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# Alberta Screening and Prevention Literature Review

2014

## 1. Screening and prevention outreach

### Question

What are the best practices in primary care for:

- Opportunistic screening and prevention processes
- Outreach screening and prevention processes

### Summary of findings

- Best strategies differ, depending on screening maneuver.
- Overall evidence seems to favour client reminders combined with small media (flyers etc.) for patient outreach
- For physician outreach, reminders work, although the evidence is not solid for electronic reminders. Assessment and feedback are also effective, but incentives such as CME credits are not proven at this point
- Nothing found for opportunistic screening practices, however, physician reminders can work for opportunistic screening practices
- Most evidence is for cancer screening. Very little found for cardiovascular screening/prevention outreach. Perhaps because there is no demand to increase screening for these conditions

### References

- Sabatino, S. A., Lawrence, B., Elder, R., Mercer, S. L., Wilson, K. M., DeVinney, B., Glanz, K. (2012). Effectiveness of interventions to increase screening for breast, cervical, and colorectal cancers: nine updated systematic reviews for the guide to community preventive services. *American journal of preventive medicine*, 43(1), 97–118.
- Ferroni, E., Camilloni, L., Jimenez, B., Furnari, G., Borgia, P., Guasticchi, G., & Giorgi Rossi, P. (2012). How to increase uptake in oncologic screening: a systematic review of studies comparing population-based screening programs and spontaneous access. *Preventive medicine*, 55(6), 587–596.
- Brouwers, M. C., De Vito, C., Bahirathan, L., Carol, A., Carroll, J. C., Cotterchio, M., Wathen, N. (2011). What implementation interventions increase cancer screening rates? a systematic review. *Implementation Science* : IS, 6, 111.

- The Community Preventive Services Task Force. (2011, April). Universally recommended vaccinations: client or family incentive rewards. Guide to Community Preventive Services. Retrieved from <http://www.thecommunityguide.org/vaccines/IncentiveRewards.html>
- Hoffman, R. M., Steel, S. R., Yee, E. F. T., Massie, L., Schrader, R. M., Moffett, M. L., & Murata, G. H. (2011). A system-based intervention to improve colorectal cancer screening uptake. *The American journal of managed care*, 17(1), 49–55.
- Weller, D. P., Patnick, J., McIntosh, H. M., & Dietrich, A. J. (2009). Uptake in cancer screening programmes. *The Lancet Oncology*, 10(7), 693–699.
- Baron, R. C., Rimer, B. K., Breslow, R. A., Coates, R. J., Kerner, J., Melillo, S., Briss, P. A. (2008). Client-directed interventions to increase community demand for breast, cervical, and colorectal cancer screening a systematic review. *American journal of preventive medicine*, 35(1 Suppl), S34–55.
- Hoff, G., & Bretthauer, M. (2008). Appointments timed in proximity to annual milestones and compliance with screening: randomised controlled trial. *BMJ (Clinical research ed.)*, 337, a2794.
- Jacobson Vann, J. C., & Szilagyi, P. (2005). Patient reminder and patient recall systems to improve immunization rates. *Cochrane database of systematic reviews (Online)*, (3), CD003941.
- Jepson, R., Clegg, A., Forbes, C., Lewis, R., Sowden, A., & Kleijnen, J. (2000). The determinants of screening uptake and interventions for increasing uptake: a systematic review. *Health technology assessment (Winchester, England)*, 4(14), i–vii, 1–133.

#### Provider outreach

- Arditi, C., Rège-Walther, M., Wyatt, J. C., Durieux, P., & Burnand, B. (2012). Computer-generated reminders delivered on paper to healthcare professionals; effects on professional practice and health care outcomes. *Cochrane database of systematic reviews (Online)*, 12, CD001175.
- Baron, R. C., Melillo, S., Rimer, B. K., Coates, R. J., Kerner, J., Habarta, N., Leeks, K. J. (2010). Intervention to increase recommendation and delivery of screening for breast, cervical, and colorectal cancers by healthcare providers a systematic review of provider reminders. *American journal of preventive medicine*, 38(1), 110–117.
- Shojania, K. G., Jennings, A., Mayhew, A., Ramsay, C., Eccles, M., & Grimshaw, J. (2010). Effect of point-of-care computer reminders on physician behaviour: a systematic review. *CMAJ: Canadian Medical Association journal*, 182(5), E216–225.
- The Community Preventive Services Task Force. (2008, February). Universally recommended vaccinations: provider assessment & feedback. Guide to Community Preventive Services. Retrieved from <http://www.thecommunityguide.org/vaccines/providerassessment.html>
- The Community Preventive Services Task Force. (2008, June). Universally recommended vaccinations: provider reminders. Guide to Community Preventive Services. Retrieved April 8, 2013, from <http://www.thecommunityguide.org/vaccines/providerreminder.html>
- Dexheimer, J. W., Talbot, T. R., Sanders, D. L., Rosenbloom, S. T., & Aronsky, D. (2008). Prompting Clinicians about Preventive Care Measures: A Systematic Review of Randomized Controlled Trials. *Journal of the American Medical Informatics Association : JAMIA*, 15(3), 311–320.
- Van Wyk, J. T., Van Wijk, M. A. M., Sturkenboom, M. C. J. M., Mosseveld, M., Moorman, P. W., & Van der Lei, J. (2008). Electronic alerts versus on-demand decision support to improve dyslipidemia treatment: a cluster randomized controlled trial. *Circulation*, 117(3), 371–378.

## 2. EMR use in screening & prevention

### Question

What are the best practices for EMR utilization to support increased screening and prevention outreach and opportunistic processes?

### Summary of findings

EMRs have been effectively used in various ways for screening and prevention. There is not enough literature to generalize best practices, but we can learn from the following successful examples. These include:

- Using the EMR to generate lists and reminders of patients that need to be contacted for screening at a certain point in time
  - Using the EMR to identify those at risk for a condition and using that information to invite these people for targeted screening.
  - Using the EMR for screening follow-up.
- 961 results.

### References

- Maddocks, H., Stewart, M., Thind, A., Terry, A. L., Chevendra, V., Marshall, J. N., Cejic, S. (2011). Feedback and training tool to improve provision of preventive care by physicians using EMRs: a randomised control trial. *Informatics in primary care*, 19(3), 147–153. <http://www.ingentaconnect.com/content/bcs/ipc/2011/00000019/00000003/art00004?token=004f1cd17db3159a4a3567232d45232b457a317b762c6b79213e743568293c62207d673f582f6b9>
- Hoffman, R. M., Steel, S. R., Yee, E. F. T., Massie, L., Schrader, R. M., Moffett, M. L., & Murata, G. H. (2011). A system-based intervention to improve colorectal cancer screening uptake. *The American journal of managed care*, 17(1), 49–55. [http://www.ajmc.com/publications/issue/2011/2011-1-vol17-n1/AJMC\\_11jan\\_Hoffman\\_49to55/](http://www.ajmc.com/publications/issue/2011/2011-1-vol17-n1/AJMC_11jan_Hoffman_49to55/)
- Holt, T. A., Thorogood, M., Griffiths, F., Munday, S., Friede, T., & Stables, D. (2010). Automated electronic reminders to facilitate primary cardiovascular disease prevention: randomised controlled trial. *The British Journal of General Practice*, 60(573), e137–e143. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2845504/>
- Padberg, F. T., Jr, Hauck, K., Mercer, R. G., Lal, B. K., & Pappas, P. J. (2009). Screening for abdominal aortic aneurysm with electronic clinical reminders. *American journal of surgery*, 198(5), 670–674.
- Woolthuis, E. P. K., De Grauw, W. J. C., Van Gerwen, W. H. E. M., Van den Hoogen, H. J. M., Van de Lisdonk, E. H., Metsemakers, J. F. M., & Van Weel, C. (2009). Yield of Opportunistic Targeted Screening for Type 2 Diabetes in Primary Care: The Diabscreen Study. *Annals of Family Medicine*, 7(5), 422–430. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2746521/>
- Persell, S. D., Dunne, A. P., Lloyd-Jones, D. M., & Baker, D. W. (2009). Electronic health record-based cardiac risk assessment and identification of unmet preventive needs. *Medical care*, 47(4), 418–424.

- Marshall, T. (2008). Identification of patients for clinical risk assessment by prediction of cardiovascular risk using default risk factor values. BMC Public Health, 8, 25. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2244603/>
- Gill, J. M., & Dansky, B. S. (2003). Use of an Electronic Medical Record to Facilitate Screening for Depression in Primary Care. Primary care companion to the Journal of clinical psychiatry, 5(3), 125–128. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC406379/>