#### **CURRICULUM VITAE**

### Stephen Eric Asche

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Statistical Investigator and Manager,

Research Methodology Group

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**Education & Training** University of Minnesota, Minneapolis, MN

School of Education

Quantitative Methods in Education

Master of Arts, Educational Psychology, 1992

University of Minnesota, Minneapolis, MN

Bachelor of Arts, Psychology, 1986

**Professional Society** 

Memberships

International Biometric Society, ENAR 2010-2019

Research Experience HealthPartners Institute, Bloomington, MN

Statistical Investigator and Manage, Research Methodology

Group 2008-present

Senior Statistician Investigator 2015-present

Statistician Investigator 2011-2015

Biostatistician, 2003-2011

Minnesota Department of Human Services, St. Paul, MN

Performance Measurement & Quality Improvement

Health Care Research & Evaluation

Research Scientist 1997-2003

University of Minnesota, Minneapolis, MN

Psychology Department Research Fellow, 1988-1997

Personnel Decision Research Institute, Minneapolis, MN

Survey Research Group

Research Analyst, 1986-1988

**Journal Review Activities** 

Journal of Patient-Centered Research and Reviews (2019) Journal of Palliative Medicine (2016, 2017, 2018) Health Services Research (2015) American Journal of Managed Care (2015) Journal of Ambulatory Care Management (2010) Journal of Substance Abuse Treatment (2002)

#### **Journal Articles**

- Kharbanda EO, Asche SE, Dehmer SP, Sinaiko AR, Ekstrom HL, Trower N, O'Connor PJ. Impact of updated pediatric hypertension guidelines on progression from elevated blood pressure to hypertension in a community-based primary care population. J Clinical Hypertension. 2019;21:560-565.
- 2. Li B, Asche SE, Yang R, Yueh B, Fina M. Outcomes of adopting endoscopic tympanoplasty in an academic teaching hospital. Annals Otology Rhinology Laryngology. 2019 Feb.
- 3. Dehmer SP, Maciosek MV, Trower NK, Asche SE, Bergdall AR, Nyboer RA, O'Connor PJ, Pawloski PA, Sperl-Hillen JM, Green BB, Margolis KL. Economic Evaluation of the Home Blood Pressure Telemonitoring and Pharmacist Case Management to Control Hypertension (Hyperlink) Trial. Jour Am Coll Clinic Pharm. 2018; 1:21-30.
- Beran MS, Asche SE, Bergdall AR, Crabtree BF, Green BB, Groen SE, Klotzle KJ, Michels RD, Nyboer RA, O'Connor PJ, Pawloski PA, Rehrauer DJ, Sperl-Hillen JM, Trower NK, Margolis KL. Key components of success in a randomized trial of blood pressure telemonitoring with medication therapy management pharmacists. J Am Pharm Assoc. 2018 Nov-Dec;58(6):614-21
- Margolis KM, Asche SE, Dehmer SP, Bergdall AR, Green BB, Sperl-Hillen J, Nyboer RA, Pawloski PA, Maciosek MV, Trower NK, O'Connor PJ. Long-term Outcomes of Home Blood Pressure Telemonitoring and Pharmacist Management on Blood Pressure Among Adults With Uncontrolled Hypertension: A Cluster-Randomized Trial. JAMA Netw Open. 2018 Sept;1(5):e18617.
- 6. Kharbanda EO, Asche SE, Sinaiko A, Ekstrom HL, Nordin JD, Sherwood NE, Fontaine P, Dehmer SP, Appana D, O'Connor PJ. Clinical decision support for recognition and management of hypertension: a randomized trial. Pediatrics. 2018 Feb;141(2):e20172954.
- 7. Kharbanda EO, Asche SE, Sinaiko AR, Nordin JD, Ekstrom HL, Fontaine PL, Dehmer SP, Sherwood NE, O'Connor PJ. Evaluation of an electronic clinical decision support tool for incident elevated BP in adolescents. Acad Pediatr. 2017 Jul 16 [Epub ahead of print].
- 8. Solberg LI, Asche SE, Butler J, Carrell D, Norton CK, Jarvik JG, Smith-Bindman R, Tillema JO, Whitebird RR, Werner AM, Ziegenfuss JY. Patient Centered Outcomes Measurement: Does it Require Information from Patients? J Patient Cent Res Rev. 2017;4:221-229.
- 9. Asche SE, O'Connor PJ, Dehmer SP, Green BB, Bergdall AR, Maciosek MV, Nyboer RA, Pawloski PA, Sperl-Hillen JM, Trower NK, Margolis KL. Patient characteristics associated with greater blood pressure control in a randomized trial of home blood pressure telemonitoring and pharmacist management. J Am Soc Hypertens. 2016;10(11): 873-880.
- 10. Pawloski PA, Asche SE, Trower NK, Bergdall AR, Dehmer SP, Maciosek MV, Nyboer RA, O'Connor PJ, Sperl-Hillen JM, Green BB, Margolis KL. A substudy evaluating treatment intensification on medication adherence among hypertensive patients receiving home blood pressure telemonitoring and pharmacist management. Annals of Pharmacotherapy. J Clin Pharm Ther. 2016;41:493-498.
- 11. Kharbanda EO, Nordin JD, Sinaiko AR, Ekstrom HL, Stultz JM, Sherwood NE, Fontaine PL, Asche SE, Dehmer SP, Amundson JH, Appana DX, Bergdall AR, Hayes MG, O'Connor PJ.

- TeenBP: Development and Piloting of an EHR-Linked Clinical Decision Support System to Improve Recognition of Hypertension in Adolescents. EGEMS (Wash DC). 2015 Jul 9;3(2):1142.PMCID: PMC4537153.
- 12. Kottke TE, Rindal DB, Rush WA, Asche SE, Enstad CJ. Persistence of smoking cessation decision support use in a dental practice. Am J Prev Med. 2015 Feb;48(6):722-728.
- 13. Larson AJ, Rindal DB, Hatch JP, Kane S, Asche SE, Carvalho C, Rugh J. Evidence Supports No Relationship Between Obstructive Sleep Apnea and Premolar Extraction: An Electronic Health Records Review. J Clin Sleep Med. 2015 Nov;11(12):1-5.
- 14. Margolis KL, Asche SE, Bergdall AR, Dehmer SP, Maciosek MV, Nyboer RA, O'Connor PJ, Pawloski PA, Sperl-Hillen JM, Trower NK, Tucker AD, Green BB. A successful multifaceted trial to improve hypertension control in primary care: why did it work? J Gen Intern Med. 2015 Nov;30(11):1665-72. PMID: 25952653; PMCID: PMC4617923.
- 15. Sandhu A, Ho M, Asche SE, Magid D, Margolis KL, Sperl-Hillen J, Rush B, Price DW, Ekstrom H, Tavel H, Godlevsky O, O'Connor PJ. Recidivism to uncontrolled blood pressure in patients with previously controlled hypertension. Am Heart J. 2015 Jun;169(6):791-797.
- Solberg LI, Asche SE, Butler J, Carrell D, Norton CK, Jarvik JG, Smith-Bindman R, Tillema JO, Whitebird RR, Ziegenfuss JY. The Effect of Achieving Patient-Reported Outcome Measures on Satisfaction. J Am Board Fam Med. 2015 Nov-Dec;28(6):785-92. doi: 10.3122/jabfm.2015.06.150079. PubMed PMID: 26546655.
- 17. Solberg LI, Asche SE, Butler J, Carrell D, Norton CK, Jarvik, JG, Smith-Bindman R, Tillema JO, Whitebird RR, Ziegenfuss JY. It is Time to Ask Patients What Outcomes are Important to Them. Am J Accountable Care 2015 Dec;3(4):48-54.
- 18. Thyvalikakath TP, Durand EU, Spallek H, Enstad C, Asche, SE, Rindal DB, Rush WA. Dental hygienists' usage of tobacco-cessation decision support tools in practice; A qualitative study. Int Jour Ev Based Prac Dent Hyg. 2015;1(1):57-65.
- O'Connor PJ, Magid DJ, Sperl-Hillen JM, Price DW, Asche SE, Rush WA, Ekstrom HL, Brand DW, Tavel HM, Godlevsky OV, Johnson PE, Margolis KL. Personalised physician learning intervention to improve hypertension and lipid control: randomised trial comparing two methods of physician profiling. BMJ Qual Saf. 2014 Dec;23(12):1014-22. PMID: 25228778. PMCID: PMC4557778.
- 20. Sperl-Hillen J, O'Connor PJ, Ekstrom HL, Rush WA, Asche SE, Fernandes OD, Apana D, Amundson GH, Johnson PE, Curran DM. Educating Resident Physicians Using Virtual Case-Based Simulation Improves Diabetes Management: A Randomized Controlled Trial. Acad Med. 2014 Dec;89(12):1664-73. PubMed PMID: 25006707.
- 21. Margolis KL, Asche SE, Bergdall AR, Dehmer SP, Groen SE, Kadrmas HM, Kerby TJ, KLotzle KJ, Maciosek MV, Michels RD, O'Connor PJ, Pritchard RA, Sekenski JL, Sperl-Hillen JM, Trower NK. Effect of home blood pressure telemonitoring and pharmacist management on blood pressure control: a cluster randomized clinical trial. JAMA 2013 Jul 3:310(1):46-56. PMID: 23821088.
- 22. Rindal D Brad, Rush William A, Schleyer Titus KL, Kirshner Michael, Boyle Raymond G, Thoele Merry J, Asche SE, Thyvalikakath T, Spallek H, Durand ECU, Enstad CJ; Computer-Assisted Guidance for Dental Office Tobacco Cessation Counseling: A Randomized Controlled Trial; Am J Prev Med, 2013 Mar;44(3) 260-264.
- 23. Rolnick SJ, Pawloski PA, Hedblom BD, Asche SE, Bruzek RJ; Patient Characteristics Associated with Medication Adherence. Clin Med Res; 2013 June;11(2): 54-65.
- 24. Rush WA, Schleyer T, Kirshner M, Boyle R, Thoele MJ, Lenton P, Asche S, Thyvalikakath T, Spallek H, Durand EC, Enstad C, Huntley C, Rindal DB. Integrating tobacco dependency counseling into electronic dental records: A multi-method approach. J Dent Ed; 2013 Jan; 78(1): 31-39.

- 25. Scholle SH, Asche SE, Morton S, Solberg L, Tirodkar MA, Jaén CR, Support and Strategies for Change Among Small Patient-Centered Medical Home Practices. Annals of Family Medicine; 2013 May;11(1): S6-S13.
- 26. Sperl-Hillen J, O'Connor P, Ekstrom H, Rush W, Asche S, Fernandes O, Appana D, Amundson G, Johnson P. Using simulation technology to teach diabetes care management skills to resident physicians. J Diabetes Sci Technol. 2013 Sep 1;7(5):1243-54.
- 27. Whitebird RR, Asche SE, Thompson GL, Rossom R, Heinrich R. Stress, burnout, compassion fatigue, and mental health in hospice workers in Minnesota. J Palliat Med. 2013 Dec;16(12):1534-9.
- 28. Whitebird RR, Solberg LI, Margolis KL, Asche SE, Trangle MA and Wineman AP, Barriers to Improving Primary Care of Depression: Perspectives of Medical Group Leaders; Qual Health Res published online Mar 20 2013; DOI: 10.1177/1049732313482399
- 29. Flottemesch TJ, Anderson LH, Solberg Li, Fontaine P, Asche SE, Patient-centered medical home cost reductions limited to complex patients. Am J Manag Care. 2012 Nov, 18(11):677-86
- 30. Anderson LH, Flottemesch TJ, Fontaine P, Solberg LI, Asche SE, Patient Medical Group Continuity and Healthcare Utilization. Am J Mgd Care., Aug 2012, V18:8
- 31. Kerby TJ, Asche SE, Maciosek MV, O'Connor PJ, Sperl-Hillen JM, Margolis KL (2012), Adherence to a Telemonitoring Intervention in a Cluster-Rondomized Clinical Trial. J Clin Hypertension. 2012 Oct;14(10):668-74; doi: 10.1111/j.1751-7176.2012.00685.x. Epub 2012 Jul 26
- 32. Flottemesch TJ, Scholle SH, O'Connor PJ, Solberg LI, Asche SE, Pawlson LG. Are characteristics of the medical home associated with diabetes care costs? Med Care 2012 Jun;50(8):676-84.
- 33. Margolis KL, Kerby TJ, Asche SE, Bergdall AR, Maciosek MV, O'Connor PJ, Sperl-Hillen JM. Design and rationale for home Blood Pressure Telemonitoring and Case Management to Control Hypertension (HyperLink): a cluster randomized trial. Contemp Clin Trials. 2012 Jul; 33(4) 794-803. Doi:10.1016/j.cct.2012.03.014. Epub 2012 Apr 1
- 34. Gilmer TP, O'Connor PJ, Sperl-Hillen JM, Rush, WA, Johnson PE, Amundson GH, Asche SE, Ekstrom HL. Cost Effectiveness of an EMR-Based Clinical Decision Support System. Health Services Research 2012 May 11. doi: 10.1111 [Epub ahead of print]
- 35. Worley DC, Thoele MJ, Asche SE, Godlevsky OV, Schmidt AM, Yard RL, Rush WA. A comparison of dental restoration outcomes after placement by restorative function auxiliaries versus dentists. J Pub Hlth Dentistry. 2012 spring;72(2):122-7. Doi:10/1111k/1752-7325.2011.00291.x.Epub 2012 Feb 16.
- 36. Solberg LI, Asche SE, Fontaine P, Flottemesch TJ, Anderson LH. Trends in Quality during Medical Home Transformation. Annals of Family Medicine. 2011 Nov-Dec;9(6):515-21.
- 37. Thygeson NM, Solberg LI, Asche SE, Fontaine P, Flottemesch TJ, Pawlson LG, Scholle SH. Using Fuzzy Set Qualitative Comparative Analysis (fs/QCA) to Explore the Relationship Between Medical "Home-ness" and Quality". Health Services Research 2012 Feb;47(1 Pt 1):22-45. doi: 10.1111/j.1475-6773.2011.01303.x. Epub 2011 Aug 22.
- 38. Fontaine P, Flottemesch TJ, Solberg LI, Asche SE. Is consistent primary care within a patient-centered medical home related to utilization patterns and costs? J Ambul Care Manage. Jan-Mar 2011;34(1):10-19.
- 39. Flottemesch TJ, Fontaine P, Asche SE, Solberg LI. Relationship of clinic medical home scores to health care costs. J Ambul Care Manage. Jan-Mar 2011;34(1):78-89.
- 40. Solberg LI, Asche SE, Fontaine P, Flottemesch TJ, Pawlson LG, Scholle SH. Relationship of clinic medical home scores to quality and patient experience. J Ambul Care Manage. Jan-Mar 2011;34(1):57-66.

- 41. O'Connor PJ, Sperl-Hillen JM, Rush WA, Johnson PE, Amundson JH, Asche SE, Ekstrom HL, Gilmer, TG. Impact of electronic health record clinical decision support on diabetes care: A randomized trial. Annals of Family medicine. 2011;9:12-21
- 42. Solberg LI, Asche SE, Sepucha K, Thygeson NM, Madden JE, Morrissey L, Kraemer KK, Anderson LH. Informed Choice Assistance for Women Making Uterine Fibroid Treatment Decisions: A Practical Clinical Trial, Medical Decision Making. Med Decis Making, 2010 Jul-Aug; 30(4): 444-52.
- 43. Sperl-Hillen JM, O'Connor PJ, Rush WA, Johnson PE, Biltz G, Asche SE, Ekstrom HL. A new approach to CME? A simulated physician learning program improved glucose control in adults with diabetes. Diabetes Care, 2010, 33(8), 1727- 1733.
- 44. Amundson GM, O'Connor PJ, Solberg LI, Asche SE, Woods R, Parker ED, Crain AL. Diabetes care quality: Insurance, health plan and physician contributions. Am J Manag Care, 2009, 15(9): 585-92.
- 45. Jackson JM, Rolnick SJ, Asche SE, Heinrich RL. Knowledge, attitudes, and preferences regarding advance directives among patients of a managed care organization. Am J Manag Care, 2009, 15(3), 177-186.
- 46. O'Connor PJ, Sperl-Hillen JM, Johnson PE, Rush WA, Asche SE, Dutta P, Biltz GR. Simulated Physician Learning Intervention to Improve Safety and Quality of Diabetes Care: A Randomized Trial. Diabetes Care. 2009;32:585-590.
- 47. Solberg LI, Asche SE, Anderson LH, Sepucha K, Thygeson NM, Madden JE, Morrissey L, Kraemer, KK. Evaluating Preference-Sensitive Care for Uterine Fibroids: It's Not So Simple. J Womens Health (Larchmt) 2009;18(7):1071-1079.
- 48. Solberg LI, Asche SE, Shortell SM, Gillies RR Taylor N, Pawlson LG, Scholle SH, Young R. Is integration in large medical groups associated with quality? Am J Manag Care, 2009, 15(6): 34-41.
- 49. Boyle RG, Enstad C, Asche SE, Thoele MJ, Sherwood NE, Severson HH, Ebbert J, Solberg LI. A randomized controlled trial of telephone counseling with smokeless tobacco users: The ChewFree Minnesota Study. Nicotine and Tobacco Research, 2008, 10(9), 1433-1440.
- 50. Scholle SH, Pawlson LG, Solberg LI, Shih SC, Asche SE, Chou AF, Thoele MJ. Measuring Practice Systems for Chronic Illness Care: Accuracy of Self-Reports from Clinical Personnel. Jt Comm J Qual Patient Saf. 2008 Jul;34(7):407-16
- 51. Solberg LI, Asche, SE, Averbeck BM, Hayek AM, Schmitt KG, Lindquist TC, Carlson, RR. Patient Safety: Can it be Measured by Surveys of Patient Experiences? Jt Comm J Qual Patient Safety, 2008, May; 34(5): 266-74.
- 52. Solberg LI, Asche, SE, Margolis KL, Whitebird RR. Measuring an Organization's Ability to Manage Change: The Change Process Capability Questionnaire (CPCQ) and its Use for Improving Depression Care. Am J Med Qual, May-Jun 2008; 23(3): 193-200.
- 53. Solberg LI, Asche SE, Margolis KL, Whitebird RR, Trangle MA, Wineman AP: Relationship Between the Presence of Practice Systems and the Quality of Care for Depression. Am J Med Qual, 2008 Nev-Dec;23(6): 420-6.
- 54. Thoele M J, Asche SE, Rindal D, Fortman, K. Oral Health Program Preferences among Pregnant Women in a Managed Care Organization. J Public Health Dent. 2008; 68(3): 174-177.
- 55. Anderson DM, Rolnick SJ, Jackson J, Amundson J, Asche SE, Loes LM. Impact of Chemotherapy in Women with Metastatic Breast Cancer Diagnosed 1990-2003. Clin Breast Cancer, 2007, 7(10), 801-803.
- 56. Boyle RG, Enstad C, Asche SE, Thoele MJ, Sherwood NE. Evaluating strategies and costs to recruit smokeless tobacco users. Addictive Behaviors, 2007, 32, 2088-3092.

- 57. Boyle RG, Solberg LI, Asche SE, Maciosek M, Boucher J, Pronk N. Proactive recruitment of health plan smokers into telephone counseling. Nicotine & Tobacco Research, 2007, 9(5): 581-9.
- 58. Margolis KL, Solberg LI, Asche SE, Whitebird RR. Use of Practice System Tools by Medical Groups for Depression. Am J Man Care, 2007, 13(1), 305-311.
- 59. Solberg LI, Asche SE, Boyle R, McCarty M, Thoele MJ. Smoking and cessation behaviors among young adults of various educational backgrounds. Am J Pub Health, 2007, 97(8), 1421-1426.
- 60. Solberg LI, Asche SE, Pawlson LG, Scholle SH, Shih SC. Practice systems are associated with high quality care for diabetes. Am J Man Care 2008;14(2):85-92
- 61. Solberg LI, Boyle RG, McCarty M, Asche SE, Thoele MJ. Young Adult Smokers: Are They Different? Am J Man Care, 2007, 13(11), 626-632.
- 62. Solberg LI, Klevan DH, Asche SE. Crossing the Quality Chasm for Diabetes Care: The Power of One Physician, His Team, and Systems Thinking. *J Am Board Fam Med.* May 1, 2007 2007;20(3):299-306.
- 63. Madlon-Kay DJ, Asche SE. Factors that Influence the Receipt of Well Baby Care in the First Two Weeks of Life. Journal of the American Board of Family Practice 2006, 19(3): 258-264.
- 64. Boyle RG, Solberg LI, Asche SE, Boucher JL, Pronk NP, Jensen CJ. Offering telephone counseling to smokers using pharmacotherapy. Nicotine Tob Res, 2005, S1: S19-27.
- 65. O'Connor PJ, Desai J, Solberg LI, Reger L, Crain AL, Asche SE, Pearson T, Clark C, Rush WA, Cherney LM, Sperl-Hillen JM, Bishop DB. Randomized trial of quality improvement intervention to improve diabetes care in primary care settings. Diabetes Care.2005; 28(8):1890-7.
- 66. Solberg LI, Asche SE, Boyle RG, Boucher JL, Pronk NP. Frequency of physician-directed assistance for smoking cessation in patients receiving cessation medications. Arch Intern Med. 2005, 165: 656-660.
- 67. Solberg LI, O'Connor PJ, Christianson JB, Whitebird RR, Rush WA, Amundson GM, Asche SE. The QUEST for quality: What are medical groups doing about it? Jt Comm J Qual Saf, 2005 31 (4): 211-219.
- 68. Solberg LI, Scholle SH, Asche SE, Shih, SC, Pawlson LG, Thoele MJ, Murphy ALR. Practice systems for chronic care: Frequency and dependence on an electronic medical record. Am J Manag Care 2005;11(12):789-796.
- 69. Beebe, T.J., Asche, SE, Harrison, P.A., & Quinlan, K. (2004). Heightened vulnerability and increased risk-taking among adolescent chat room users: Results from a statewide school survey. Journal of Adolescent Health, 35, 116-123.
- 70. DeMoss C, McGrail M Jr, Haus E, Crain AL, Asche SE. Health and performance factors in health care shift workers. J Occup Environ Med. 2004 Dec;46(12):1278-81
- 71. O'Connor PJ, Asche SE, Crain AL, Rush WA, Whitebird RR, Solberg LI, Sperl-Hillen JM. Is patient readiness to change a predictor of improved glycemic control? Diabetes Care. 2004 Oct;27(10):2325-9.
- 72. Beebe, T.J., Harrison, P.A., McRae, J.A., Asche, S.E., & Adelmann, P.K. (2003). Evaluating behavioral health services in Minnesota's Medicaid population using the Experience of Care and Health Outcomes (ECHO(tm)) survey. Journal of Health Care for the Poor and Underserved, 14, 608-21.
- 73. Asche SE, & Harrison, P. A. (2002). The relationship between problem severity and ancillary treatment services: Is substance abuse treatment responsive to client need? Journal of Behavioral Health Services & Research, 29, 345-356.
- 74. Harrison, P.A & Asche, S.E.(2001). Adolescent treatment for substance use disorders: Outcomes and outcome predictors. Journal of Child and Adolescent Substance Abuse, 11, 1-17.

- 75. Harrison, P.A. & Asche, S.E.(2001). Outcomes monitoring in Minnesota: Treatment implications, practical limitations. Journal of Substance Abuse Treatment, 21:173-183.
- 76. Harrison, P.A. & Asche, S.E. (1999). Comparison of substance abuse treatment outcomes for inpatients and outpatients. Journal of Substance Abuse Treatment, 17, 207-220.

#### Other Publications

- Adelmann, P. K., & Asche SE (2002). *Minnesota behavioral health treatment need assessment:*Comparisons of health plans participating in the Prepaid Medical Assistance Program.

  (MS-1965). St. Paul: Minnesota Department of Human Services.
- Harrison, P. A., Beebe, T. J., McRae, J. A., & Asche SE (2001). An evaluation of behavioral health services by Minnesota Medicaid Managed Care Enrollees. A field test of the Experiences of Care and Health Outcomes (ECHO) survey (MS-1847). St. Paul, MN: Minnesota Department of Human Services.
- Harrison, P.A. & Asche, S.E.(2000). The challenges and benefits of chemical dependency treatment. Results from Minnesota's treatment outcomes monitoring system 1993-1999 (MS-1710). St. Paul, MN: Minnesota Department of Human Services.

### Presentations and abstracts

- Margolis KL; Asche SE; Bergdall AR; Groen SE; Klotzl KJ; Michels RD; Rehrauer DJ; Sperl-Hillen JM; Trower NK; O'Connor PJ. How did pharmacists help patients achieve blood pressure control in a randomized trial of home blood pressure telemonitoring plus pharmacist management? Poster at the HMO Research Network 20th Annual Conference: Embedded Research To Improve Health. Phoenix, AZ. Apr 2014. Project Number: A07-116 Hyperlink.
- 2. Sperl-Hillen JM; O'Connor PJ; Ekstrom HL; Rush WA; Asche SE; Fernandes OD; Appana D; Amundson GH; Johnson PE; Currant DM. Educating resident physicians using virtual case-based simulation improves diabetes management--a randomized, controlled trial [abstract 322-OR]. Diabetes. 2014 Jun;63(Suppl 1):A84. Presented at the American Diabetes 74th Scientific Sessions, San Francisco, Jun 2014.
- 3. Sperl-Hillen JM; O'Connor PJ; Magid DJ; Margolis KL; Price DJ; Asche SE; Rush WA; Johnson BD; Ekstrom HL. Personalized physician learning intervention to improve hypertension control: randomized trial comparing two methods of physician profiling. Poster at the HMO Research Network 20th Annual Conference: Embedded Research to Improve Health. Phoenix, AZ. Apr 2014. Project Number: A00-016 SimCare.
- 4. Rush WA, Rindal D, Enstad CJ, Johnson NJ, Johnson KS, Spallek H, Schmidt AM, Thirumalai V, Godlevsky O, Ashe SE, Kane S, Bader JD. Building a simulation system to train dentists to practice evidence-based dentistry. 19<sup>th</sup> Annual HMO Research Network Conference; San Francisco, CA; April 17, 2013
- O'Connor PJ, Asche SE, Sperl-Hillen JM, Price DJ, Ekstrom HL, Tavel HM, Magid DJ, Margolis KL. Recidivism to uncontrolled blood pressure levels in patients with previously controlled hypertension. Minnesota Health Services Research Conference. Minneapolis. March 2013
- 6. Sperl-Hillen JM, Ekstrom HL, Asche SE, Johnson PE, O'Connor PJ. Virtual diabetes education improves resident physician knowledge and performance: a cluster-randomized trial. Minnesota Health Services Research Conference. Minneapolis. March 2013
- 7. Bergdall AR, ASCH SE, Sperl-Hillen JM, Maciosek MV, Trower NK, Kerby TJ, Pritchard RA, Sekenski JL, O'Connor PJ. Outcomes at six months of a randomized trial of home blood

- pressure telemonitoring with pharmacist case management. Minnesota Health Services Research Conference; St. Paul, MN; March 5, 2013
- 8. Margolis KL, Bergdall AR, Asche SE, Maciosek MV, Kerby TJ, O'Connor PJ. Outcomes at six months of a randomized trial of home blood pressure telemonitoring with pharmacist case management. Presented at the AHA Quality of Care and Outcomes Research 2012 Scientific Sessions. Atlanta, GA. May 2012.
- 9. Rindal DB, Rush WA, Schleyer TK, Kirshner M, Boyle RG, Thoele MJ, Asche SE, Thyvalikakath T, Spallek H, Durand EC, Enstad CJ, Huntley CL. Effectiveness of computer-assisted guidance for tobacco dependence in dental offices. Presented at the AADR (American Association for Dental Research) Annual Meeting. Tampa, FL March 2012.
- 10. Anavian JA; Conflitti JM; Khanna G; Guthrie ST; Asche SE; Schroder LK; Cole PA. Reliability of radiologic measurement techniques for displacement in scapula fractures. Presented at the American Academy of Orthopaedics Surgeons Annual Meeting. New Orleans, LA. Mar 2010.
- 11. Appana D; Amundson JH; O'Connor PJ; Sperl-Hillen JM; Rush WA; Ekstrom HL; Johnson PE; Asche SE. Personalized learning intervention to enhance hypertension care skills of physicians and extended-care providers [abstract 2308-PO]. Diabetes. 2010 Jun;59(Suppl 1):A605. Project Number: A07-090 PPL HT
- 12. Bruzek RJ; Pawloski PA; Hedblom BD; Asche SE; Rolnick SJ. Medication adherence across eight disease states within an integrated health system. Poster at the Academy of Managed Care Pharmacy (AMCP) Educational Conference. Saint Louis, MO. Oct 2010.
- 13. Gilmer TP; O'Connor PJ; Sperl-Hillen JM; Rush WA; Johnson PE; Amundson JH; Asche SE; Ekstrom HL. Cost-effectiveness of an EMR-based diabetes clinical decision support system [abstract 268-OR]. Diabetes. 2010 Jun;59(Suppl 1):A71. Project Number: A03-083 Diabetes Clinical Inertia.
- 14. Gilmer TP; O'Connor PJ; Sperl-Hillen JM; Rush WA; Johnson PE; Amundson JH; Asche SE; Ekstrom HL. Cost effectiveness of an EMR-based clinical decision support system. Poster at the HMO Research Network Annual Conference, 16th: "Emerging Frontiers in Healthcare Research and Delivery." Austin, TX. Mar 2010. Project Number: A03-083 Diabetes Clinical Inertia
- 15. Gilmer TP; Sperl-Hillen JM; O'Connor PJ; Rush WA; Johnson PE; Biltz GR; Asche SE; Ekstrom HL. A diabetes simulated physician learning program improved glucose control and is highly cost-effective [abstract 1031-P]. Diabetes. 2010 Jun;59(Suppl 1):A277. Project Number: A03-083 Diabetes Clinical Inertia
- 16. Gilmer TP; Sperl-Hillen JM; Rush WA; Johnson PE; O'Connor PJ; Asche SE; Ekstrom HL. Cost-effectiveness of a simulated physician learning program improved glucose control in adults with diabetes. Presented at the HMO Research Network Annual Conference, 16th: "Emerging Frontiers in Healthcare Research and Delivery." Austin, TX. Mar 2010. Project Number: A03-083 Diabetes Clinical Inertia
- 17. Kerby TJ; Schneider NK; Asche SE; Loes LM; Maciosek MV; Meyers PJ; Michalski D; Margolis KL. Electronic data collection for a clinical trial conducted within a health system. Poster at the HMO Research Network (HMORN) Annual Conference, 16th: "Emerging Frontiers in Healthcare Research and Delivery." Austin, TX. Mar 2010. Project Number: A07-116 Hyperlink
- 18. Margolis KL; Kerby TJ; Asche SE; Cooper S; Loes LM; Maciosek MV; Meyers PJ; Schneider NK; Sperl-Hillen JM; O'Connor PJ. Home blood pressure telemonitoring and case management to control hypertension: HyperLink trial design and baseline characteristics [abstract PS1-04]. Clin Med Res. 2010 Dec;8(3-4):203. Project Number: A07-116 Hyperlink

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### **Ongoing Research Support**

## Optimizing the Value of PROMs in Improving Care Delivery through Health Information Technology (Solberg)

Contract Number: R18HS025618 Source: AHRQ

Role on Project: Co-Investigator/Statistician Dates: 09/01/2017-08/31/2022

Despite great interest in patient-reported outcomes measures as a way to improve care, there are few examples of real-life care systems that routinely collect and use such information. We will partner with a large medical group that is developing such a system in orthopaedics to evaluate it thoroughly. By working with clinical leaders, doctors, and patients, we will learn what outcomes are most important to patients and study the effect of providing this information to patients and their doctors on their satisfaction and on those outcomes.

## Implementing Cancer Prevention Using Patient - Provider Clinical Decision Support (Elliott)

Source: NCI/R01CA193396

Role: Statistician 03/24/2016-02/28/2021

If primary and secondary prevention practices for breast, colorectal, and cervical cancer were improved, more than 100,000 cancer deaths a year could be delayed or averted in the United States and the burden of these diseases on quality of life reduced. In this project, we will adapt, implement, and evaluate a proven electronic health record-linked, Web-based, personalized clinical decision support system to identify patients needing primary and/or secondary cancer prevention care. The objectives of this project are to improve the quality and consistency of primary and secondary prevention of common cancers in rural areas by providing patient-centered and evidence-based treatment recommendations to both primary care provider teams and patients at the point of care and provide an efficient and effective model for implementation and dissemination of cancer prevention in rural settings.

## A Clinic-Randomized Trial of a Clinical Decision Support System to Improve Dental Provider Delivery of Brief Tobacco Interventions and Quitline Referrals (Rindal)

Source: NIDCR/U01DE026135

Role: Co-Investigator/Statistician 07/01/2016-06/30/2020

This clinic-randomized trial will examine the rate at which dental providers deliver a smoking intervention and refer to a quitline when their EDR system includes health information technology-driven CDS compared with providers in control clinics without assistance from

the CDS. The primary outcome is a binary variable indicating whether the provider delivered a brief intervention or referral for treatment, as reported by the patient. By leveraging the dental encounter as an opportunity to deliver smoking cessation, we can further decrease smoking rates, leading to improved population health.

## Home Blood Pressure Telemonitoring and Case Management to Control Hypertension (Margolis)

Source: NHLBI/R01HL090965

Role: Co-Investigator/Statistician 08/01/2013-04/30/2018

Uncontrolled hypertension causes many preventable stokes, heart disease, and kidney disease in Americans each year, so better control of hypertension is an important national health priority. Our NHLBI-funded randomized HyperLink intervention showed dramatic improvement in hypertension control using a simple and inexpensive strategy including home BP monitoring and periodic telephone contact with a pharmacist. In this project we will extend this important study to assess longer-term effectiveness and cost-effectiveness, and to assess opportunities for its broad use to improve the health of millions of Americans.

## De-Implementing Opioid Use and Implementing Optimal Pain Management Following Dental Extractions (Rindal)

Source: NIDCR/ U01DE027441

Role: Co-Investigator/Statistician 09/01/2017-08/31/2021

The overarching goal of this project is to de-implement the reliance of opioid analgesics and to implement reliance on non-opioid analgesics to manage postoperative pain following dental extractions. We will compare different strategies to reduce the reliance on opioids and increase the use of alternative pan management approaches utilizing information support tools aimed at both providers and their dental extraction patients.

# **EHR-Based Clinical Decision Support to Improve BP Management in Adolescents (Kharbanda)**

Source: NHLBI/R01HL115082

Role: Statistician 08/01/2012–07/31/2018

The goal of this project is to improve detection and management of elevated blood pressure in adolescents. It (a) uses electronic health record (EHR) technology to deliver patient-specific clinical decision support (CDS) to providers at the point of care, (b) assesses the impact of this intervention on identification and clinical care of hypertension in adolescents, and (c) assesses the impact of the intervention on costs of care. This project will be integrated with other ongoing and related research, primarily targeting adult populations.

### **Research Support Completed Within Past 3 Years**

### An Innovative Approach to Disseminate Dental Research (Rush)

Source: NIDCR/R01DE022332

Role: Statistician 03/15/2012-02/28/2017

This randomized trial provides dentists with simulated patients posing evidence-based challenges of effective treatment and build in treatment-specific decision support. We will assign HealthPartners dentists into a usual-care and simulation group and measure their treatment-planning patterns after the simulation group is exposed to evidence-based simulations and feedback support. We expect to find that the dentists exposed to the simulation encounters will exhibit practice patterns more congruent with successful patterns practiced in the simulation. While conducting this project, we will also plan the distribution of the simulation tool to the broader dental community.

### **Computer Assisted Tobacco Intervention for Dental Providers (Rindal)**

Source: NIDCR/R34DE023895

Role: Statistician 09/01/2014-8/31/2016

Electronic dental records (EDRs) are a powerful tool to incorporate current scientific evidence into clinical practice by providing the right information at the right time to the right person in the right format that helps deliver optimal treatment. This planning grant will develop a group-randomized trial examining the degree to which dentists and dental hygienists in private practices and dental schools will assess patient interest in quitting and deliver a smoking intervention more often when given computer-assisted guidance compared with providers in a control group without such assistance, as measured by a survey of current smokers with a recent dental visit.

### Measuring Patient Outcomes from High Tech Diagnostic Imaging Studies (Solberg)

Source: Patient-Centered Outcomes Research/No Award Number Provided Role: Statistician 10/31/2012-06/30/2015

This study proposes to evaluate the use of patient surveys, health plan claims data, and medical records information to analyze the care process and outcomes experiences of patients after they have advanced imaging tests for abdominal or low back pain. The specific aims for the study are: 1) To identify the kinds of information that clinicians and patients who have had an advanced imaging test (CT or MRI scan) for abdominal or low back pain want and need to know regarding the care process and outcomes subsequent to such tests. 2) To identify and quantify that patient-centered information using these multiple data sources. 3) To determine where the information that patients and clinicians want and need is best obtained and to create a single tool or algorithm for future outcomes assessment work.

### **Analysis of Dental Practice Support Tools Addressing Smoking Cessation (Kottke)**

Source: CDC/ 200-2009-28537

Role: Statistician 07/22/2013–07/21/2015

Despite the fact that tobacco is the leading cause of preventable death for Americans, efficacious clinical decision support tools to assist providers in the delivery of interventions are underutilized even in high performing HMOs. This study tests whether referral to a tobacco quit line by a dental care provider will increase utilization of the smoking cessation phone line as well as interest in quitting, quit attempts, duration of quit attempts among smokers. A clinical decision support tool embedded in the electronic dental record will prompt dental providers to ask patients about their smoking status and offer referral to the quit line when appropriate. Researchers will examine the fidelity of dental providers in providing the intervention by assessing the use of the clinical decision support tool and the extent of sustained provision of the brief referral intervention in order to inform future dental practice-based smoking cessation interventions.

## Personalized Physician Learning Intervention to Improve Hypertension Control (O'Connor)

Source: NHLBI/NIH/DHHS/1R01HL08945101A1

Role: Statistician 6/1/2008-5/31/2012

In this project we assess the impact of two PPL interventions that differ in how they identify patterns of physician decision making in HT care. The first intervention, REAL-PPL, uses real EMR-derived data to direct the personalized learning intervention. The second intervention, SIM-PPL, uses physician performance on simulated cases to direct the personalized learning intervention.

# Home Blood Pressure Telemonitoring and Case Management to Control Hypertension (Margolis)

Source: NHLBI/NIH/DHHS/1R01HL09096501A1

Role: Statistician 9/15/2008-6/30/2012

In this cluster-randomized trial we propose and test two simple yet powerful strategies that take advantage of new technology and team models of care to improve BP control in adults with hypertension.