ANNALS OF FAMILY MEDICINE

Online Supplementary Material

Crabtree BF, Miller WL, Tallia AF, Cohen DJ, DiCicco-Bloom B, McIlvain H, Aita V, Scott JG, Gregory P, Stange KC, McDaniel R. Delivery of clinical preventive services in family medicine offices. *Ann Fam Med.* 2005;3:430-435.

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Supplemental Table 1. Key Characteristics of Participating Practices and Approaches to Delivering Preventive Services

Practice, Size,* and Location†	Practice Characteristics‡	Preventive Service Delivery, %	Defining Characteristics of Approach to Delivering Preventive Services
1. Small, rural	PA or NP: Yes System owned: No High volume: No	Screening: 89 Smoking counseling: 50 Immunization: 60	Prevention is a shared value guiding the practice. PAs see acute care patients, leaving time for physicians to attend to chronic and HCM visits. No specific office systems support prevention, and staff play a minimal role in prevention, except for taking weight and blood pressure measurements. HCM visits are thorough and occur regularly. HCM visits are facilitated by clinician verbal reminder. Clinicians also deliver preventive care opportunistically, although not consistently during illness visits
2. Small, rural	PA or NP: No System owned: No High volume: Yes	Screening: 76 Smoking counseling: 63 Immunization: 60	Intake forms used to assess prevention issues and an electronic medical record to prompt physicians to address appropriate prevention issues. Patient care assistants collect and document prevention and track mammograms, Pap smears, and patient's needing follow-up care. Thorough HCM visits are provided, and preventive care is also delivered during illness visits as it pertains to patients' concerns. Physicians have a major commitment to prevention in the community (ie, shot clinics, sex education, and prenatal classes)
3. Small, rural	PA or NP: No System owned: No High volume: No	Screening: 87 Smoking counseling: 43 Immunization: 51	Holistic philosophy caring for many patients with autoimmune disease. The focus on autoimmune disease shapes prevention (maximize health with vitamins, diet, exercise). Staff complete brief intake questionnaire concerning current visits, graph vital signs, weight, blood pressure, and sometimes height (annually for women, at initial visit for men). Graphing visually represents patients' health over time, but this documentation fails to meet insurance or Medicare guidelines and may change. Physician does developmental screening for children and activity-lifestyle screening for adults. Developed protocol for assessing patients' risk of diabetes, kidney, liver, and coronary heart disease to help with autoimmune evaluations. Patients receive educational materials regarding laboratory tests and information and counseling about advance directives

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Practice, Size,* and Location†	Practice Characteristics‡	Preventive Service Delivery, %	Defining Characteristics of Approach to Delivering Preventive Services
4. Large, rural	PA or NP: Yes System owned: No High volume: Yes	Screening: 84 Smoking counseling: 37 Immunization: 48	Only clinic in area. Charts have problem and medication lists and prevention flow sheets, but these are rarely utilized. Staff ascertain blood pressure and weight and check date of last annual examination for women, letting them know when they are due. Staff inconsistently ask about influenza shots, mammograms, and smoking. Practice has several cutting-edge prevention approaches (chart stickers for smoking, summary and reinforcement letters to patients after HCM visits, wellness program at hospital, newsletter and a health educator on staff), but utilization is not consistent across physicians. Prevention is part of vision, leading to the hiring of a part-time health educator
5. Large, rural	PA or NP: Yes System owned: No High volume: Yes	Screening: 76 Smoking counseling: 33 Immunization: 35	Two-location practice. Physicians vary in approach to preventive care. Charts have medication and problem lists that are utilized, but no prevention flow sheet. Immunization records are often inconsistent, and charts are disorganized. Nurses record weight and vital signs at intake, and anticipate physicians needs by putting appropriate screening guidelines in each chart. Some nurses are independently involved in prevention with responsibility to screen and teach patients, as well as manage the recall of patients for Pap smears, laboratory work, and mammograms. Physicians offer a range of preventive services opportunistically and hand out educational material as appropriate. Physician and nurse developed osteoporosis screening protocol and purchased bone scanner. Dietitian on premises at larger location
6. Small, suburban	PA or NP: Yes System owned: Yes High volume: No	Screening: 63 Smoking counseling: 35 Immunization: 50	Utilization of intake forms (initial and HCM visit), patient reminder system for HCM visits, and clear protocols (posted immunization schedules, weight and blood pressure recorded at every visit, staff order mammograms at time HCM is scheduled) make preventive service delivery fairly uniform. Patients who receive regular HCM at this office are better covered than those who do not in terms of preventive care (eg, men, women who see an OB/GYN, and young adults). NP oversees patients on diet program
7. Small, rural	PA or NP: Yes System owned: No High volume: No	Screening: 58 Smoking counseling: 24 Immunization: 39	Acute and chronic care focus. Very few HCM visits. Progress notes are comprehensive and include problem and medication lists. Physician does some opportunistic prevention, but PAs are problem-focused, making prevention delivery inconsistent. Practice does not use a face sheet, problem or medication list, or a prevention flow sheet. Charts are poorly organized, so it is difficult to find preventive services even when recorded. Tobacco cessation counseling rarely occurs (3 providers are tobacco users). Staff have clear protocol to ascertain weight and blood pressure but do little else to deliver preventive care. Educational materials of high quality and accessibility, but rarely utilized by clinicians

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Practice, Size,* and Location†	Practice Characteristics‡	Preventive Service Delivery, %	Defining Characteristics of Approach to Delivering Preventive Services
8. Small, suburban	PA or NP: No System owned: Yes High volume: No	Screening: 61 Smoking counseling: 20 Immunization: 31	Practice utilizes a "passive" approach to prevention. Nurses record weight, blood pressure, and height at most visits. Educational materials are posted and available. Patient intake forms developed to record prevention-oriented information at each visit. Yet, intake forms are often incomplete, and physicians rarely follow-up on prevention-related information that patients report on these forms
9. Small, urban	PA or NP: Yes System owned: Yes High volume: Yes	Screening: 65 Smoking counseling: 31 Immunization: 31	Prevention is clinician driven with minimal office-level protocols, and staff are not supportive. Charts are well organized, and clinicians rely on a mental protocol to deliver preventive care opportunistically in most visits. Few patients attend HCM visits, and many patients have complex, multiple chronic health problems, so encounters have many competing social and economic constraints that make prevention difficult
10. Small, suburban	PA or NP: Yes System owned: Yes High volume: No	Screening: 57 Smoking counseling: 50 Immunization: 31	Physicians practice autonomously and vary in techniques and prioritization of prevention. Charts include problem and medication lists and prevention flow sheets that are moderately used. NPs meticulously and mechanistically fill out database and family history sheets. NPs are sensitive to prevention issues and thoroughly document a range of preventive services. Physicians use opportunistic approach for some preventive care, such as tobacco cessation advice with patients seeking treatment of respiratory infections. Patients seen for illness visits are advised to schedule HCM visit as appropriate
11. Small, urban	PA or NP: Yes System owned: Yes High volume: No	Screening: 73 Smoking counseling: 20 Immunization: 17	Practice oriented toward women's health care, with a focus on Pap smears and mammograms and not thorough HCM visits. Staff have minimal role in prevention. Face sheet, problem and medication lists are current. Clinical encounter forms are conscientiously filled out. Thorough charting allows clinicians to review charts in the hallway before seeing patients, and remind patients when Pap smears and mammograms are due. Tobacco status is consistently documented but counseling is not delivered for fear of alienating and losing patients
12. Small, suburban	PA or NP: No System owned: No High volume: No	Screening: 58 Smoking counseling: 69 Immunization: 16	Clinicians often spend a great deal of time with patients in lengthy visits. Preventive care is delivered in all visits. Thorough HCM visits are provided, using comprehensive sex- and age-specific prevention flow sheets. A reminder system is used for female annual examinations. High-quality educational materials are available. Charts are a mess and poorly filed, often unfilled in piles around the floor. Staff are all part-time and not involved in prevention
13. Small, urban	PA or NP: No System owned: Yes High volume: Yes	Screening: 63 Smoking counseling: 10 Immunization: 26	Social and economic constraints of serving a large indigent population compete with prevention. Nevertheless, this practice has developed some protocols to make prevention possible. Although rarely used, a prevention flow sheet is in most charts, a card-based reminder system is used for female HCM visits, and staff have clear protocols to ascertain weight and blood pressure

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Practice, Size,* and Location†	Practice Characteristics‡	Preventive Service Delivery, %	Defining Characteristics of Approach to Delivering Preventive Services
14. Small, suburban	PA or NP: No System owned: Yes High volume: No	Screening: 52 Smoking counseling: 9 Immunization: 34	Primary focus is on providing acute care. Charts include problem and medication lists and a prevention flow sheet, although these are rarely used. Intake forms for well-child checks, but information is sometimes inconsistent with chart. Strong staff protocol for recording blood pressure, weight, and tobacco use, although smoking cessation seldom occurs. Clinicians use opportunistic approach to delivery preventive care in illness visits. In HCM visits, physician use mental checklist because health system did not approve their HCM checklist. Well-organized high-quality educational materials are often shared with parents at well-child checks
15. Small, rural	PA or NP: No System owned: No High volume: No	Screening: 57 Smoking counseling: insufficient data Immunization: 23	Practice and community share a problem-focused approach to health care, with relatively little attention focused on prevention. Charts include problem and medication lists, prevention sheets, and intake forms, but these are rarely used. Thorough HCM visits occur, but infrequently. Practice lacks clear vision for preventive care, with 1 physician advocating for changes but partners being ambivalent. The local farming community has many underinsured patients with no coverage for preventive health care
16. Large, urban (small city)	PA or NP: No System owned: No High volume: Yes	Screening: 55 Smoking counseling: 44 Immunization: 14	Multispecialty practice designed for efficient treatment of acute problems with few systems for prevention. Physicians are problem focused. Staff ascertain weight and blood pressure at intake, but play little or no role in prevention unless specifically directed by a physician. Prevention defaults to patient request for specific services. Problem and medication lists and prevention flow sheets are in chart, but almost never used. Patient education material is diverse, but sporadically used
17. Small, suburban	PA or NP: No System owned: Yes High volume: No	Screening: 47 Smoking counseling: 36 Immunization: 21	Practice focused on acute care. Preventive services are provided during HCM visits, but few patients come in for HCM visits. Many women seek OB/GYN care elsewhere, and few systems are in place for women's preventive health. Charts include fairly well utilized problem and medication lists and prevention flow sheets. Staff have clear protocol to ascertain weight and blood pressure but do little else to deliver preventive care. No physician and patient reminder systems. Patient education material is excellent and accessible, but inconsistently used

PA = physician's assistant; NP = nurse practitioner; HCM = health care maintenance; Pap = Papanicolaou; OB/GYN = obstetrics-gynecology; MD = doctor of medicine; DO = doctor of osteopapthy.

* Practices were categorized as small if they had 1 to 4 clinicians (MD, DO, NP, or PA) and large if they had 5 or more clinicians.

† Practices were categorized as rural if located in towns with populations < 2,500 or in towns with populations between 2,500 and 10,000 if these towns were relatively isolated and had little recent population change. Practices located in downtown areas of major metropolitan areas were categorized as urban, whereas those at the edge of large urban centers were categorized as suburban. Details of this classification can be found in Pol L, Rouse J, Rasmussen D, Zyzanski S, Crabtree B. Rural/Urban Comparisons of Preventive Services in Family Practice Clinics. *J Rural Health.* 2001;17(2):114-121.

‡ During data collection fieldworkers subjectively assessed patient volume. In practices categorized as not high volume, clinicians generally saw 25 or fewer patients per day; in those categorized as high volume, clinicians generally saw more than 30 patients per day, in some cases more than 40 patients per day.