SBIRT

Service Design

Medical Residency Site Visit Report: University of Maryland

SBIRT Service Design Medical Residency: University of Maryland

Prepared by JBS International, Inc. and Alliances for Quality Education, Inc.
Prepared for the Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment

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SBIRT Service Design Medical Residency: University of Maryland

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Grant TI Number	TI80003
Date of Site Visit	October 13–15, 2010
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Beth Barnet, M.D., Curriculum/Training Committee
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Overview and Summary of Findings

Purpose of the Visit

The purpose of the site visit included the following:

- Conduct an onsite assessment of program strengths and engage the grantee in a continuing improvement process supported by technical assistance as approved by the Substance Abuse and Mental Health Services Administration (SAMHSA). An assessment of the University of Maryland's SBIRT medical residency training program model, curriculum, training methods, implementation, and program evaluation was completed by:
  - Meeting onsite with the project director, project coordinator, program champions, clinical staff, residents, evaluator/evaluation team, and data entry staff
  - Observing training session(s)
  - Reviewing curriculum components and materials (paper and electronic)

The site visit team met with the Maryland M.D.s Making a Difference (MD3) principal investigators/project directors and project team on October 13–15, 2010 to gain a better understanding of the University of Maryland SBIRT medical residency training program model, curriculum, training methods, implementation, and program evaluation.

Site Visit Overview

Day 1: On October 13, the site visit team conducted two meetings. The morning meeting was held at University of Maryland, Baltimore, with the principal investigators/project directors, program evaluator, and program manager to discuss the MD3 SBIRT training program with a focus on understanding progress to date, status of plans, current implementation, barriers and facilitators to implementation, and lessons learned. Topics that were covered included the following: program background and context, program model, curriculum components, faculty training, residency implementation, dissemination model, and sustainability planning.

The afternoon meeting was held at University of Maryland, Baltimore County, to understand the local program evaluation design and plans (process and outcome assessments), evaluation activities and progress to date, barriers and facilitators to evaluation, lessons learned, and to review any preliminary data. Topics that were

covered included monitoring residency performance, process assessment, and outcome assessment.

Day 2: On October 14, the site visit team conducted a series of meetings with faculty and residents in the University of Maryland Medical Center (UMMC) psychiatry, behavioral medicine, obstetrics-gynecology, and family medicine programs and clinics. Meeting topics included general impressions of SBIRT, plans for training residents, preparedness and receptivity of residents to trainings, instructional method and strategies for training, tracking resident progress, and challenges to implementing training.

Day 3: On October 15, the site visit team observed an SBIRT training of obstetrics-gynecology residents. The training was conducted from 8 a.m.–12 p.m. onsite at UMMC. The training was delivered in a lecture format using a slide show presentation, role-play, and other interactive exercises.

Overview of Project

The MD3 SBIRT medical residency training program, operated by the University of Maryland, Baltimore, and the University of Maryland, Baltimore County, is currently in year one of its 5-year SAMHSA SBIRT grant. MD3's project goal is to deliver SBIRT training to residents across a total of seven primary care residency programs within UMMC. The seven primary care residency programs include: (1) emergency medicine; (2) family medicine; (3) internal medicine; (4) obstetrics-gynecology; (5) pediatrics; (6) psychiatry; and (7) trauma. Also targeted as part of the MD3 project are related fellowship programs (e.g., child and adolescent psychiatry, behavioral pediatrics) and related faculty and students, including other residency programs and health professionals in the State of Maryland. Over the 5-year period, MD3 anticipates that their program will train 1,500 UMMC and other program residents using their full curriculum, 1,200 residents using an abbreviated curriculum, and 520 practicing physicians and other healthcare professionals in other regional and statewide trainings.

The curriculum components include presentation slides, training videos, role-play (e.g., implementation of SBIRT with standardized patients, actual patients, and patient vignettes), patient tools/resources, and a didactic lecture series. The didactic lecture series consists of 15 lectures addressing the following topics: (1) addiction 101; (2) substances of abuse; (3) alcohol; (4) nicotine; (5) medical comorbidity; (6) psychiatric comorbidity; (7) treatment; (8) management of intoxication and withdrawal; (9) maintenance medications; (10) prescribing controlled substances; (11) toxicologic screening/chronic disease management; (12) chronic pain and addiction; (13) anxiety;

stress, and addiction; (14) adolescent substance abuse and the developing brain; and (15) substance use disorders in physicians.

The evaluation team at University of Maryland, Baltimore County, will use a series of tools to measure impact of training on resident knowledge, attitudes, behavior, and practice skills related to SBIRT. A pre/post Knowledge, Attitudes, and Behavior (KAB) survey will be administered annually to measure changes in resident knowledge, attitudes, and behaviors regarding SBIRT. Assessments of resident skill delivering SBIRT in actual and mock clinical encounters (e.g., shadowing and feedback of resident delivering SBIRT with actual patient, patient vignettes/role-play, standardized patients) are planned for all residents in the three program areas currently delivering SBIRT training (family medicine, obstetrics-gynecology, and psychiatry). Beginning in the 2011–2012 academic year, a sample of patient charts in the three active program areas will be reviewed beginning within 3 months of SBIRT training through the end of the residency year to assess the extent to which resident are conducting screenings, brief intervention, and referral to treatment.

The MD3 program anticipates conducting training activities until July 2014, at which point the emphasis will shift to sustaining the activities initiated under SAMHSA grant funding.

Project Accomplishments to Date

The MD3 program has completed several activities within their first year of funding. A summary of major accomplishments to date include the following:

- Development of a core training curriculum to be applied across residency program areas
- Finalization of training curriculum and didactic lectures, including materials and exercises, for the obstetrics-gynecology, psychiatry, and family medicine residency program areas
- Commencement of training for obstetrics-gynecology, family medicine, and psychiatry residency program areas
- Designed faculty needs assessment to gather information from each residency program regarding how they address substance abuse and behavior change and their scheduling of didactics
- Finalization of local evaluation protocol
- Finalization of tools for measuring resident knowledge, attitude, and behavior change

- Finalization of screening module to be integrated into the EPIC electronic medical record (EMR) system

Program Strengths

Faculty and Organizational Experience

Program directors, Dr. Christopher Welsh and Dr. Carlo DiClemente, have significant past experience in research, education, and training involving substance abuse treatment in clinical practice (especially brief intervention/motivational interviewing). UMMC has operated grants in the past that involve the application of SBIRT components or principles in clinical settings (e.g., R. Adams Cowley Shock Trauma Center) and is part of an extensive network of hospitals and other clinical practice sites that have state-of-the-art practice facilities for training (e.g., COMPACT Center for observing simulated resident-patient clinical encounters).

Multi-Modal Curriculum

The project team is committed to providing a consistent core curriculum to a diverse group of residents. To achieve this goal, they have developed methods for training that are flexible and adaptive to unique residency program needs. The SBIRT curriculum was designed to be delivered in various methods, including slide presentations and didactic lectures, training videos, and role-play resulting in dynamic trainings intended to improve resident knowledge and skill development. The project team is also developing online modules (expected to be completed in the summer of 2011) which will allow residents to access SBIRT training content remotely at their convenience. The project team has acknowledged a lack of evidence to support the efficacy of online modules as a mode of residency training; however, the use of online modules is utilized in other similar programs and may circumvent some of the limitations in onsite availability for first-year residents imposed by new limits on consecutive duty hours (see Program Barriers/Challenges section below for additional information).

Full, Abbreviated, and Web-Based Lengths/Versions With Core and Adaption Components

The SBIRT curriculum will be designed in full, abbreviated, and Web-based lengths/versions to broaden the scope of residents who will receive training. This approach captures residents whose rotation schedule permits them to participate in the full-length training as well as residents who are only able to participate through the abbreviated or Web-based versions (e.g., residents who rotate through the Shock Trauma Center may only have a 1-month window to be trained). Additionally, the core curriculum provides a standard knowledge base and skill set to be taught across specialty programs; however, there is an adaptation component of the curriculum that is uniquely designed for each specialty program area and addresses the particular

considerations of that practice setting and patient population. For example, obstetrics-gynecology residents review trend data in substance use/abuse among pregnant women and practice SBIRT techniques through role-play using scenarios representative of doctor-patient interactions in an obstetrics-gynecology clinical setting.

EPIC Electronic Medical Record System

The EPIC EMR contains a module for documenting the prescreening component of SBIRT during a clinical encounter. EPIC may be leveraged for documenting delivery of other SBIRT components as well and for evaluation purposes. EMR technology offers UMMC the ability to document SBIRT delivery across clinical settings in a standardized way. However, interoperability limitations exist. For example, certain UMMC delivery settings do not use an EMR system or use an EMR system that cannot communicate with EPIC. These limitations, if unresolved, may reduce the utility and value of EPIC as a means of documenting SBIRT delivery and assessing the efficacy of its implementation during clinical encounters with actual patients.

MD3 Pocket Card

The project has developed a pocket card for clinicians to use in their practice/interactions with patience. More specifically, the pocket card is a resource for medical students, medical residents, attending physicians, and other healthcare professionals containing valuable information on screening, brief intervention, referral, and treatment for patients misusing tobacco, alcohol, and drugs.

Program Challenges/Barriers

Reduction in Duty Hours

As of July 1, 2011, the Accreditation Council for Graduate Medical Education (ACGME) reduced caps on consecutive duty hours for first-year medical residents from 24 hours to16 hours, with some exceptions.[1,2] In the past, medical residency programs have depended on residents working long shifts for training and education purposes. The greater amount of time a resident is onsite, the greater the opportunity for integrating education and training into their shift and the easier it is to schedule/coordinate education and training sessions with the greatest number of residents. With new reductions in duty hours, UMMC, as well as other medical residency grantees, will need to devise ways of overcoming challenges associated with greater variation in resident schedules and their lesser coordinated availability in order to deliver SBIRT training and education as planned.

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[1] Accreditation Council for Graduate Medical Education. Common Program Requirements: Effective, July 1, 2011. Information retrieved from http://www.acgme.org/acwebsite/home/Common_Program_Requirements_07012011.pdf on November 18, 2010.

[2] Nasca, T. J., Day, S. H., & Amis, E. S. (2010). The New Recommendations on Duty Hours from the ACGME Task Force. *The New England Journal of Medicine, 363. e3–e3.*

Standardization of Training Across Residency Program Areas

Variability across the seven targeted residency program areas (e.g., content area, patient characteristics, practice setting, and workflow) may act as a barrier to standardization. The core curriculum is intended to provide a basic knowledge and skill set across all program areas and the adaptation component is intended to provide the flexibility to target SBIRT training and education material to the unique needs and considerations of a given residency program. However, program area variability may result in significant differences in curriculum, training design, and delivery that may cause challenges in, among other things, grants management, and evaluation. For example, residents are taught about screening instruments but not all are being trained nor are using them as intended based on the evidence base. The application of overall concepts in screening and brief interventions is encouraged, but because of the settings and time constraints residents are not necessarily taught to adhere to specific evidence-based protocols.

Team Roles and Responsibilities

- ***Principal Investigator/Project Director:*** Christopher Welsh, M.D., is the Principal Investigator and Project Director for the project. Dr. Welsh serves as the primary contact person with SAMHSA and oversees all reporting to SAMHSA, the grant budget, the various committees/teams that make up the project (e.g., curriculum development committee, implementation committee), and coordinates grant activities internally at UMMC and with external partners (e.g., Johns Hopkins Medical Institution). Carlo DiClemente, Ph.D., co-directs the project and assists with developing the screening and brief intervention protocols, developing the SBIRT curriculum, training residents, and developing and implementing the evaluation protocol. Dr. DiClemente also assists Dr. Welsh in leading the various committees/teams that make up the project, train-the-trainer protocol development and implementation, as well as reporting on the results of the grant.
- ***Curriculum/Training Committee:*** David McDuff, M.D.; Beth Barnett, M.D.; and Adrienne Williams, Ph.D., serve as trainers for the grant. Their duties include assisting with curriculum development, conducting residency trainings, and participating in grant meetings.
- ***Program Evaluator:*** Janine Delahanty, Ph.D., collaborates with Dr. DiClemente in all facets of the grant evaluation. Dr. Delahanty is responsible for the development and implementation of the evaluation protocol for the entire project and oversees the revision of extant measures and the development of new measures as necessary. She is also in charge of the evaluation of dissemination, followup of residents post-training, data analysis and interpretation, and report writing.

- ***Program Manager:*** Katherine Earley, M.Ed., assists the principal investigators/project directors with grant management activities. Major responsibilities include communications with SAMHSA; assistance with oversight of reporting, budget management, and activities of the various committees/teams; as well as coordinating across residency program areas and with external partners.
- ***Graduate Research Assistant:*** Angela Petersen, B.A., assists Dr. DiClemente and Dr. Delahanty in developing curriculum, creating manuals, and with evaluation activities (e.g., gathering evaluation data, contacting residents for evaluation purposes, etc.).

Administrative Observations

- The ACGME-reduced caps on consecutive duty hours for first-year medical residents will significantly impact how and when resident training can be implemented. This new policy should be discussed in more detail with SAMHSA and other SBIRT medical residency grantees to further examine its impact on training implementation.
- Continue the working relationship with EPIC/EMR staff to maintain and improve the design for SBIRT documentation as adjustments are made to the system.

Curriculum

Core Component: The MD3 core curriculum, "SBIRT Training Curriculum and Manual for Medical Residents," consists of four training modules: (1) SBIRT overview training module; (2) screening training module; (3) brief intervention training module; and (4) referral and treatment training module, each having a section on rationale and learning objectives, followed by the actual lesson (i.e., specific content/skills to be learned). The core curriculum also has four sets of slide presentations: (1) screening, brief intervention, and referral to treatment—SBIRT; (2) screening; (3) brief intervention and motivational enhancement; and (4) referral and treatment, which contain training objectives, rationale, relevant statistics and research, description of tools and techniques, skill demonstration video clips, and other content.

Adaptation Component: Training, including role-play exercises (e.g., implementation of SBIRT with standardized patients and patient vignettes) and sections of slide presentations (e.g., research and statistics about the specific patient population) will include adapted information that addresses the considerations of a particular residency program area.

Variations in Full, Abbreviated, and Web-Based Versions: Efforts are underway to develop abbreviated and Web-based versions of the MD3 SBIRT training program, which will enable MD3 to offer training and instruction in various lengths and types.

Curriculum Observations

- The curriculum is evolving and will continue to evolve as more specialty areas are trained.
- The curriculum will be customized based on specialty area because of issues related to scheduling, availability of time, patient characteristics, practice setting, and workflow.
- Each residency program will use the curriculum, materials, and training exercise concepts as a foundation for customizing the SBIRT training program that meets their specific scheduling and practice needs.
- The MD3 program should further examine the impact of customizing training per resident specialty to assess the impact of this approach on fidelity to the SBIRT model and to assess residents' proficiency in delivering SBIRT components.

Approach/Implementation

Residency Training Implementation: Due to variations in residency program areas, there is no single training implementation model for delivery of SBIRT training. Each residency program will use the core curriculum, materials, and training exercise concepts as a foundation for adapting an SBIRT training program that meets their specific scheduling and practice needs. For example, the chart below compares some basic differences in plans for SBIRT training implementation for the three residency programs (i.e., family medicine, obstetrics-gynecology, and psychiatry) that have developed implementation plans. Data included in this chart is derived from materials created by MD3 and shared with the site visit team, detailing training implementation and evaluation plans by program area.[3, 4] In certain instances, brief calculations were made to determine values (e.g., estimated hours for a particular mode of training, like one-on-one didactics, were occasionally expressed in months or for the full period of the grant instead of annually. In these cases, the appropriate time conversions were calculated so that the hours for all modes of training were expressed in years).

[3] University of Maryland SBIRT Medical Residency Training Program Site Visit (October 13–15). Curriculum Snapshot, pp. 18–24.
[4] MD3 Program Evaluation (October 13–15). pp. 1–3.

	Family Medicine	Obstetrics-Gynecology	Psychiatry
Rotation of SBIRT training	Behavioral Medicine	N/A	Addiction Psychiatry[5]
Length of rotation	1 Month	N/A	1 Month
Postgraduate year(s) (PGY) receiving SBIRT training	PGYI—PGYIII	PGYI—PGYIV	PGYI[6]
Estimated annual hours of didactic lecture	5	4	4–8
Estimated annual hours for one-on-one didactics	1.5	N/A	10 (PGYI)
Estimated annual hours of group training	N/A	3	5 (PGYI)
Estimated annual hours for shadowing actual patient encounters and feedback per resident	8	1–2[7]	1–2 (PGYI) 1–2 (PGYII)
Estimated number of annual standardized patient interviews per resident	1[8]	2	N/A
Estimated number of patient vignette evaluations per resident	2[9]	N/A	2 (PGYI)[10]

[5] Efforts being made to integrate SBIRT training into psychiatry emergency services rotation
[6] Efforts being made to include PGYII—PGYIV; formal SBIRT training is provided during the PGY IV year to some residents who enter the residency training program after the PGYI year
[7] PGYI—PGYIV
[8] PGYII—PGYIII only
[9] PGYI—PGYIII will complete 2 patient vignettes (on 2 of the 4 substances, tobacco, alcohol, drugs, and misuse of RX) upon completion of rotation, either in-person or using SurveyMonkey
[10] PGYI will complete 2 patient vignettes (on two of the 4 substances) upon completion of rotation using SurveyMonkey

MD3 Program Implementation: Below is an abbreviated timeline listing major, overall program implementation activities over the 5-year duration of the grant.

Year 1 (November 2009–June 2010)

- Develop core training curriculum and basic SBIRT information and reference materials
- Design faculty needs assessment
- Develop curriculum and didactic lectures for the obstetrics-gynecology, psychiatry, and family medicine residency program areas
- Create evaluation protocol and submit Institutional Review Board (IRB) application
- Develop tools for measuring resident knowledge, attitude, and behavior change
- Develop screening module to be integrated into the EPIC EMR system

Year 1–2 (July 2010–June 2011)

- Begin to train obstetrics-gynecology (24 residents), family medicine (24 residents), and psychiatry (60 residents; 18 fellows) in didactic and practice settings.
  - Train faculty so they may supervise residents and sustain SBIRT.
- Conduct needs assessment and develop specific curricula for pediatrics, emergency medicine, trauma, internal medicine.

Year 2–3 (July 2011–June 2012)

- Continue to train obstetrics-gynecology, family medicine, and psychiatry residents in didactic and practice settings
- Begin to train pediatrics (40 residents; 17 fellows), emergency medicine (30 residents), trauma (350 rotating residents; 8 fellows), and internal medicine (105 residents; 84 fellows) in didactic and practice settings.
  - Train faculty so they may supervise residents and sustain SBIRT.
- Begin collaboration with John Hopkins University and other local and statewide programs to disseminate SBIRT training.

Year 3–4 (July 2012–June 2013)

- Continue to train obstetrics-gynecology, family medicine, psychiatry, pediatrics, emergency medicine, trauma, and internal medicine residents and faculty.
- Deliver trainings to collaborators and provide support to their faculty and administration in the development and implementation of training plans.

Year 4–5 (July 2013–June 2014)

- Continue to train obstetrics-gynecology, family medicine, psychiatry, pediatrics, emergency medicine, trauma, and internal medicine residents and faculty.
- Continue to deliver trainings to collaborators and provide support to their faculty and administration in the development and implementation of training plans.

Year 5 (July 2014–October 2014)

- Implement sustained program operations in UMMC.
- Disseminate program information to other residency programs and healthcare organizations across the State.
- Conduct trainings.
- Complete local program evaluation.
- Work with local, city, State, and national groups for funding to sustain the project.

Approach/Implementation Observations

- The MD3 program should further examine the requirements or recommendations provided to the residents on the administration of specific screening instruments. Currently, residents are not asked to administer a specific validated instrument but rather learn about the instruments and screening questions, which often leads to item selection, modification, and the creation and use of an adapted tool.

Data Collection and Evaluation

The University of Maryland, Baltimore County is the local evaluation organization. The purpose of the evaluation is to assess the extent to which the MD3 SBIRT for substance abuse training program changes resident knowledge, attitudes, and behaviors regarding SBIRT with patients in medical settings. The evaluation also seeks to assess residents' skills in applying SBIRT in their clinical practices.

Consent for Participation: University of Maryland, Baltimore and University of Maryland Baltimore County require IRB approval for residents to participate in the grant evaluation. All residents are required to participate in all evaluation activities and each must sign a formal consent form prior to their participation. However, they may not consent to having their responses used for evaluation purposes.

Unique STUDYID: All residents are assigned a three-letter, four-number unique STUDYID consisting of letter and number combinations derived from the resident's mothers' maiden name and resident's date of birth.

Data Collection: The following data collection tools/methods will be applied throughout the grant period of performance for purposes of evaluation:

- ***Knowledge, Attitudes, and Behaviors (KAB) Survey:*** The KAB survey a 112-item tool that collects data on resident demographics (n = 17), attitudes/beliefs

(n = 24), knowledge (n = 20), competence/efficacy (n = 9), and current behaviors (n = 42) regarding SBIRT. THE KAB survey is administered to residents via SurveyMonkey at two time points in the course of single year of residency
  - — *Pre-implementation of SBIRT training*—Within 2–6 weeks of a new residency year and prior to any of the year's SBIRT training activities—about July 1
  - — *Post-implementation of SBIRT training*—within 2–6 weeks of the end of that residency year—by June 30

- ***CSAT GPRA Tools:*** The CSAT Baseline Training Satisfaction Survey is administered post-training, defined as the end of each residency year. The CSAT Followup Training Satisfaction Survey is administered 30 days after the baseline survey is administered. Both surveys will be administered either in-person or via SurveyMonkey.
- ***Standardized Patients:*** Residents in obstetrics-gynecology, family medicine, and psychiatry rotations receiving SBIRT training will complete up to two videotaped sessions (i.e., one in the fall and one in the spring) for each year of residency implementing SBIRT with a standardized patient. All videotapes will be independently evaluated by trained coders using a standardized protocol. Each resident will receive standardized feedback about his or her performance.
- ***Patient Vignettes:*** Residents in family medicine and psychiatry rotations receiving SBIRT training will complete four vignettes, one for each of the four MD3 substances (i.e., tobacco, alcohol, drugs, and prescription misuse), either in-person or via SurveyMonkey during years 1–3 of residency. Each vignette includes a patient description and mock patient quotes coupled with resident prompts for writing various responses to the patient. Additionally, each vignette contains a scoring section, which includes a scale for measuring resident adherence to brief intervention technique, use of other skills, and space for calculating the frequency of open-ended and closed-ended questions in a resident's response.
- ***Patient Chart Reviews:*** Beginning within 3 months of SBIRT training through the end of the residency year, a sample of patient charts will be systematically reviewed for the presence of (1) demonstration of screening; (2) brief intervention; and (3) referral, if screen positive. The evaluation team is also exploring approaches using random sampling and review of (1) resident logs or (2) EPIC and other EMR systems, in order to evaluate the degree of SBIRT implementation in clinical encounters of residents and actual patients.

Analysis: Analyses using various statistical methods will be conducted to determine which, and to what degree, program or contextual factors as well as individual factors are associated with post-training outcome measures (e.g., knowledge, skills, attitudes)

by resident demographics (e.g., residency program, year of residency, medical education, and training history). Additionally, dose response analyses will be conducted to determine the relationship between post-training outcome measures and the number of training hours received (i.e., comparative effectiveness of full, abbreviated, and Web-based curriculum versions).

Reporting: Results of the local evaluation will be reported to SAMHSA through biannual reports and disseminated through scientific journal articles and other publications, as appropriate. Local evaluation data will also be incorporated into sustainability planning and activities.

Program Area Summaries

In an effort to understand perspectives on SBIRT training at the program area level, the site visit team met with lead faculty/staff members from the three program areas currently delivering SBIRT training (i.e., psychiatry, family medicine/behavioral medicine, and obstetrics-gynecology). The purpose of these meetings was for the site visit team to develop an understanding of the training approach, status of implementation to date, and barriers and facilitators to implementation for each program area from the perspective of faculty and staff integrating the trainings into their program and, in some cases, delivering the trainings to residents. Meetings were conducted in the office or clinical practice setting of the faculty/staff member and lasted between 45 and 90 minutes. In the cases of psychiatry and family medicine/behavioral medicine, a medical resident or fellow receiving SBIRT training participated in the discussion to share their observations regarding the SBIRT model and trainings received.

Program: Psychiatry
Participants: Dr. Chris Welsh (Associate Professor), Dr. David McDuff (Clinical Associate Professor), Dr. Chris Holt (Fellow)

Observations: Major topics of discussion included: (1) variation among residents learning SBIRT; (2) methods of instruction and scope of training content; (3) challenges in training residents; and (4) recommendations for enhancing the project.

Variation among residents learning SBIRT: The instructors reported variation in resident receptivity, preparedness, and ability to learn and perform SBIRT. They acknowledged that, typical of new ideas, SBIRT trainings have been met with a certain degree of resistance, defensiveness, and reluctance that reflects a lack of skill and confidence in applying the model but may be overcome with practice. Secondly, residents begin the SBIRT training with varying levels of knowledge and experience in substance abuse treatment and addiction. UMMC residents come from various medical schools that provide varying levels of instruction and training on substance abuse.

Additionally, the residents and the medical schools, being from various regions of the country and some international, may be more or less affected by/exposed to issues related to substance abuse. Since there is no consistent baseline, the instructors tend to provide a basic education in order to create an equal level of preparedness and skill among residents for training in SBIRT.

Methods of instruction and scope of training content: The instructors indicated a strong preference toward interactive exercises (e.g., role-play, vignettes) as the means for training in SBIRT, emphasizing that skill development in this context is highly experiential. In regards to scope of content, they recognized that they incorporate other behavioral health issues, not just substance abuse, during SBIRT training since such issues will also often present among patients (e.g., obesity, anger, sexual practice).

Challenges in training residents: Along with differences in the levels of prior knowledge and experience with substance abuse treatment and addiction, the instructors identified two additional challenges to training residents in SBIRT: (1) variations in basic interviewing skills; and (2) differing levels of comfort in discussing topics with patients that can cause the patient to react defensively or with resistance (e.g., substance, sexual practice, health behavior change, weight). Also, new limits on consecutive duty hours have made scheduling/coordinating the trainings more difficult since the psychiatry rotation is only a month long. Fitting the SBIRT training into that timeframe as planned will require some creativity and ingeniousness.

Recommendations for enhancing the project: The instructors expressed interest in leveraging interactive technology to deliver training and document progression in knowledge, attitudes, and behavior change applying SBIRT. Additionally, they noted an interest in having access to other medical residency grantee training videos and materials for the purpose of improving the MD3 program without duplicating the efforts.

Program: Family Medicine (Behavioral Medicine)
Participants: Dr. Adrienne Williams (Director of Behavioral Medicine) and Dr. Eva Diciccio (Resident)

Observations: Major topics of discussion included: (1) methods of instruction and scope of training content; (2) innovations; (3) challenges in training residents; and (4) recommendations for enhancing the project.

Methods of instruction and scope of training content: Training approaches vary by year of residency. First-year family medicine residents participate in a 1-month clinic rotation in behavioral health. Training is provided in health and substance abuse screening using an open-ended format and general listening skills. Teaching tools include PowerPoint presentations, pocket cards, role-plays, and demonstrations.

Appropriate terminology and question wording are discussed. Screening demonstrations are performed by the faculty with real patients and the resident practices the skill with the next patient, as the faculty provides one-on-one shadowing and feedback. The first-year residents are exposed to various screening tools; no one specific screening tool is utilized. Rather, the use of conversational skills is emphasized as a means of obtaining information from the patient.

In their second year, family medicine residents receive additional training in motivational interviewing and brief intervention is introduced. Tobacco, alcohol, or drug use triggers brief intervention. Second-year residents are shadowed with real patients for a few half days. The residents practice at various clinical sites and are evaluated using standardized patients at end of the year. The standardized patient encounter is videotaped and feedback is provided to the resident.

During the third year, family medicine residents focus more intensely on motivational interviewing and advanced skills. These residents are also videotaped with standardized patients for the year-end evaluation and provided with feedback.

Innovations: The clinic has transitioned to the use of EMR. Screening questions will appear on the devices automatically, which will ensure the standardization of screening. A video monitoring system will also be installed in each clinic room by March 2011, which will facilitate the faculty's ability to provide feedback on patient encounters.

Challenges in training residents: The faculty identified scheduling as the greatest challenge to resident training. The residents are not localized; consequently, they do not participate in didactics and other trainings together as a group. However, lectures are repeated to increase the chance that everyone will receive the lecture over time. Other challenges include workflow and time. Time limitations and workflow limit the residents' availability to perform lengthy screenings using the AUDIT and ASSIST. Another limitation is patient illiteracy. One-third of the patient population is illiterate and need assistance with reading and completing forms.

Recommendations for enhancing the project: SBIRT should become a requirement for all family medicine physicians. The nationwide dissemination of SBIRT will ensure faculty buy-in. SBIRT should also be required continuing education. The pocket cards and access to informational Web sites are also important.

Program: Obstetrics-Gynecology
Participants: Dr. May Blanchard (Assistant Professor)

Observations: Major topics of discussion included: (1) barriers to training; (2) facilitators to training; and (3) sustainability of training.

Barriers to training: Dr. Blanchard discussed the factors that push and pull a physician, thereby constraining their ability to implement SBIRT. She notes that when substance use/abuse is an obvious issue, the physician can plan to spend adequate time to intervene, however, when the issue arises toward the end of a physician-patient encounter it is very difficult to begin to intervene at that point due to time constraints. Also, Dr. Blanchard noted the difficulty in incorporating an additional screening tool to the existing battery of social history, depression tool, etc.

Facilitators to training: Dr. Blanchard noted that having a champion at the program director level really improves implementation. For example, the obstetrics-gynecology program has designated a 4-hour block on Fridays for resident training. By designating this section of time for training, it allows for greater ease when scheduling SBIRT trainings, which is a critical issues considering new caps on consecutive work hours.

Sustainability of training: Dr. Blanchard expressed confidence in the sustainability of SBIRT training citing (1) the skill set is critical for residents to develop; (2) resources available to support continued training and implementation (e.g., social work staff, standardized patient practice facility, etc.); (3) ability to fold in SBIRT components into existing workflow and procedure (e.g., screening items with existing screening tools); and (4) faculty support.

Observations (residents): When polled at the beginning of the training, no resident expressed having any prior knowledge or familiarity with SBIRT. Initially, residents appeared fatigued, but as the lecture progressed residents became more receptive and engaged as the training shifted from a formal lecture style to an interactive dialogue with the instructor and between other residents. In particular, role-play and other interactive exercises appeared to improve receptivity and engagement. For example, when illustrating a point about the need to clarify levels of drinking reported by patients, the instructor used empty containers of alcoholic beverages to demonstrate common variation in volume and percentage of alcohol per drink (e.g., one drink as reported by a patient may be a 12 oz. can of beer or a 22 oz. can of beer, the alcohol content of one 1.5 oz. drink of spirits can be 60 proof or 100 proof). In another example, residents were paired in groups of two to practice administering the Annual Health Risk Questionnaire (an MD3-developed SBIRT screening tool). Each resident played the role of physician or patient and then changed roles. Afterward, the instructor solicited feedback from residents on their impressions of the tool and discussed implications for integration into the workflow of an actual clinical setting. Interactivity seemed to be a key to successful engagement in training. Additionally, residents expressed a shared experience of frustration and difficulty in dealing with patient behavior change, including cases involving behavioral health problems. Such experiences may have contributed to

resident recognition of the need/relevance and practical value of the SBIRT training, thereby increasing the level of engagement.

Observations (instructors): Overall, portions of the training in which the instructors employed an interactive and more conversational lecture style were more successful in engaging residents than portions of the training in which a more didactic lecture style was employed. A notable strength of the instructors was the adaptation components of the curriculum for the obstetrics-gynecology program area. For example, the instructors inserted slides into the presentation that illustrated longitudinal trends of substance abuse and frequent patterns of substance abuse among pregnant women to illustrate the scope of the problem for the specific patient population. Additionally, the instructors used a concept called the teachable moment, which focuses on the nature of patients' circumstances as an opportunity to address substance abuse problems. In the case of the obstetrics-gynecology program area, a teachable moment exists when an individual with a substance use/abuse problem becomes pregnant and begins obstetric care. This moment can serve as an opportunity for the physician to intervene, using SBIRT, to explain the health effects of substance use/abuse on the mother and child, motivate behavior change, and refer to treatment if necessary. The result may be reduction or cessation of substance use/abuse by the mother to the benefit of the mother and child.

Summary of Onsite Observations

Based on the meetings and discussions held during the 2½-day site visit, key topics were identified. These topics are summarized below:

1. ***Residency Buy-In:*** Facilitators for initiating buy-in from residency program areas to participate in SBIRT training included (1) having strong champions at the administrative- and residency director-levels; (2) having cross-program collaboration and awareness through the psychiatry consult service that interacts with residents across specialties; and (3) recognizing drug and alcohol abuse as a major issue that residents confront in treating patients in the Baltimore, MD, area. Consultation from a national expert would further strengthen and support program area buy-in.

2. ***Faculty Training:*** Faculty trainings are targeted and being conducted individually. Residency program faculty, having varying levels of knowledge and skill regarding SBIRT, require individually targeted training of SBIRT. Residency program demonstrate a familiarity with screening and referral to treatment but can benefit from training specified to their need. Brief intervention was identified as the area of most need.

3. ***EPIC EMR System:*** The EPIC EMR system, although offering a means for documenting SBIRT delivery in clinical encounters, has limitations. For example, the social history portion of EPIC is nonadjustable, which means the SBIRT screening component cannot be incorporated and must be integrated as a separate module. This may create extra steps for physician documentation and interfere with physician workflow. Secondly, residents rotate through roughly 12 hospitals, some of which are not using an EMR system or are using an EMR system that does not communicate with EPIC. These interoperability issues can affect information sharing and coordination of patient care, data collection for evaluation SBIRT delivery, etc.

4. ***Booster/Refresher Trainings:*** In certain residency program areas (e.g., psychiatry), a majority of SBIRT training is conducted in the early years of residency. The MD3 program has identified the need for booster or refresher SBIRT trainings (e.g., psychiatry may use case conference meetings in PGYII and PGYIII to reinforce SBIRT knowledge and skills) and plan to incorporate these trainings into their program implementation.

5. ***Sustaining SBIRT Training Through Accreditation:*** An accreditation requirement (e.g., ACGME) for behavioral health training across residency program areas, although difficult to achieve, was frequently acknowledged as a powerful mechanism for sustaining SBIRT. Psychiatry, having such an accreditation requirement, was cited as a strong example of a case where residents can be trained in SBIRT and meet accreditation requirements simultaneously.

6. ***Dosage Analysis:*** The evaluation design will include plans for measuring the relationship between dosage of training and outcomes (e.g., analyzing hours spent delivering SBIRT in actual and simulated clinical encounters against results of KAB surveys, scores/feedback for mock SBIRT delivery). Understanding the effect of training dosage may offer guidance for program improvement, especially since there is variability in dosage across the three versions/lengths of SBIRT training.

7. ***Uses of Data Post-Grant Funding:*** The data can be analyzed and reported for program improvement. As programs are refined and enhanced, the results may support the case for accreditation and other means for sustainability. The data are also intended to be shared during dissemination and training with collaborators and through publications, as appropriate.