Introduction
Total Health is a vision for the future of health care. Total Health means health of mind (behavior health), body (physical health), and spirit. Total Health includes investing in the determinants of health by leveraging nonmedical impacts as a catalyst for public health and primary care integration. In addition, the current model of behavior and physical health care is better than treating either alone but is not sufficient to promote deeper healing of underlying trauma. The goal of Total Health is to treat the entire person and to have a deep understanding of how a patient’s emotional history and community may contribute to disease. To achieve Total Health we will need healthy people in healthy communities and a system to make lives better. We hope to make lives better by 1) measuring vital signs of health, 2) promoting healthy behaviors, 3) monitoring and treating disease, 4) spreading leading practices, and 5) creating healthy environments with our community partners. Best practices, spread to the communities we serve, will make health care more affordable, prevent preventable diseases, and save lives.

The key to achieving Total Health will be to transform our current health care system from a focus on treating disease to a focus on preventing disease. This transformation will require complex behavior change interventions and services not usually provided in the medical home. The behavior medicine specialist will bring the knowledge and experience used to treat mental illness into the medical home to help the primary care physician improve the care of all patients in the medical home.

The behavior medicine specialist will help improve outcomes in synergy with the primary care physician by universal screening of high-risk diseases, stepped care protocols, and efficient use of all resources available to care for patients in the medical home (health education classes, wellness coaches, and online social networking lifestyle management programs). These interventions should increase patient satisfaction, increase access to specialty care (psychiatry), and help us achieve Total Health.
engage patients in behavior that may prevent illness or disease. The science of behavior change is complex. Most patients are overwhelmed with what is prescribed by physicians and the media. But many people lack the knowledge, skills, and confidence to practice the health behaviors that will improve their physical and mental health. Patient engagement to improve health care outcomes may require the expertise and resources of a psychologist trained in behavior change who can work side by side with the physician in the medical home.

This journey to holistic health will start when patients come to see their physician and continue when they access health care services in their community. The key to achieving Total Health in the future may be integrating behavior health services into the medical home. In this model, healthy people will be able to receive physical health services and behavior health services in the clinic where they see their primary care physician. Currently most physicians focus on physical illness and refer patients to specialty behavior medicine for behavior health treatment. To be more effective and to obtain behavior change interventions to help the physician manage chronic diseases, primary care physicians may benefit from integrating a psychologist called a behavior medicine specialist (BMS) into the medical home where they provide direct patient care.

Behavior Medicine Specialist

The BMS concept is not new. Large health care systems across the country, including the Department of Defense, have added behavior change specialists into the medical home. Traditionally, the BMS is a psychologist who works side by side with all members of the health care team to enhance effective preventive and clinical care for all patients. The BMS role in primary care is different from his or her role in a mental health clinic (Table 1). As a member of the primary care team, the BMS mainly focuses on helping the primary care physician make lives better. As stated above, we can make lives better by 1) measuring vital signs of health, 2) promoting healthy behaviors, 3) monitoring and treating disease, 4) spreading leading practices, and 5) creating healthy environments with our community partners. The BMS consults with the entire team but serves as a link between the patient and the physician (primary care physician and the psychiatrist) and helps these providers to increase their effectiveness. In the medical home, the physician is responsible for the care of all patients.

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Table 1. Behavior medicine specialist compared with mental health specialist

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Behavior medicine specialist</th>
<th>Mental health specialist</th>
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<tbody>
<tr>
<td>Model of Care</td>
<td>Population-based consultation</td>
<td>Patient-based specialty focus</td>
</tr>
<tr>
<td>Primary customer</td>
<td>Primary care physician</td>
<td>Patient</td>
</tr>
<tr>
<td>Direct report(s)</td>
<td>Primary care physician</td>
<td>Psychiatrist</td>
</tr>
<tr>
<td>Team structure</td>
<td>Primary care team member</td>
<td>Mental health team member</td>
</tr>
<tr>
<td>Location</td>
<td>Primary care clinic</td>
<td>Mental health clinic</td>
</tr>
<tr>
<td>Goal(s)</td>
<td>Measure vital signs of total health</td>
<td>Resolve patient’s mental health issues</td>
</tr>
<tr>
<td></td>
<td>Promote healthy behaviors</td>
<td></td>
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<td></td>
<td>Monitor and treat disease</td>
<td></td>
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<tr>
<td></td>
<td>Spread leading practice</td>
<td></td>
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<tr>
<td></td>
<td>Create healthy environments with our community partners</td>
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Measuring Vital Signs of Health

Measuring vital signs of health will help the BMS and the medical home team identify patients who will benefit from upstream behavior change interventions before a disease progresses to a more serious level of care. Although consensus on vital signs of health has not been determined, some that may make the list are shown in the Sidebar: Proposed Vital Signs of Total Health. Vital signs of health should include measurements around healthy eating and active living as these have been shown to help improve biometrics or risk factors for health like blood pressure, cholesterol, and body mass index. Tobacco is a well-documented vital sign for health, and lowering tobacco smoking rates may be the single most important intervention we can do to save lives and reduce health care costs. Finally, mental health screening will be a very important means to help identify and treat patients with anxiety and depression. A new tool called the Treatment Progress Indicator measures anxiety, depression, and functional status. This tool can be used to monitor an individual patient’s therapy and response to interventions while seeing how care provided by one provider compares with care provided by many providers. This type of report could be used to identify and spread best practices. Once vital signs of health are agreed on, programs can be developed that promote healthy behaviors and improve health care outcomes.
**Promoting Healthy Behaviors**

The BMS is a culturally competent psychologist who provides treatment for a wide variety of mental health, psychosocial, motivational, and medical concerns, including management of anxiety, pain, depression, substance abuse, smoking cessation, insomnia, diabetes, medication adherence, and psychological trauma. The BMS also provides support and management for patients with severe and persistent mental illness and tends to be familiar with psychopharmacologic interventions. The BMS coordinates care of mental illness with the primary care physician and psychiatrists, which may decrease the need to refer patients to a psychiatrist, reducing overall cost of care, and alleviating the stigma of patients seen in the mental health clinic. Randomized controlled trials show that disease management models using care managers are both clinically effective and cost-effective. Meta-analyses indicate that there is a cost offset of 20% to 40% for primary care patients who receive behavior health services. Notably, fewer hospitalizations result in significant cost reductions for patients with chronic physical illness and those with psychiatric diagnoses.

**Monitoring and Treating Disease**

Finally, the BMS may help primary care physicians differentiate symptoms from disease and prevent unnecessary tests and referral to specialists. Even though mind-body relationships may seem obvious, physical health problems may be masked by psychosocial concerns. Physicians are trained to deal with diseases, and they often must evaluate symptoms that are not associated with a disease.

A retrospective 3-year study of 1000 patients in a general medical clinic setting provided a comprehensive picture of symptoms in the outpatient setting. The investigators identified 14 common symptoms: chest pain, fatigue, dizziness, headache, edema, back pain, dyspnea, insomnia, abdominal pain, numbness, impotence, weight loss, cough, and constipation. They found that 38% of the patients reported at least one of these symptoms, but an organic cause for the symptoms was found only 16% of the time. Ten percent of the symptoms were believed to be psychological in origin and 74% were of unknown cause.

As the physician focuses on helping his or her population achieve their health care goals, the BMS helps the physician by advising on the best way to successfully change the behavior of a single patient and a population of patients (eg, diabetics with kidney disease). To accomplish these goals, the BMS and physician must agree on a common strategy for management of patients with behavior health issues. An example of this model of care is known as stepped care.

The BMS will help facilitate systemic change within a primary care population to improve measurable outcomes. The BMS typically collaborates with physicians as a consultant to develop treatment plans and monitor patient progress. The BMS is needed in primary care clinics because research has shown that approximately half of all mental health care services are provided solely by primary care providers. Furthermore, primary care practitioners prescribe about 70% of all psychotropic medications and 80% of antidepressants. Another reason to integrate the BMS into the medical home is that chronic disease can contribute to behavior health dysfunction, and behavior health dysfunction can contribute to chronic disease. An example is depression, which can coexist in diabetes, coronary artery disease, obesity, and chronic pain. Studies have shown effective treatment of depression in primary care clinics can improve quality of life and measurable outcomes and may improve treatment adherence in chronic disease.

In stepped care, patients who do not improve through the usual course of care will move to the next level of care where the intensity of service is customized according to the patient’s response. This may include cognitive behavior therapy or psychotherapy. The key is to use a viable model and to have a strong, positive connection between provider and patient that occurs in a timely manner and over an appropriate period. Likewise, a patient who no longer needs a higher level of treatment can step down to a milder intervention. An example of stepped care is shown in Table 2. To diagnose a behavior health issue, primary care providers often use evidence-based behavior health screening tools. One such screening tool is the Patient Health Questionnaire (PHQ-9) that is used to identify adults with depression. This nine-item questionnaire can be completed, usually in one to two minutes.

Ideally, the physician confirms the depressive symptomology and then uses brief intervention algorithms for treatment. Many medical homes have begun to integrate the screening of depression as a routine practice in caring for patients with chronic illnesses. This process may begin with a brief two-question screening, using the first two questions of the PHQ-9. Patients with depression, as determined by answers to the PHQ-9 tool, may need different types of care on the basis of the severity of their illness. Patients with mild depression

<table>
<thead>
<tr>
<th>Stepped care</th>
<th>Step One</th>
<th>Step Two</th>
<th>Step Three</th>
<th>Step Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>Mild</td>
<td>Moderate</td>
<td>Moderate-Severe</td>
<td>Severe</td>
</tr>
<tr>
<td>PHQ-9 score</td>
<td>1-9</td>
<td>10-14</td>
<td>15-19</td>
<td>&gt; 20</td>
</tr>
<tr>
<td>Intervention</td>
<td>Very-low-intensity intervention</td>
<td>Low-intensity intervention</td>
<td>High-intensity intervention</td>
<td>Very-high-intensity intervention</td>
</tr>
<tr>
<td>Health education classes</td>
<td>Cognitive behavioral therapy</td>
<td>Group therapy, brief psychotherapeutic interventions</td>
<td>One-on-one therapy, intensive outpatient and inpatient programs</td>
<td></td>
</tr>
<tr>
<td>Wellness coaching</td>
<td>Care management</td>
<td>Care management</td>
<td>Care management</td>
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</table>

PHQ-9 = Patient Health Questionnaire-9.
Behavior Medicine Specialist

(PHQ-9 score, 1-9) may need only mild intervention whereas a patient with severe depression (PHQ-9 score, > 20) may need significant intervention. Stepped care protocols can be used to help patients understand the different options of care available to them according to the severity of their illness. Stepped care may include referrals to wellness coaches, online programs, or community resources not provided in the medical home (e.g., faith-based counseling).

Historically, subjective evaluations were used to determine when a patient’s condition had improved. Since it is hard to standardize outcomes and set goals for subjective measurable outcomes, it is also hard to determine when a patient could be repatriated back to the primary care physician and to identify and to share best practices in care. As a result, access to behavior health has been a challenge at a time when it appears demand for behavior health service has been increasing. In the future, physicians and the BMS will use objective tools to help manage behavior health conditions much like primary care physicians use objective measures to manage chronic disease such as diabetes, high blood pressure, and obesity.

Spreading Leading Practices

Healthy people and medical homes will be the foundation to a healthy community. Self-management tools will help individuals understand what they need to do to be healthy. To achieve Total Health in the future, we will need healthy communities to maintain health. Because patients spend very little time in the medical home, our communities need to be healthy to support work being done by healthy people and healthy medical homes. Healthy communities will help people thrive where they live, learn, work, play, and pray. To accomplish this goal healthy people and medical homes will need to interact with healthy communities. The BMS is an important team member coming into primary care clinics. The BMS will help stimulate change in our communities by identifying and sharing best practices while also identifying gaps in care.

Creating Healthy Environments

Another key responsibility of the BMS will be to integrate the patient with community resources. Every day thousands of our patients require assistance from our clinical social workers and other staff members for basic necessities like food, housing, transportation, medications, dental services, and support groups. And every day organizations in our local communities assist us to help our patients by providing these needed services. Currently there is no organized systematic Web-based approach to locate these services that also allows for community organizations to see the services previously accessed by a patient. In addition, there is currently no objective way to know if a service provided to a community improves health care outcomes.

In the future, the BMS will have access to Web-based resources (wellness resource locators) to help match up a particular patient need with a specific community resource where people live, learn, work, play, and pray (Figure 1). The BMS will have the ability to locate and interact quickly and effectively with all appropriate services in the local healthy communities. In addition, the BMS will have the ability to track referrals, services, visits, and program enrollment. Outcome-based reporting will have the potential to demonstrate community and individual patient results. This program will help the BMS to identify community care gaps and best practices. Many communities have a plethora of support and social services, but locating these resources can be time-consuming and frustrating. This new program can be incorporated into stepped care as part of a comprehensive care plan that includes referrals for required services. The coordination of social services with clinical services should result in a significant increase in patient compliance and improved outcomes.

Discussion

Since the 1980s, research has improved our ability to recognize, to diagnose, and to treat chronic disease. In fact, many studies have found correlations between physical and behavior health-related problems. Individuals with serious physical health problems often have comorbid behavior health problems. In addition, it is estimated that as many as 70% of primary care visits stem from behavior health issues. For these reasons it makes sense at this time to integrate the BMS into the primary care clinics and medical homes. Delivering behavior health services in primary care can help to 1) minimize the stigma and delay of seeing a behavior health specialist in another building, 2) increase opportunities to improve overall health care outcomes, and 3) improve access to psychiatry services.

The disease management model of the future will be a system of care and interventions designed to optimize wellness and actually prevent disease. Effective implementation of this concept will reduce the overall cost of care and disease burden. Prevention is forever a part of disorder management. Key to this shift in our paradigm will be a use of BMS-directed self-management tools needed to be healthy and thrive. This will involve developing Web-based tools to help people measure their biometrics and behavior health index as well as tools to help them meet their biometric and behavior goals. Web-based programs will be interlinked with the BMS and the medical home. The final part of this strategy is linking the care of patients to community resources. This last strategy will be more difficult because it will involve Kaiser Permanente partnering with key community leaders to align resources to help both the patient and the communities to achieve Total Health.

Finally, in addition to universal screening for vital signs of health, there should also be an awareness of an alternative paradigm that emphasizes a focus on health and protective factors as opposed to a focus on problems and risk factors. A recent article looked at estimated deaths attributable to social factors in the US. Results showed that approximately 245,000 deaths in the US in 2000 were attributable to low education, 176,000 to racial segregation, 162,000 to low social support, 133,000 to individual-level poverty, 119,000 to income inequal-

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ity, and 39,000 to area-level poverty. The authors concluded that the estimated number of deaths attributable to social factors in the US is comparable with the number attributed to pathophysiology and behavior causes. Therefore, regarding improving the Total Health of populations, social factors may play a role in determining why certain populations are not meeting their vital signs of health outcomes goals. For this reason, behavior health clinics that address social issues along with behavior health issues have been established into medical settings at Northwestern Memorial Hospital (www.nmh.org/nm/blumh-specialists/cardiac-behavioral-medicine) and Boston Children’s Hospital (www.childrenshospital.org/centers-and-services/behavioral-medicine-clinic-program/overview).

Conclusion
In population-based care, the entire population is the target. Our strategy should be to use a “wide net” approach aimed at serving the entire primary care population with emphasis on prevention and improving outcomes with effective accountable interventions. By going upstream in care, health care clinics may dramatically improve health care outcomes while reducing cost of care. For example, the BMS may help to introduce trauma and stress reduction education to help everyone better understand the relationships between illness and wellness. It is important to recognize that the current health care environment is promoting and rewarding quality improvement and the concept of the patient-centered medical home. Medical groups that want to grow will need to focus on disease prevention to lower health care costs. To accomplish this goal, health care leaders will need to work closely with community leaders to create healthy environments.

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References

Trinity

Man is a trinity composed of three elements: the body, the heart, and the mind.
To each of these elements corresponds some need. The satisfaction of these needs, in full measure, constitutes the science of life and assures the greatest sum of happiness, which we can enjoy.

— Joseph-François Malgaigne, 1806-1865, French surgeon and medical historian