Edit: In this month’s column, Krupa Shah, MD, MPH, and Tricia Elliott, MD, of the Department of Family and Community Medicine at Baylor College of Medicine discuss how to teach learners to conduct a prevention visit. I thank Paul Paulman, MD, of the University of Nebraska for being the guest editor of this month’s column.

I welcome your comments about this feature, which is also published on the STFM Web site at www.stfm.org. I also encourage all predoctoral directors to make copies of this feature and distribute it to their preceptors (with the appropriate Family Medicine citation). Send your submissions to williamh@bcm.tmc.edu. William Huang, MD, Baylor College of Medicine, Department of Family and Community Medicine, 3701 Kirby, Suite 600, Houston, TX 77098-3915. 713-798-6271. Fax: 713-798-7789. Submissions should be no longer than 3–4 double-spaced pages. References can be used but are not required. Count each table or figure as one page of text.

Teaching Preventive Medicine in an Office-based Visit

Krupa Shah, MD, MPH; Tricia Elliott, MD

Health promotion, disease prevention, and community health offer the greatest potential for reducing the leading causes of death and disability and for improving the quality of life across diverse populations.1,2 Yet, in the United States we continue to emphasize disease-based, episodic, acute care.3,4 Until prevention is integrated into all aspects of our health care system, significant progress toward providing comprehensive preventive services to our patients will not be possible.

The office visit provides an excellent opportunity for practicing preventive medicine and for training medical students and resident physicians to integrate preventive practices into clinical care. In 2002, the physician office visit rate in the United States was 314.4 per 100 persons. Between 1992 and 2002, the population increased by 13%, but the number of visits to physician offices increased by 17%.5

Integrating preventive medicine into office-based practice is not easy. Many physicians, including those training our medical students and residents, lack knowledge and skills in this area. In addition, the choreography of the clinic visit is limited by time boundaries, which challenge the physician’s ability to address anything other than the most acute problems. Insurance systems are reluctant to invest in interventions that produce long-term rather than short-term benefits for the patient. Nor are they anxious to invest in interventions that benefit public health more than the health of the insured patient. Lack of continuity in doctor-patient relationships makes it difficult for physicians to treat chronic conditions or to recognize systemic factors relating to a patient’s health. Patient education and lifestyle interventions require cultural and gender sensitivity.6,7

In our experience as learners and teachers, we have discovered an effective tool for teaching preventive care in ambulatory settings. This tool is the Task-oriented Processes in Care (TOPIC) model.8

The TOPIC model offers guidelines for optimizing physicians’ patient care competency in ambulatory visits for different prototypical purposes such as a new problem visit, chronic illness visit, psychosocial visit, behavior change visit, and checkup/preventive visit.

It also provides an effective and efficient method of supervision, helping teachers tease out information and communicate the complexity of ambulatory care to learners. It provides a structured framework with consistent teaching content. By learning to apply goals-oriented tasks, the learners can develop their own solutions to clinical questions and develop therapeutic patient-physician relationships. While
preventive services are provided in any type of visit, the TOPIC model provides students with a systematic approach to the patient coming for a checkup or a well-person visit.

**Using the TOPIC Model to Teach Preventive Medicine in the Ambulatory Setting**

To demonstrate how this works in our department, we will present a case example of one type of visit, the routine checkup:

Ms Smith, a 40-year-old woman with no significant past medical history, presents to the student or resident physician for a routine checkup.

**Preceptor Teaching Points**

The first step is to clarify with the learner that the primary focus of the visit is that of a checkup. In addition, assess whether the patient has additional concerns that led to the visit. Initial dialogue with the patient should include questions such as “How can I help you today?” and “Are there any specific concerns that brought you in today?” Beginning the conversation in this manner allows the patient to be open regarding her concerns and establishes a context for the overall visit.

The next step for the learner is to assess risk factors in major areas of preventive services, such as cardiovascular (CVS), cancer, injury, infectious disease (ID), metabolic and emotional health, along with previous preventive services along these areas. For our patient, questions such as past medical history with previous illnesses, family history, behavioral practices, previous immunizations, and other prior age- and gender-appropriate screenings help to develop a risk profile.

Ms Smith that she came to the doctor for a full checkup and a pap smear. She is concerned because her sister was recently diagnosed with diabetes.

Ms Smith describes a family history of diabetes, hypertension, and osteoporosis. An administrative assistant for a large corporation, she eats out most days and “makes bad choices.” Although she exercises regularly, she has smoked one pack of cigarettes per day for the past 20 years.

Ms Smith states that she received her last tetanus shot 15 years ago, her last pap smear more than 3 years ago, and she had a BTL 5 years ago. She has never had a mammogram. She also reports infrequent use of seat belts. She denies any psychological problems or significant marital or family problems.

On physical exam, Ms Smith’s only significant findings include a body mass index (BMI) of 30, a blood pressure of 140/95, and acanthosis nigricans.

**Preceptor Priorities**

Upon reviewing this cumulative information, the learner can then review established, evidence-based guidelines as recommended by professional societies and nationally based preventive organizations to offer specific clinical preventive services. For our case example above, the learner designed a risk profile and the preventive services (Table 1).

Once a risk profile for the patient has been prepared, the preceptor can introduce the learner to initiate a therapeutic relationship development with the patient. The bond of trust between the patient and the physician is vital to the diagnostic and therapeutic process. It facilitates the process of making accurate diagnoses and in providing optimal recommendations for prevention and treatment. If patients have concerns or reservations, you want to know what those are. This way you can obviate their worries and make them feel invested in and comfortable with the plan.

Preceptors should advise learners to choose preventive services of interest to and pertinent to the patient. It would be reasonable

<table>
<thead>
<tr>
<th>Risk Profile</th>
<th>Preventive Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>Smoking, elevated blood pressure, obesity, family history of diabetes and hypertension</td>
</tr>
<tr>
<td></td>
<td>Blood pressure, lipid profile, glucose, smoking cessation counseling, improving diet, and exercise recommendations</td>
</tr>
<tr>
<td>Cancer</td>
<td>Smoking, age and sex related</td>
</tr>
<tr>
<td></td>
<td>Mammogram, Pap smear, smoking cessation, self/MD skin check, avoid excess sun exposure, use protective clothing and hats and sunscreen with SPF ≥ 15</td>
</tr>
<tr>
<td>Injury</td>
<td>Infrequent seat belt use, sun exposure</td>
</tr>
<tr>
<td></td>
<td>Seat belt use reinforcement</td>
</tr>
<tr>
<td>Infectious disease</td>
<td>Last tetanus shot 15 years ago</td>
</tr>
<tr>
<td></td>
<td>Tetanus shot today</td>
</tr>
<tr>
<td>Metabolic</td>
<td>Family history of osteoporosis, perimenopausal</td>
</tr>
<tr>
<td></td>
<td>Calcium intake, weight-bearing exercise, smoking cessation</td>
</tr>
<tr>
<td>Emotional health</td>
<td>None identified</td>
</tr>
</tbody>
</table>

---

**Table 1**

Risk Profile and Preventive Services
to choose one to three preventive services for this visit and perhaps addressing one to three at a follow-up visit, given the time constraints of an ambulatory clinic visit. Physicians can offer handouts on relevant preventive services or have posters in the waiting area or the examination rooms.

In dealing with this case example, Ms Smith is concerned, because her sister was recently diagnosed with diabetes. Discussing with Ms Smith her risk factors for diabetes and creating a prevention plan is crucial for building trust to begin this relationship in an honest and straightforward manner. It also improves patient compliance, and the patient will likely follow-up with you.

The physician should emphasize to learners to negotiate the prevention plan with the patient and tailor it to the patient’s beliefs and values. For example, the learner may really want to talk about smoking cessation during this visit, whereas Ms Smith may want to work on weight loss. The learner needs to keep the entire context of the patient in mind prior to making and offering the prevention plan.

With Ms Smith, we identified elevated blood pressure in this visit. Talking to her about her preferences and tasks in her lifestyle, you can decide with her a time line in improving her blood pressure. Ms Smith agreed to a time line of 3 months. During this time line, she was encouraged and motivated to modify her lifestyle, keep blood pressure logs, and call the office if she has any concerns or questions, with the anticipation of following-up with her in 3 months. This also supports patients’ own self-care and also reiterates the importance of the patient-physician relationship. Most importantly, during this encounter, the physician needs to be warm, attentive, and be able to attend to emotional responses and to the processes of behavior change as they arise.

Finally, emphasize to the learner that every patient-physician encounter is a lifelong learning experience, and review the relevant evidence-based clinical practice guidelines, US Preventive Task Force recommendations, American Academy of Family Physicians recommendations, and other recommendations listed in Table 2.

**Conclusions**

- Adequate provision of clinical preventive services by physicians has the potential to dramatically improve health while decreasing the financial burden borne by the US health care system.
- Teaching preventive medicine to medical students and residents using the TOPIC model as a tool will prepare them to fill this need and meet the future needs of our rapidly changing health care system.
- As the evidence base for health promotion and disease prevention expands and changes, future health professionals must be able to evaluate the evidence and design care that integrates these skills and knowledge.
- Competency in delivery of health promotion and disease prevention care cannot be left to chance but must be part of the ongoing evaluation of clinical education and practice.

**Table 2**

<table>
<thead>
<tr>
<th>Useful Web Sites*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Preventive Task Force (<a href="http://www.sph.ahrq.gov/prevent.htm">www.sph.ahrq.gov/prevent.htm</a>)</td>
</tr>
<tr>
<td>National Immunization Program (<a href="http://www.cdc.gov/nip/ACIP/default.htm">www.cdc.gov/nip/ACIP/default.htm</a>)</td>
</tr>
<tr>
<td>Cochrane Collaboration (<a href="http://www.cochrane.org">www.cochrane.org</a>)</td>
</tr>
<tr>
<td>National Guideline Clearinghouse (<a href="http://www.guideline.gov">www.guideline.gov</a>)</td>
</tr>
<tr>
<td>AAFP Clinical Preventive Services (<a href="http://www.aafp.org/x7661.xml">www.aafp.org/x7661.xml</a>)</td>
</tr>
<tr>
<td>Evidence-based Medicine journal (<a href="http://ebm.bmjournals.com">http://ebm.bmjournals.com</a>)</td>
</tr>
</tbody>
</table>

*All accessed on August 8, 2006

AAFP—American Academy of Family Physicians

**References**