextGen Summary Reports* pre/post the portal initiative at the health center.

**Sample**: Nonrandom, purposeful sampling of patients, providers, and clinical care coordinators at the health center.

**Results**: Survey results will be summated and disseminated to various stakeholders.

**Conclusion**: Results, implications, and discussion disseminated to advance patient-centered care and online provider-patient engagement and sustain online patient portal utilization.

First Primary Presenting Author

# **Primary Presenting Author**

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**Professional Experience:** Deborah Kornacker DNP(c),MS,RN 1991-2018,Associate Professor,College of Nursing and Health Professions,Lewis University,Romeoville, IL. Deborah began her doctoral journey in 2015 and developed this program evaluation project with a focus on patient-centered care, online patient engagement, and enhancement of technology utilization.

**Author Summary:** Associate Professor, Deborah Kornacker has been a nursing professor at Lewis University since 1991. As a lifelong learner, Deborah will complete her Doctorate in Nursing Practice in 2018. Deborah earned a MS in Nursing from Rush University in 1986. Deborah was awarded the Brother Louis Seiler Ministry of Teaching Award for teaching excellence May, 2018