

Manual for the Specialty Indecision Scale, 2nd Edition

George V. Richard, Ph.D.
Mark L. Savickas, Ph.D.
Larry Early, Ph.D.
Jeanette Calli, M.S.
Carissa A. Englert, M.S.
John Bono, M.S.

Table of Contents

INTRODUCTION	1
SCORING AND REPORTING	3
SIS Score Report	3
Summary Page.	3
Scale Reports.	3
SIS Scoring	3
INTERPRETING THE SIS	5
Scale Descriptions	5
Item Recommendations	5
Overall Scale Recommendations	5
Interpreting the results	5
ADVISOR RESOURCES AND GUIDANCE	7
General Overview and Counseling Guidelines—Role of the Advisor	7
Recommended interventions for advisors	7
SIS Interactive Manual	7
TEST CONSTRUCTION	8
Item Development	8
Factor Structure	10
Reliability	12
Development of Student Feedback and Advisor Interventions: National Panel on Career Decision-Making Difficulties	12
Normative Data	12
SUMMARY	14
REFERENCES	15
Appendix 1. Specialty Indecision Scale, 2nd Edition—Scale and Item Descriptions	16
Appendix 2. Item Descriptions, Suggested Activities for Students, and Advisor Recommendations	17
Readiness: Need to begin the process of specialty choice	17
Information: Need to locate sources of information and guidance	19
Identity: Need to identify one's interests, values, personality, and career goals	22
Barriers: Need to resolve external conflicts	24
Indecisiveness: Need to reduce internal conflicts	27
Self-Doubt: Need to increase decision-making confidence	30
Other Concerns	32
Appendix 3. Overall Scale Recommendations	35
Appendix 4: National Panel on Career Decision Making Difficulties	38

INTRODUCTION

Career indecision is defined as difficulty in making career decisions. While many individuals do not face such difficulty in choosing their careers, others can experience one or more of a number of problems that can lead to an inability to decide. Therefore, the identification and management of career indecision is an important step in the provision of career guidance and support. Recognizing that indecision exists, accurately identifying the source of that indecision, and offering support and guidance to individuals in overcoming it will significantly improve one's ability to make sound career choices.

A substantial body of research on career indecision exists in the vocational psychology literature. Much of it focuses on high school and undergraduate level college students, with very little attention to the decision-making difficulties faced by upper level professional students. With reports of 55% and 80% of medical students changing their specialty choice during medical school^{1,2,3}, and 10% to 15% of residents changing major specialties^{4,5,6,7,8,9,10}, addressing career indecision in this unique population is an especially important area of research.

Causes of career indecision range from lack of information to internal conflicts, external barriers, and self-doubt. Medical students face increasing difficulty in making important career decisions, especially once the choice of medicine is made for a number of reasons, with over 100 medical specialty and subspecialty options available and some very important consequences resulting from making uninformed career decisions. Indecision is most likely due to the complexity of choices these students face, the lack of exposure and limited opportunities to fully explore and understand the numerous career options available to them, and the serious financial and emotional repercussions of making a poor choice. The choice can also be influenced by other familial and social-psychological factors that may often result in indecision similar to that faced by younger high school and college students. During their fourth year of medical school students choose their specialty and apply for residency training in that chosen area of specialization. Some authors contend that, because of the difficulties mentioned above, the choice of specialty should be delayed until after completion of medical school¹¹, a recommendation that is not easily implemented. Instead of supporting a delay of the decision, it may be more useful to develop more effective resources that aid the career planning and decision-making process.

This manual describes the development, administration, scoring, and reporting of the Careers in Medicine (CiM) Specialty Indecision Scale (SIS), 2nd Edition, an extension of the work of Savickas and his colleagues^{12,13,14,15} that also incorporates a taxonomy of career decision-making difficulties developed by Gati, Krausz, and Osipow.¹⁶ The SIS is a 35-item inventory of concerns medical students experience when making a specialty choice. Respondents rate each item on a scale ranging from 1 (Does not describe me at all) to 4 (Describes me well). It is administered electronically, and is available on the AAMC's CiM Web site, a password protected site open to all medical students enrolled in U.S. and Canadian allopathic and osteopathic medical schools. The results yield standard scores for each of six major career concerns: Readiness, Information, Identity, Barriers, Indecisiveness, and Self-Doubt. The scores on these six career concerns and highest scored items are then used to provide feedback to medical students and recommended interventions to their advisors to help overcome these difficulties.

ADMINISTERING THE SIS

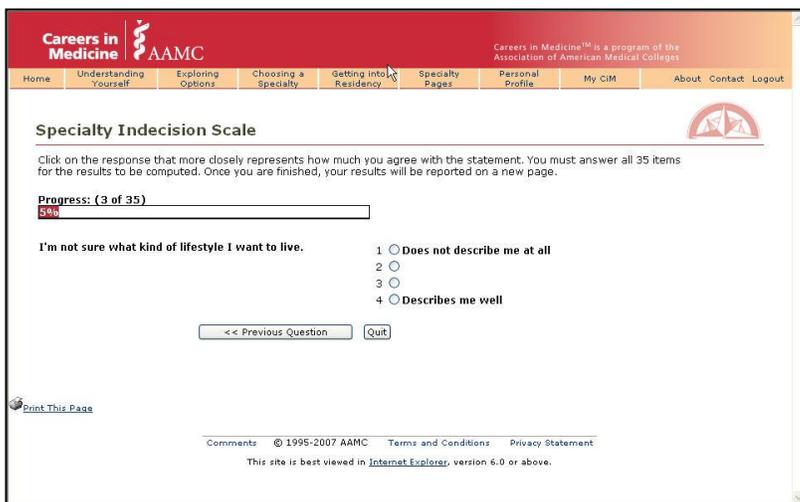
The SIS was developed as the first step in the completion of the CiM assessment battery, available to registered users of the CiM Web site. It can assist students in identifying their career decision-making concerns and developing a plan for completing the CiM career planning program. After logging on, the SIS is accessible through the “Understanding Yourself” main menu option. A general description of the instrument is presented and the user can then select “Begin Exercise.”

Directions for completing the instrument are as follows:

Click on the response that more closely represents how well the statement describes you. You must answer all 35 items for the results to be computed. Once you are finished, your results will be reported on a new page.

The user is presented with each of the 35 items individually, with instructions to rate the items using the 4-point scale presented on the page. Once the user selects one of the 4 scale points, the next item is displayed and progress is indicated in the progress bar on the page. Figure 1 illustrates the SIS administration page.

Figure 1. Illustration of a page in the administration of the Specialty Indecision Scale, 2nd Edition.



The screenshot shows the 'Specialty Indecision Scale' administration page. At the top, there is a navigation menu with options: Home, Understanding Yourself, Exploring Options, Choosing a Specialty, Getting into Residency, Specialty Pages, Personal Profile, My CIM, About, Contact, and Logout. The main content area features the title 'Specialty Indecision Scale' and a sub-header 'Specialty Indecision Scale' with a small graphic. Below the title, there is a paragraph of instructions: 'Click on the response that more closely represents how much you agree with the statement. You must answer all 35 items for the results to be computed. Once you are finished, your results will be reported on a new page.' A progress bar indicates 'Progress: (3 of 35)' with a 'Start' button. The current question is 'I'm not sure what kind of lifestyle I want to live.' and the response options are: 1 Does not describe me at all, 2 , 3 , and 4 Describes me well. At the bottom of the question area, there are buttons for '<< Previous Question' and 'Quit'. A 'Print This Page' link is located in the bottom left corner. The footer contains copyright information: '© 1995-2007 AAMC' and links for 'Terms and Conditions' and 'Privacy Statement'. A note at the bottom states 'This site is best viewed in Internet Explorer, version 6.0 or above.'

The SIS can be completed in approximately 10 – 15 minutes to complete. Students are not allowed to save an incomplete assessment; they must complete it in one session, due to the possible influence of experiences over time on career indecision. Concerns may have been resolved during the period between assessments rendering previous responses inaccurate.

SCORING AND REPORTING

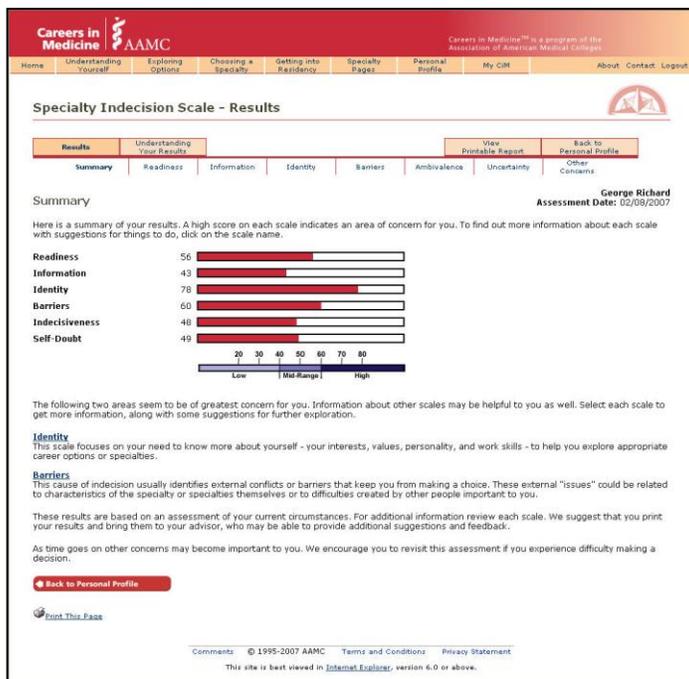
SIS Score Report

Once all statements have been rated, responses are immediately scored and stored in the CiM database, and the SIS Score Report is displayed (see Figure 2). The report opens with a “Summary Page” that includes links to detailed reports for each of the six scales, a page containing information about “Other Concerns,” a section on “Understanding Your Results,” and an option to “Print a Full Report.”

Summary Page.

The Summary Page graphically displays the student's scores on each of the six causes of career indecision, and identifies up to two major areas of concern for the student, along with instructions for reviewing the remainder of the report and seeking guidance from their CiM Liaison or an advisor. The two scales with the highest scores are identified on the Summary Page. In cases where all scale scores are low, the user is informed of this result and encouraged to review the detailed scale reports for the existence of individual items that may have been rated high.

Figure 2. Summary Page for the SIS Score Report



Scale Reports.

To provide additional guidance a separate tab is available for each scale that describes the meaning of the score and lists the items, or statements, that the student identified as being of particular concern (i.e., the student rated the item as “describes me well”). For each item specific suggestions are provided to help reduce the severity of the concern for the student. There is also a tab, called “Other Concerns,” containing other high scoring statements not contained in the six scales of the instrument. The student is encouraged to follow those suggestions, and to discuss their results in more detail with an advisor in their school.

The SIS Report will be added to the student’s Personal Profile, thereby providing the student with the ability to access the report any time after completing the assessment. Reports of previous administrations of the SIS are also available on the Personal Profile.

SIS Scoring

Scoring for the SIS was developed on a normative sample of over 1200 medical students completing the instrument in the spring of 2005. Means and standard deviations were calculated for each scale, and using this information, individual scores were calculated and converted to a standard score with a Mean of 50 and Standard Deviation of 10. These standard scores were calculated using the following formula:

$$\text{Standard Score} = 50 + (((\text{Raw Scale Score} - \text{Mean Scale Score}) / \text{Scale Standard Deviation}) * 10)$$

Scores of less than 40 represent a low score, those between 40 and 59 are mid-range, and scores of 60 and above are high. Table 1 presents the items used in scoring each of the six SIS scales, along with the mean and standard deviations for each scale.

Table 1. SIS Scale Items, Mean Scores and Standard Deviations.

Scale (Career Concern)	Item numbers	Mean Score	Standard Deviation
Readiness	1, 8, 15, 22, 29	10.11	3.14
Information	2, 9, 16, 23, 30	10.82	3.8
Identity	3, 10, 17, 24, 31	8.34	2.7
Barriers	4, 11, 18, 25, 32	8.28	2.67
Indecisiveness	5, 12, 19, 26, 33	12.82	3.69
Self-Doubt	6, 13, 20, 27, 34	11.51	3.49

A number of items were not included in the calculation of the above scales because they did not correspond to the final constructs measured by the resulting six scales. However, they contribute important information about other areas of medical student career indecision to warrant inclusion in the instrument, and should be explored by the student and advisor.

INTERPRETING THE SIS

Scale Descriptions

The SIS measures difficulty in the following six areas:

Readiness—Need to begin the process of specialty choice. This usually means that the student is not ready to make a decision for a number of reasons. He or she may feel that it is too early to decide or that other events are more important than their need to make a decision.

Information—Need to locate sources of information and guidance. This concern addresses a need for the student to find out more about how to make career decisions - who to talk to, what to do, where to go. Often this concern is prevalent in students who are just beginning the process of career decision-making or specialty choice, or who have never completed the career decision-making process.

Identity—Need to identify one’s interests, values, personality, and career goals. This concern focuses on the student’s need to know more about him or herself – his/her interests, values, personality and work skills – to help explore appropriate career options or specialties.

Barriers—Need to resolve external conflicts. This area of indecision usually identifies external conflicts or barriers that may be keeping the student from making a choice. These external “issues” could be related to characteristics of the specialty or specialties themselves or to difficulties created by other people important to the student.

Indecisiveness—Need to reduce internal conflicts. This cause of indecision identifies internal conflicts that impede the ability to decide. Often this concern focuses on two or more specialties that are equally appealing to the student or that may have competing characteristics that makes it difficult for him/her to choose.

Self-Doubt—Need to increase decision-making confidence. Psychosocial factors, such as self-confidence, anxiety, or a feeling of being overwhelmed with the decision are important causes for high scores on this area of concern.

Scores for each scale were calculated from the answers to the 35 questions on the instrument. For each scale, a total of five items were used to create the score. Appendix 1 presents items used in scoring each of the scales.

Item Recommendations

Most high scales will contain items that the student indicated was a major concern (i.e., “describes me well”). In those cases the items will be reported on the scale report page, and will include suggested activities the student can undertake to address the specific concern. Appendix 2 contains the items, organized by scale, and those student activities suggested in the report. In some cases a scale score can be low or mid-range, overall, but still contain one or more high items. Those high items will be displayed on the scale report with the suggested activities.

Overall Scale Recommendations

There may be cases in which the student obtains a high overall scale score but does not report any individual items that are of serious concern. This occurs when the student has rated all items in the scale moderately high, but less than a 4 (Describes me well). In these cases some general suggestions and feedback are provided for the student. They are presented in Appendix 3.

Interpreting the results

The following is an approach to interpreting the results and providing guidance to a student. These are recommended intervention procedures and should be followed only with your knowledge of the student's situation. Other factors may be involved in the student's life, and must be taken into consideration when advising the student.

1. First, review the overall scale score and identify those that are highest. The highest scales should be explored first. They tend to indicate areas of urgent concern.
2. Describe the scales and how each contributes to career indecision.
3. Review each scale containing a high score. There will likely be one or more items to which a score of 4 (describes me well) has been assigned. These are the statements that will indicate areas of possible distress. Recommendations and feedback are provided to the student for each high item. If the scale is high, but no items have been rated highly, general feedback and guidance pertaining to the overall concern is provided.
4. While there may be more than two areas of concern that have received high scores, only the two highest scores will be identified on the Summary Report. These areas should be explored first, as higher score may be indicative of more serious concerns. If there are many high scale scores the student is encouraged to see an advisor to address the large number of possible concerns they are facing.
5. In addition to high scales, there may be other concerns that fall in the midrange of the scale and still may cause concern for the student. For example, there may be one or more specific statements important to the student, but not enough to raise their score to a high level on the overall scale. In those cases we present those high items and offer suggestions for further activity in those areas.

Students should be encouraged to retake the SIS over time as they address existing concerns and begin to experience new ones.

ADVISOR RESOURCES AND GUIDANCE

General Overview and Counseling Guidelines—Role of the Advisor

Some of the concerns identified in the SIS may be present at different stages during the student's medical school experience and career development process. While there are no hard and fast rules about when these concerns become evident, early stages tend to involve readiness, information, identity, while later stages tend to be more focused on barriers, indecisiveness and self-doubt. In addition, scores tend to decrease as students complete their medical education, i.e., scale scores are higher for first and second year students, and lower as they progress towards the later years of medical school.

The SIS was developed following major theories of career indecision and subjected to rigorous psychometric procedures. A group of medical students from across the United States served as the initial respondents and their results were used to create the structure of the instrument, as well as the normative results that guide our understanding of medical students' career indecision.

As you provide guidance to students about their concerns, please keep in mind that year in school may play an important role in understanding their scores. For instance, a high readiness score may not be surprising for students in their first year of medical school. However, readiness as a concern for a third or fourth year student may require more immediate attention. While this concern should be explored in both cases the causes and reasons for this difficulty and the interventions followed may in all likelihood differ.

Your role as an advisor will be important as you help your students understand their results. In addition to the information provided here, the CiM Advisor Manual ¹⁷ contains information about skills you can use in assisting your students. For more detailed information consult the Advisor Manual.

Recommended interventions for advisors

In addition to the suggestions we provide to the student for each statement in the SIS, we have developed some additional suggestions for the advisor to consider when working with the student. These suggestions are presented in Appendix 2, which also includes the feedback and suggested activities for students on each item. Review these suggested interventions in conjunction with the student feedback as you consider how you might advise the student. The recommendations were developed with input from a National Panel on Career Decision Making Difficulties, comprised of CiM liaisons from medical schools throughout the U.S. and Canada, and supplemented with comments from AAMC CiM staff. These are only suggestions to consider. Not all of them will necessarily apply to the situations facing each unique student. Use your knowledge of the student's specific situation to guide your work.

SIS Interactive Manual

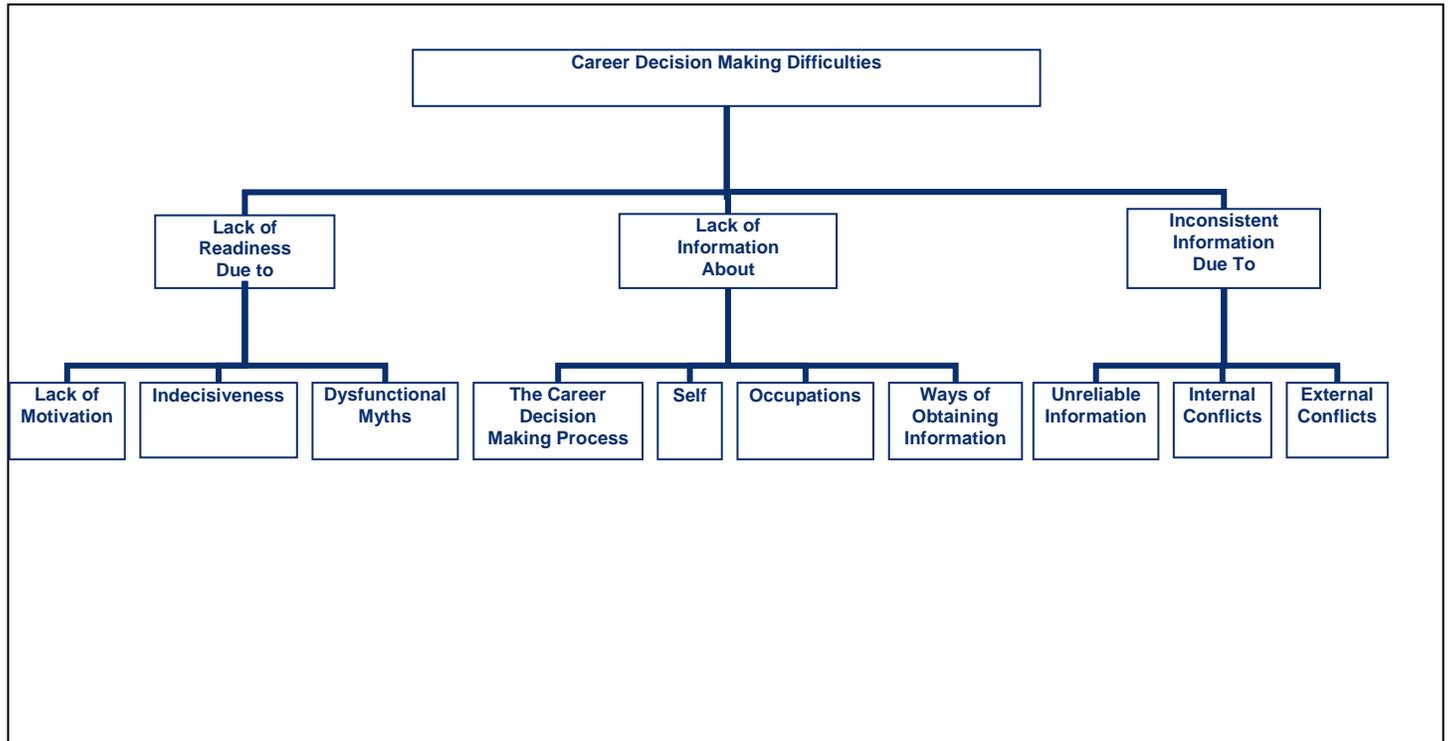
The information described in this manual, and the suggested feedback and interventions, are available on the CiM Web site for users registered as School Liaisons, Liaison Support, or Faculty/Staff. They can be accessed through the SIS Interactive Manual available from the SIS introductory page.

TEST CONSTRUCTION

Item Development

A number of measures for assessing career indecision in the general population have been developed over the years.^{18, 19} In one model, Gati, Krausz, and Osipow¹⁷ developed a taxonomy of career decision-making difficulties containing three major difficulty categories and ten subcategories (see Figure 3). These difficulties occur at different stages in the career decision-making process. Lack of Readiness tends to occur prior to making a career decision, while Lack of Information and Inconsistent Information occur during the career decision-making process itself. Gati, et al., focused their research on the development of a Career Decision-Making Difficulties Questionnaire (CDDQ) and the application of the taxonomy to high school and college students. This model has not been applied to address the decision making difficulties of professional students.

Figure 3. Taxonomy of Career Decision-Making Difficulties



Utilizing a revision of another major measure of career indecision, Savickas and his colleagues^{14, 15} developed a 19-item instrument, the Specialty Indecision Scale, which measures four major areas of indecision within the decision-making process. These four areas were identified as a cognitive factor that describes information deficits, a conative factor that addresses emotional or affective barriers, a criterion restraints factor that addresses excessive standards or external conflicts that affect specialty choice, and a fourth factor dealing with implementation of the decision. The use and relevance of the Specialty Indecision Scale to the medical school population is recognized as an important precursor to the conceptualization and development of the current instrument.

Items for the Specialty Indecision Scale (SIS), 2nd Edition, were constructed following the CDDQ taxonomy established by Gati, Krauss, and Osipow.¹⁶ At least four to five items were written for each of the ten difficulty areas. Following the work of Savickas and his colleagues in the development of the original SIS, the items were written to focus specifically on the field of medicine and the choice of a medical specialty. A total of 41 items were developed following these guidelines. These items were sent to the original developer of the CDDQ taxonomy for review, and based on this review and that of the authors many of the items were either revised or removed, yielding a total of 36 items. A Likert-type response format, ranging from 1 (Does not describe me at all) to 4 (Describes me well), was used to rate each item. Higher scores on the scale indicated that the item is an expressed career concern.

A web-based version of the draft SIS was developed and distributed to students from U.S. allopathic medical schools from across the country. Subjects were identified by asking medical school student affairs deans in each of 125 US medical schools to forward a request to participate in the study to their students. Responses were collected from 1,581 students representing approximately 50 medical schools from across the United States. Some students did not complete the entire instrument and, after removing these incomplete responses, the remaining dataset contained 1,207 responses. Average age of the students was 25.9 years old. There were 509 males (42%) and 698 females (58%). Seventy-seven percent of the respondents were Caucasian, 9.2% were Asian, 4.8% were African American, and 2.7% were Hispanic. These percentages are generally representative of the racial and ethnic

backgrounds of the medical student population. The students were spread evenly across the four years of medical school (27.9% were first year students, 27.3% were second years, 25.1% third years, and 17.7% fourth years).

Factor Structure

Table 2 presents the results of a principal components analysis (PCA), which yielded seven factors, and accounted for approximately 53% of the total variance in the model. To further understand the results, cluster analysis was also conducted using the EXTREE method described by Gati, Krausz, and Osipow¹⁷ in the development of the CDDQ. Each analysis yielded seven factors but with some variation between the two approaches. Five factors with nearly identical results were produced by both analyses, but the factor analysis yielded an additional factor that did not exist in the cluster analysis. A seventh factor only yielded two good items in the PCA factor analysis, and the remaining items were spread out in other branches in the cluster analysis. No other well-formed clusters or factors were identified. After examination of the inter-item correlations and reliability estimates, the final structure of the instrument was determined, composed of six factors, or scales, with five items each. One item was dropped from the instrument, and five items were kept, even though they did not form a seventh factor. These items were considered important to medical students in making career choices, and will be considered for the possible development of additional scales.

PCA Factor 1 contained five identical items (11, 16, 17, 22, and 24). Two items were removed from this scale due to a lack of correspondence between the two analyses, and the factor was labeled Information. PCA Factor 2 contained five identical items (7, 23, 25, 30, and 31). No other items loaded on this factor in either analysis. The factor was labeled Indecisiveness. Factor 3 contained six identical items (4, 12, 13, 14, 19, and 35), however, because of the desire to limit the number of items to five, item 14, with the lowest loading on the factor was removed and the factor was given the label Readiness. PCA Factor 4, labeled Identity, contained four identical items (21, 27, 33, and 36) and two items not found in the cluster analysis, while the cluster analysis contained an additional item that did not load on this factor in the PCA. After examining these three items, item 32 was found to fit best with this factor. The two remaining items (26 and 34) were removed. The four items that loaded on PCA Factor 5 (1, 8, 9, and 18) did not group together in the cluster analysis. These four items, along with item 26, formed a new scale, which was named Self-Doubt. In the case of PCA Factor 6, five identical items were found (6, 10, 15, 20, and 29), and two additional items (3 and 32) were supported in the cluster analysis but not in the PCA factor analysis. These two items were removed from this factor and the resulting scale was named Barriers. PCA Factor 7, with only three items loading on this factor, found only two identical items (2 and 5) in the cluster analysis. Because of this and the lack of meaningful relationships among the remaining items in this analysis (3, 14, and 34) a seventh scale was not established. The resulting instrument included six scales (Readiness, Information, Identity, Barriers, Indecisiveness, and Self-Doubt), each containing five items, and the remaining five items that did not fit together as a scale.

Reliability

Internal consistency reliability estimates (coefficient alpha) for the scales were reported as 0.72 for Readiness, 0.84 for Information, 0.68 for Identity, 0.65 for Barriers, 0.76 for Indecisiveness, and 0.70 for Self-Doubt. A Cronbach's alpha coefficient of 0.90 was found for the entire scale. One item, item 28, was removed from the instrument because it lowered the overall reliability of the instrument. Mean inter-item correlations for each of the six scales ranged from 0.30 for Identity to 0.51 for Information indicating that the items are sufficiently homogeneous without being redundant. Test-retest reliability analysis has not been completed at this time.

Development of Student Feedback and Advisor Interventions: National Panel on Career Decision-Making Difficulties

To assist with developing feedback, interventions, and resources relevant to each item and overall concern in the SIS, a National Panel on Career Decision-Making Difficulties was established, consisting of members of the CiM community—mainly CiM Liaisons—from US and Canadian medical schools who represented a variety of educational backgrounds and experience (Appendix 4 contains a roster of panel members). Each week, for a period of approximately six weeks, a small number of items were sent to panel members with instructions to provide recommendations on possible underlying problems, interventions, advice, guidance, and resources they would provide to a student presenting with each concern. At the end of the six week period, nearly 25 responses for each item were collected, providing a rich source of information with which to provide guidance for both students and advisors on the use of the results. Panel responses covered a range of perspectives and recommendations and also included suggestions about item wording and factor descriptions. After extensive staff review and revision, as well as additional review and comments by the panel, student feedback and advisor interventions were created. These were then incorporated into the SIS Score Report for students and the SIS Interactive Manual for advisors, all of which can be found in Appendix 2.

Normative Data

Mean scale scores, overall and by gender, are presented in Table 3. Total possible scores range from 5 to 20, and mean scores for the sample ranged from 8.28 on the Barriers Scale to 12.82 on Indecisiveness. Moderate levels of indecision were found in this sample of students, with higher scores on Indecisiveness, Self Doubt, and Information. Significant differences were found between men and women on only two of the six scales (Readiness and Self-Doubt), while no differences were found with regard to race or ethnic background.

Table 3. Mean SIS Scale Scores and Standard Deviations Overall and By Gender

	Male		Female		Total	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Readiness	9.40	2.57	9.02	2.65	10.11	3.14
Information	10.70	3.79	10.91	3.80	10.82	3.8
Identity	8.47	2.79	8.24	2.64	8.34	2.7
Barriers	8.32	2.64	8.26	2.69	8.28	2.67
Indecisiveness	13.02	3.85	12.66	3.57	12.82	3.69
Self-Doubt	11.00	3.36	11.88	3.55	11.51	3.49

Further significant differences were found for subjects based on year in school for all scales except Barriers (see Table 4).

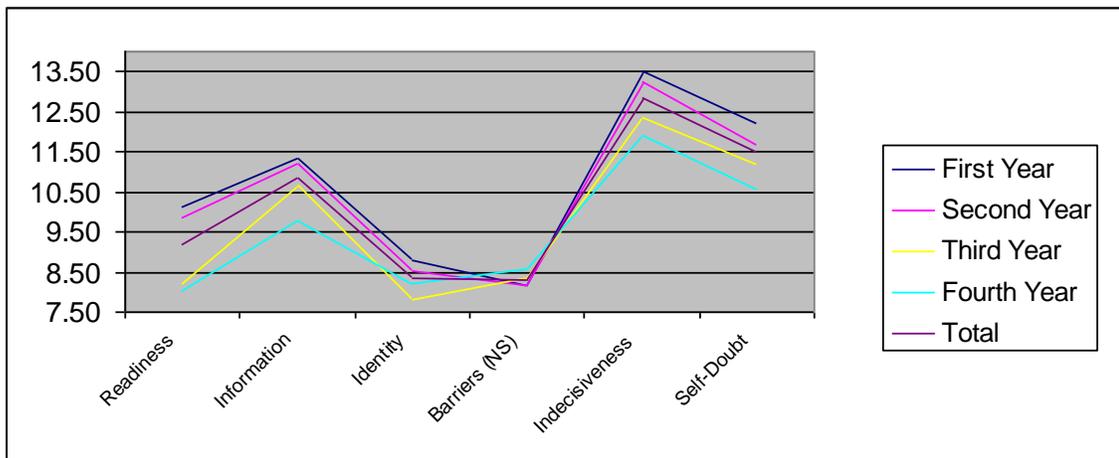
Table 4. Mean SIS Scale Scores and Standard Deviations by Year in School

	M1	M2	M3	M4
--	----	----	----	----

	Mean	Std. Deviation						
Readiness	10.13	2.51	9.85	2.63	8.20	2.35	8.06	2.28
Information	11.32	3.57	11.18	3.75	10.65	3.99	9.77	3.71
Identity	8.78	2.68	8.50	2.85	7.82	2.50	8.19	2.69
Barriers	8.16	2.48	8.17	2.41	8.37	2.84	8.56	3.00
Indecisiveness	13.50	3.27	13.24	3.49	12.36	3.94	11.90	4.02
Self-Doubt	12.22	3.39	11.70	3.46	11.21	3.55	10.58	3.41

Mean scores tended to decrease over time in the curriculum, with first and second year students reporting significantly higher concerns than third and fourth year students on Readiness, Information, Identity, Indecisiveness and Self-Doubt (see Figure 4). Students in the first and second years of medical school tended to score significantly higher than those in their third and fourth years on all subscales except Barriers.

Figure 4. Mean SIS Scales by Year in School



SUMMARY

The Specialty Indecision Scale, 2nd Edition, provides a means for students and advisors to navigate the comprehensive array of print and web-based career planning resources available to medical schools and students in the U.S. and Canada. It will provide additional capabilities to medical schools and their students in the diagnosis and treatment of career indecision, and can be a useful tool for practitioners who want to learn more about specialty indecision, and to find ways to focus career counseling efforts to assist students faced with the rigorous demands of a medical school curriculum. These students have limited time for making informed career choices. The SIS can contribute to a more efficient and effective means for engaging in the career decision-making process.

REFERENCES

1. Kazerooni EA, Blane CE, Schlesinger AE, Vydareny KH. Medical students' attitudes toward radiology: Comparison of matriculating and graduating students. *Academic Radiology* 1997;4:601-607.
2. Forouzan I, Hojat M. Stability and change of interest in obstetrics-gynecology among medical students: Eighteen years of longitudinal data. *Academic Medicine* 1993;68:919-922.
3. Zeldow PB, Preston RC, Daugherty SR. The decision to enter a medical specialty: Timing and stability. *Medical Education* 1992; 26:327-332.
4. David AK, Blosser A. Long-term outcomes of primary care residency choice by graduating medical students in one medical school. *Journal of Family Practice* 1990;31:411-416.
5. Singer AM. The class of '83: A follow up study of 1983 medical school graduates through the first six postgraduate years. *Final Report to the Health Resources and Services Administration*. Contract no. 240-87-0067 with the Association of American Medical Colleges, Washington DC, 1991.
6. Wolfson PJ, Robeson MR, Veloski JJ. Medical students who enter general surgery residency programs: A follow-up between 1972 and 1986. *American Journal of Surgery* 1991;162:491-494.
7. Dial TH, Lindley DW. Predictive validity of specialty choice data from the AAMC Graduation Questionnaire. *Journal of Medical Education* 1987;62:955-958.
8. Davis WK, Coles C, Bouhuijs PAJ, Donaldson M, Dauphinee WD, Hoftvedt BO, et al. Medical Career Choice: Current Status of Research Literature. *Teaching and Learning in Medicine* 1990;2:130-138.
9. Tardiff K, Cella D, Seiferth C, Perry S. Selection and change of specialties by medical school graduates. *Journal of Medical Education* 1986;61:790-796.
10. Weismann CS, Levine DM, Steinwachs DM, Chase GA. Male and female physician career patterns: Specialty choices and graduate training. *Journal of Medical Education* 1980;55:813-825.
11. Schafer S, Shore W, Hearst N. Is Medical School the Right Place to Choose a Specialty? *Journal of the American Medical Association* 2001;285:2782-3.
12. Savickas ML. Medical Career Development Inventory and Medical Specialty Decision Scale, *Journal of Vocational Behavior* 1984;25:106-123.
13. Lewis DW, Savickas ML, Jones BJ. Career Development Predicts Medical School Success, *Journal of Vocational Behavior* 1996;49:86-98.
14. Savickas ML, Alexander DE, Osipow SH, Wolf, FM. Measuring Specialty Indecision among Career-Decided Students, *Journal of Vocational Behavior* 1985;27:356-367.
15. Savickas ML, Alexander, DE, Jonas AP, Wolf FM. Difficulties Experienced by Medical Students in Choosing a Specialty, *Journal of Medical Education* 1986;61:467-469.
16. Gati I, Krausz M, Osipow S. A taxonomy of difficulties in career decision making. *Journal of Counseling Psychology* 1996;43:516-526.
17. Association of American Medical Colleges. *Careers in Medicine Advisor Manual*. Washington, DC: Association of American Medical Colleges.
18. Kelly K, Lee W. Mapping the domain of career decision problems. *Journal of Vocational Behavior* 2002;61:302-326.
19. Levinson EM, Ohler DL, Caswell S, Kiewra K. Six approaches to the assessment of career maturity. *Journal of Counseling and Development* 1998;76:475-482.

Appendix 1. Specialty Indecision Scale, 2nd Edition—Scale and Item Descriptions

READINESS: Need to begin the process of specialty choice

- 4 I haven't spent much time thinking about choosing a specialty.
- 12 My specialty will come to me in due time.
- 13 I don't know much about the specialty I'm interested in.
- 19 I'm too busy with my studies to worry about choosing a specialty.
- 35 It's too early for me to decide on a specialty.

INFORMATION: Need to locate sources of information and guidance

- 11 I can't find adequate and reliable information about the specialties I'm interested in.
- 16 I don't know who can help me make a decision.
- 17 I don't know what kind of information I need to help me decide.
- 22 I don't know where I can get guidance for choosing a specialty.
- 24 I don't know how or where to find information about specialties.

IDENTITY: Need to identify one's interests, values, personality, and career goals

- 21 I'm not sure what kind of lifestyle I want to live.
- 27 Before exploring specialties, I need to know more about my own interests and goals.
- 33 I don't have reliable information about my interests, abilities, and goals.
- 36 I need a clearer sense of who I am.
- 32 Someone will tell me what to specialize in.

BARRIERS: Need to resolve external conflicts

- 6 I can't afford to pursue my desired specialty.
- 10 The specialty I'm interested in doesn't pay well enough.
- 15 Someone important to me doesn't like the specialty I've chosen.
- 20 I see a lot of problems with the specialty I'm interested in.
- 29 I can't find one specialty that pays well and lets me serve others.

INDECISIVENESS: Need to reduce internal conflicts

- 7 I'm interested in several specialties, but haven't found the perfect one.
- 23 I've identified some good specialty choices, but can't decide among them.
- 25 I'm attracted to two quite different specialties.
- 30 I am of two minds about my specialty.
- 31 I like parts of many different specialties.

SELF-DOUBT: Need to increase decision-making confidence

- 1 There are so many choices I don't know where to start.
- 8 I'm unsure about my ability to succeed in different specialties.
- 9 I don't know what factors I need to consider in making this decision.
- 18 Thinking about choosing a specialty makes me anxious.
- 26 Making important decisions is always difficult for me.

OTHER CONCERNS: The following items are not scored on a scale:

- 2 I need more information about requirements and responsibilities of different specialties.
 - 3 People are telling me different things about the same specialty.
 - 5 I need to know how different specialties impact the balance between work and other life roles.
 - 34 I don't know what I need to do to make this decision.
 - 14 I don't know how the specialties differ from each other.
-

Appendix 2. Item Descriptions, Suggested Activities for Students, and Advisor Recommendations

Suggested activities are provided for each statement in the SIS to which the student assigned a high score (4). Additional suggestions for the advisor to consider when working with the student have also been developed. Both suggested student activities and advisor recommendations are presented here. Review both sets of suggestions as you consider how you might advise the student. The recommendations were developed with input from a National Panel on Career Decision Making Difficulties, comprised of CiM liaisons from medical schools throughout the U.S. and Canada, and supplemented with comments from AAMC CiM staff.

These are only suggestions to consider. Not all of them will be necessary, nor will all of them apply to the situation facing the student. Use your knowledge of the student and his or her specific situation to guide your work.

These item descriptions, feedback and suggested interventions are also provided in an interactive manual, available online on the CiM Web site. If you are registered to use the site as a school liaison, liaison support, or faculty/staff, the interactive manual is available to you on the SIS introductory page. It can be accessed by selecting the Specialty Indecision Scale, 2nd Edition page from the “Understanding Yourself” menu. A link to the SIS Interactive Manual is available at the bottom of the page. Links to specific areas of the CiM Web site are provided on the Interactive Manual when feedback includes suggestions pertaining to those topics. Those links are underlined in this appendix.

Readiness: Need to begin the process of specialty choice

1. I haven't spent much time thinking about choosing a specialty.

Depending on where you are in your medical student career that may not be a problem, but certainly the earlier you begin this process, the easier it will be to find a specialty that meets your personal characteristics and is a good fit for you.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated [timeline](#) in the CiM Student Guide and on the [CiM web site](#).
- Complete the [self-assessment exercises](#) and review your [Personal Profile](#) for insight into your values, interests, skills, personality and practice considerations.
- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- If you are in your third year or later, schedule time to meet with your advisor to discuss choosing a specialty.

Advisor Recommendations

- A student in the first or second year should be introduced to the CiM web site and encouraged to begin the self-assessment and exploration process.
- A student in the third year who exhibits a lack of engagement and/or motivation will need this concern addressed more vigorously. Prescribe one or more career exploration tasks (interest groups, informational interviewing, meeting with faculty mentor, alumni shadowing, etc.) and develop an individual timeline for completion. Schedule a follow-up with the student to track their progress.
- If this concern surfaces in a fourth year student, they may need to see a career counselor for further assistance.
- Areas to explore with the student include their motivation to go into medicine (if they are questioning it), internal conflicts, a personal problem or situation that requires attention, or feeling overwhelmed. All of these areas may be contributing to this concern.
- In extreme cases the student may need to consider decelerating their academic progress to allow more time to decide. These students may have other issues in the realm of professionalism that merit this approach if appropriate guidance, exploration or structure does not get them back on task.

8. My specialty will come to me in due time.

Waiting for an epiphany about specialty choice is not the best way to make a decision. A well-informed career decision generally results in a better fit and a happier, more satisfied and productive physician.

Suggested Activities for Students

- Review the CiM Student Guide and [timeline](#) to ensure you stay on track with this process.
- Complete the [self-assessment exercises](#) and review your [Personal Profile](#) for insight into your values, interests, skills, personality and practice considerations.
- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- If you are in your third year or later, schedule time to meet with your advisor to discuss choosing a specialty.

Advisor Recommendations

- Uncertainty and lack of confidence can often be a source of students' reluctance to make decisions. These obstacles need to be faced before they can make a mature and informed specialty choice. Approaching these topics requires an open and nonjudgmental relationship between the student and advisor.
- Review a timeline of events with concrete dates for scheduling elective clerkships, submitting ERAS applications, scheduling residency interviews, etc.
- Explore how they have approached big decisions previously and the process being used to make this decision.
- Encourage the student to attend regularly planned meetings and workshops to address career decision issues throughout the four years of medical school.
- A student in the first or second year should be introduced to the CiM web site and encouraged to begin the self-assessment and exploration process.
- A student in the third year who exhibits a lack of engagement and/or motivation will need this concern addressed more vigorously. Prescribe one or more career exploration tasks (interest groups, informational interviewing, meeting with faculty mentor, alumni shadowing, etc.) and develop an individual timeline for completion. Schedule a follow-up with the student to track their progress.
- If this concern surfaces in a fourth year student, they may need to see a therapist.

15. I don't know much about the specialty I'm interested in.

Depending on where you are in your medical school training that may be OK. There are plenty of ways to gather information about specialties and some basic research is often the best place to start.

Suggested Activities for Students

- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- Conduct [informational interviews](#) with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Attend specialty interest groups or panel programs offered in your medical school.
- Use your clerkship rotations and electives to broaden your knowledge about different specialties. Try to schedule your rotations such that the specialties you are considering fall early in your clinical training.
- Visit specialty organization web sites and review journal publications to get an idea of the current issues and opportunities in the specialties. Links to specialty organizations and journals are available through the [Specialty Pages](#).

Advisor Recommendations

- Explore what the student has done or plans to do to investigate the specialty of interest.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage them to explore "the 3 R's" - requirements, routines, and rewards of the specialty.
- Work with them to prepare a step-by-step plan with target dates for each task. Plan a follow-up meeting with specific agreed upon actions that the student will take prior to the next meeting.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the [Advisor Manual](#) and on the [Advisor web site](#).

22. I'm too busy with my studies to worry about choosing a specialty.

While it's important to devote time to your studies, choosing a specialty does not have to be an all-consuming activity. Break the tasks into small pieces and do a little at a time to ensure you remain proactive about this process.

Suggested Activities for Students

- Review the [timeline](#) to ensure you stay on track with this process.

- Seek out time management resources.
- Access time efficient ways to explore career options including using web resources, attending specialty panels or groups, and short shadowing experiences.

Advisor Recommendations

- Check their progress against the CiM timeline to help them understand what needs to be done and to get an indication of whether they need additional motivation toward specialty decision-making.
- Work with them to prepare a step-by-step plan with target dates for each task. Plan a follow-up meeting with specific agreed upon actions that the student will take prior to the next meeting.
- Examine the student's academic performance. This may be an area that needs to be addressed before undertaking further career guidance.
- If you sense that the workload is overwhelming the student, refer him/her to an academic assistance program, if available at your institution, including time management courses or resources.
- Areas to explore with the student include their motivation to go into medicine (if they are questioning it), internal conflicts, a personal problem or situation that requires attention, or feeling overwhelmed. All of these areas may be contributing to this concern.
- In extreme cases the student may need to consider decelerating their academic progress to allow more time to decide. These students may have other issues in the realm of professionalism that merit this approach if appropriate guidance, exploration or structure does not get them back on task.

29. It's too early for me to decide on a specialty.

Depending on where you are in your medical training, that may be true although the earlier you begin this process, the easier it will be to find a specialty that meets your personal characteristics and is a good fit for you.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Complete the self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality and practice considerations.
- Explore the Specialty Pages for nature of the work, training requirements, competitiveness data, and links to additional information.
- If you are in your third year or later, schedule time to meet with your advisor to discuss choosing a specialty.

Advisor Recommendations

- Check their progress against the CiM timeline to help them understand what needs to be done and to get an indication of whether they need additional motivation toward specialty decision-making.
- Work with them to prepare a step-by-step plan with target dates for each task. Plan a follow-up meeting with specific agreed upon actions that the student will take prior to the next meeting.
- Encourage them to complete the self-assessments and review their Personal Profile, available through the CiM web site. Remind them it's never too early to start this exploration.
- By the middle to end of the third year the student should be narrowed down to two or three specialties in preparation for rotations or electives in the fourth year. Further interactions with faculty, community physicians and/or alumni will help to narrow the choice.
- Assign a more advanced student to motivate the conflicted student in the context of peer counseling. Exposure to and communication with students and residents who have already chosen specialties are beneficial for students as they begin the process. Active decision-making will likely be more attractive and less intimidating to the student as he or she learns about other peoples' processes.
- Small group advising sessions can also help motivate students who are not ready to begin the process, and provide ideas about how and where to start.

Information: Need to locate sources of information and guidance

2. I can't find adequate and reliable information about the specialties I'm interested in.

Depending on where you are in the information gathering process, there are a number of sources that will assist you in getting enough reliable information to begin narrowing your options.

Suggested Activities for Students

- Contact the state or national specialty society to see if they provide any student advising or networking services, or attend local specialty organization meetings.
- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- Conduct [informational interviews](#) with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Attend specialty interest groups or panel programs offered in your medical school.
- Use your clerkship rotations and electives to broaden your knowledge about different specialties. Try to schedule your rotations such that the specialties you are considering fall early in your clinical training.

Advisor Recommendations

- Have them define what questions they have and what specialty information they're still seeking.
- Explore what the student has done to investigate the specialty of interest, what sources they are using and why the information that they have gathered so far is not adequate or reliable. If necessary, assist in redirecting the student to better, more reliable information resources.
- Encourage the use of reliable sources, such as the [Specialty Pages](#), specialty organizations, trusted clinical faculty and community physicians.
- Assist students who have begun their clinical rotations in reflecting on their clerkships to date and help them to evaluate those experiences in terms of specialty choice. Self-reflection on their clerkships could be accomplished through journaling and/or conversations with advisors, friends, family, and mentors.

9. I don't know who can help me make a decision.

Although the decision is ultimately yours, getting advice and feedback from knowledgeable sources can help make the decision much easier. There are a number of people you can consult with for assistance.

Suggested Activities for Students

- Schedule time to meet with your advisor or contact your student affairs office. Most schools provide either formal or informal advising to assist you with career and other concerns.
- Speak with clinical faculty or community physicians with whom you have interacted and formed a relationship.
- Talk over this decision with friends, family, and significant others who know you well.
- Consult with students in advanced years of school who have already made the decision to see how they went about making this choice.

Advisor Recommendations

- Either as part of an introductory workshop (such as Workshop #1 described in the [Advisor Manual](#)), or in an individual session, introduce the student to the schedule of planned events at your institution and other available resources including the career advising program/staff, departmental and alumni advisors, interest groups, and specialty organizations.
- Discuss programs and/or experiences in which they can participate to get information about specialties and explore their own interests and skills. Examples may include preceptorships, shadowing programs, interest groups, volunteer clinics and specialty mentors.
- Assist the student in reflecting on their experiences to date and help them to evaluate those experiences (particularly clerkship rotations) in terms of specialty choice. Self-reflection could be accomplished through journaling and/or conversations with advisors, friends, family, and mentors.

16. I don't know what kind of information I need to help me decide.

The kind of information you need depends on where the gaps in your knowledge are. Do you need more information about the specialties you are considering or more about your personal characteristics and how you may fit in those specialties?

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated [timeline](#) in the CiM Student Guide and on the [CiM web site](#).
- Schedule time to meet with your advisor to develop a list of questions needing answers and review the resources that may be helpful in getting those answers.

-
- Complete the self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality and practice considerations.
 - Review the "Exploring Options: Getting Started" article.
 - Explore the Specialty Pages for nature of the work, training requirements, competitiveness data, and links to additional information.

Advisor Recommendations

- Review the steps in the CiM program, how each will help in the decision-making process and the tools and resources used to accomplish these steps.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage them to explore "the 3 R's" - requirements, routines, and rewards of the specialty.
- Brainstorm or provide a list of resources including internet resources such as FREIDA, ACGME, etc., books or journals, community programs and names of mentors that are available to talk to the student, and contact information for faculty advisors in various departments.

23. I don't know where I can get guidance for choosing a specialty.

Support and encouragement are important to this process and you should not choose a specialty without some feedback. Guidance can usually be obtained through your school, but you should also look for potential mentors and advisors throughout your medical school experience.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) in the CiM Student Guide and on the CiM web site.
- Schedule time to meet with your advisor. Most schools provide either formal or informal advising to assist you with career and other concerns.
- Attend specialty interest groups, panel programs or other workshops offered in your medical school.

Advisor Recommendations

- Introduce the student to the schedule of planned events at your institution and other available resources including the career advising program/staff, departmental and alumni advisors, interest groups, and specialty organizations.
- Discuss programs and/or experiences in which they can participate to get information about specialties and explore their own interests and skills. Examples may include preceptorships, shadowing programs, interest groups, volunteer clinics and specialty mentors.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.

30. I don't know how or where to find information about specialties.

There is a great deal of information readily available about specialties and the easiest way to start is with some basic internet research. Once you get a feel for some of the specialties you may be interested in, you should engage in more experiential activities.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) in the CiM Student Guide and on the CiM web site.
- Review the "Exploring Options: Getting Started" article.
- Explore the Specialty Pages for nature of the work, training requirements, competitiveness data, and links to additional information
- Conduct informational interviews with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Attend specialty interest groups or panel programs offered in your medical school.

Advisor Recommendations

- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage them to explore "the 3 R's" - requirements, routines, and rewards of the specialty.
- Encourage them to explore the Specialty Pages as a good place to begin gathering information.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.
- Review what the student already knows about his/her preferences and interests in medicine, preferably using their CiM self-assessment information.
- Assist the student in reflecting on their experiences to date and help them to evaluate those experiences (particularly clerkship rotations) in terms of specialty choice. Self-reflection could be accomplished through journaling and/or conversations with advisors, friends, family, and mentors.

Identity: Need to identify one's interests, values, personality, and career goals

3. I'm not sure what kind of lifestyle I want to live.

It's important to explore your perceptions about lifestyle, but recognize that they will also change over time. Most specialties can accommodate any number of practice settings and configurations to meet your lifestyle needs.

Suggested Activities for Students

- Your lifestyle preferences generally stem from what you value. Complete the self-assessment exercises, particularly the Physician Values in Practice Scale (PVIPS) and the Environmental Factors and Practice Needs inventory.
- Conduct informational interviews with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Schedule time to meet with your advisor to discuss lifestyle issues and concerns.

Advisor Recommendations

- Review the results of the students Physician Values in Practice Scale (PVIPS) and Environmental Factors and Practice Needs inventory. Discuss how these values and environmental factors can influence their specialty choice.
- Lifestyle needs and wants change over time and by situation. Either in a group setting or individually, conduct a visualization exercise with the student. Guide the student in visualizing 10 to 20 years in the future:
 - Where is he/she is working and living?
 - Does he/she have a family?
 - What kind of patients is he/she working with? (pediatric, adult, aging, etc.)
 - In what type of setting is he/she practicing? (community clinic, hospital, research facility, academic medical center, etc.)

Discuss how these aspects will affect their lifestyle and what adjustments can be made to meet future lifestyle needs. Ask them to also discuss this with their significant others, families and close friends for their reactions.

- Discuss with the student how you have balanced your lifestyle needs and wants with the demands of your specialty and practice setting. The student needs to consider all aspects of lifestyle: work satisfaction, time with family, income, time to participate in recreational/hobbies, control over time and activities, partner's needs and expectations, etc. Although the specialty has some basic demands on lifestyle some is determined by practice setting.
- As part of a workshop (See Workshop #2 in the Advisor Manual), conduct the values auction with students.

10. Before exploring specialties, I need to know more about my own interests and goals.

Understanding yourself is the foundation on which all career decisions should be made and you are right to begin with some introspection. It will provide you with a good baseline of information about yourself before you start exploring specialties and ultimately assist you in making a good specialty choice.

Suggested Activities for Students

- Complete the following self-assessment exercises to explore:
 - Interests using the Medical Specialty Preference Inventory (MSPI)

- Values with the Physician Values in Practice Scale (PVIPS)
- Practice considerations using the Environmental Factors and Practice Needs inventory- e.g., lifestyle preferences, urban vs. rural location, size of centre, type of patients etc.
- Skills using the Informal Skills Assessment
- Review the personal statement you wrote for admission into medical school. It may remind you or help you clarify your goals.

Advisor Recommendations

- Assist the student in developing a plan for assessing themselves, utilizing the CiM Web site, Student Guide and other relevant school resources.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their self-assessment efforts. Examples include CiM self-assessment workshops or assessments that may be available through the campus career center. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.

17. I don't have reliable information about my interests, abilities, and goals.

With an emphasis on external validation (e.g. grades, tests, etc.) throughout medical school, it's easy to lose sight of your personal characteristics like interests, abilities and goals. Take time to reflect and refocus your energies internally.

Suggested Activities for Students

- Complete the following self-assessment exercises to explore:
 - Interests using the Medical Specialty Preference Inventory (MSPI)
 - Values with the Physician Values in Practice Scale (PVIPS)
 - Practice considerations using the Environmental Factors and Practice Needs inventory- e.g., lifestyle preferences, urban vs. rural location, size of centre, type of patients etc.
 - Skills using the Informal Skills Assessment
- Review the personal statement you wrote for admission into medical school. It may remind you or help you clarify your goals.
- Schedule time to meet with your advisor to discuss your abilities and experiences.

Advisor Recommendations

- Encourage the student to complete a thorough assessment of their interests, values, skills and personality. This will assist them in gathering reliable information about themselves.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their self-assessment efforts. Examples include CiM self-assessment workshops or assessments that may be available through the campus career center. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.

24. I need a clearer sense of who I am.

Understanding yourself is the first step in the career planning and specialty choice process. There are a number of assessments and resources to assist you in gaining a clearer sense of self.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Complete the following self-assessment exercises to explore:
 - Interests using the Medical Specialty Preference Inventory (MSPI)
 - Values with the Physician Values in Practice Scale (PVIPS)
 - Practice considerations using the Environmental Factors and Practice Needs inventory- e.g., lifestyle preferences, urban vs. rural location, size of centre, type of patients etc.
 - Skills using the Informal Skills Assessment

Advisor Recommendations

- Encourage the student to complete a thorough assessment of their interests, values, skills and personality. This will assist them in gathering reliable information about themselves.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their self-assessment efforts. Examples include CiM self-assessment workshops or assessments that

may be available through the campus career center. Outlines and handout materials for the CiM workshops are available in the [Advisor Manual](#) and on the [Advisor web site](#).

- A student in the third year who exhibits a lack of engagement and/or motivation will need this concern addressed more vigorously. Areas to explore with the student include their motivation to go into medicine (if they are questioning it), internal conflicts, a personal problem or situation that requires attention, or feeling overwhelmed. All of these areas may be contributing to this concern.
- If this concern surfaces in a fourth year student, they may need to see a career counselor for further assistance or be encouraged to decelerate and give themselves more time for self exploration and career exploration. A year spent exploring at this time may avoid years spent training and potentially practicing in a field the student does not enjoy.
- In individual sessions, the advisor can review what the student already knows about his/her preferences and interests in medicine and help brainstorm specialties to consider.
- Ask the student questions to glean what interests them - enjoyable courses or clerkships, physicians they admire and why, the type of doctor they envisioned themselves as when they decided to enter medical school, etc.
- Help identify the skills and weaknesses of the student, their values system and desires regarding personal life. Encourage the student to complete rotations in two or three specialties to see where they fit best.

31. Someone will tell me what to specialize in.

Specialty choice is an important and personal decision that can be a difficult one to make. Waiting for someone to provide you the answer or hoping for an "aha" moment generally just produces an anxiety-filled wait. Being proactive and starting the process of decision-making for yourself will lead to a more personally satisfying outcome.

Suggested Activities for Students

- Meet with your advisor to discuss choosing a specialty and the decision-making process.
- Complete the [self-assessment exercises](#) and review your [Personal Profile](#) for insight into your values, interests, skills, personality and practice considerations.

Advisor Recommendations

- Find out the origin of this thought, which may include one of the following: lack of insight, naiveté, being overwhelmed, denial, low self-esteem, depression or apathy, mood disorders or other personal problems.
- Whatever the reason for their external locus of control, be careful not to denigrate this perspective. Rather, try to work through it. Ask, "What do you want Person X to tell you?" or "If you chose 'Y' specialty, how do you imagine Person X would react?" Through these types of questions, try to elicit both what the student wants and also what the student believes the authority figure wants. After this you can address integration of these.
- Consider the cultural issues that may be part of this concern. In certain cultures the expectations of parents, family, and authority figures (often clinical faculty) are accepted over personal preferences. If this is the case, advisors must be careful not to impose their cultural norms (often those of individual freedom and independent decision-making) on the student. There is a delicate balance between honoring the student's cultural traditions of familial/authoritative deference and encouraging complete sublimation of desires and control to an external source. This balance is further complicated because sometimes advisors are seen as that authority figure. It is critical that we consciously check our paternalism throughout the interaction with the student.
- A group setting may encourage discussion about the decision-making process and normalizes varied decision-making styles. Provide information about and refer students to any school-sponsored workshops or programs that will assist them in decision-making. Examples include small group advising sessions or CiM workshops. Outlines and handout materials for the CiM workshops are available in the [Advisor Manual](#) and on the [Advisor web site](#).

Barriers: Need to resolve external conflicts

4. I can't afford to pursue my desired specialty.

Specialty choice can be difficult when coupled with serious financial concerns. It may be helpful to look at the complete picture including compensation data, debt burden and long-term effects, both personal and financial, of this choice.

Suggested Activities for Students

- Explore the [Specialty Pages](#) for salary and compensation information.
- Talk to faculty, community physicians, and residents in the specialty to explore ways of overcoming cost issues.
- Review AAMC resources such as [Monetary Decisions for Medical Doctors \(MD\)²](#), the [Financial Wellness for Medical Students](#) curriculum, and the CiM [Budgeting and Financial Management](#) section to develop a budget for finishing medicine and applying for residency.
- Talk to your financial aid office to review your financial situation, your debt and payment schedules and get information on consolidating loans.
- Explore alternative ways of funding medical school: e.g., National Health Service, Military, Indian Health Service.

Advisor Recommendations

- Discuss the issues impacting this concern:
 - What do they mean by afford? (time, location, income, etc.)
 - Are they basing their assumption on accurate information?
 - Have they considered the trade-off they might make by choosing a specialty that is not as desirable to them because of financial concerns?
 - Have they spoken to faculty, residents or community physicians in the specialty to verify/challenge their assumptions?
- Refer them to the financial aid office to review their amount of debt, projected income, loan consolidation, post graduate loan repayment programs, etc.
- Assist the student in developing a budget for finishing medical school and applying for a residency program.
- Explore options for incorporating the qualities of the desired specialty into higher paying specialties or identify other specialties that might offer similar advantages.

11. The specialty I'm interested in doesn't pay well enough.

It may be helpful to clarify your future financial picture, all the practice options available within the specialty and your values related to money and income satisfaction. These will all play a part in making this decision.

Suggested Activities for Students

- Complete the [Physician Values in Practice Scale \(PVIPS\)](#) assessment and review the results with your advisor.
- Explore the [Specialty Pages](#) for salary and compensation information.
- Talk to your financial aid office to review your financial situation, your debt and payment schedules and get information on consolidating loans.
- Talk with faculty, community physicians, and residents in the specialty to explore lifestyle issues and practice alternatives.
- Review AAMC resources such as [Monetary Decisions for Medical Doctors \(MD\)²](#), the [Financial Wellness for Medical Students](#) curriculum, and the CiM [Budgeting and Financial Management](#) section to develop a budget for finishing medicine and applying for residency.

Advisor Recommendations

- Explore possible reasons for the indecision including lack of information or knowledge about self, lack of confidence or trust in judgement, etc.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Review the results of the student's [Medical Specialty Preference Inventory \(MSPI\)](#), focusing not on the specialty scores but the factor scores, with the goal of helping the student develop a language for his/her general medical interests rather than explicitly and immediately connecting these to a specific specialty.
- Explore non-specialty specific issues that are important to them (Doctor/patient relationship, knowledge used, procedures, patient population, practice/environmental factors, etc.). Students will often describe these in the context of the specialties they are considering, often over-emphasizing one specialty.
- Speak directly to their ambivalence. Each of the specialties they are thinking about has something to offer them. By committing to one area, in some ways, they are being asked to give up other things. Have they ever thought about it that way? Is the struggle about giving up more than it is about gaining?

-
- To promote further reflection, recommend students write a personal statement for each specialty they are considering. Upon attempting to do so, many students have found it easier to write a personal statement for one medical specialty than the others, and this served as an important revelation.
 - Have the student make a list of the pros and cons of each specialty and review them in terms of their importance or priorities.
 - Assist them in checking their impressions of the specialties against reality.

18. Someone important to me doesn't like the specialty I've chosen.

Having someone who is important in your life disagree with your decision can be difficult. An honest discussion about your decision and its impact is important.

Suggested Activities for Students

- Discuss with your significant other what objections the person has to the specialty and ensure that their perceptions are based on accurate information.
- Discuss your decision and its consequences together carefully and respectfully.

Advisor Recommendations

- Clarify the concern with the student
 - What specific concerns (e.g., financial, lifestyle, geographic) does this individual have?
 - Explore whether there are unrealistic biases or concerns, or if based on information that is valid or insightful
 - Help the student consider practice settings or variations within the desired field to see how concerns might be accommodated.
 - Brainstorm related fields that might meet the student's needs and lessen the concern of the significant other
 - Recognize the possible role of culture in students allowing others to influence their decision.
- Discuss how they might manage career satisfaction in the context of an unhappy significant other versus personal dissatisfaction with career choice. While it's important for the student to consider family who will be affected by his/her specialty decision, it's also essential that he or she choose a field that will be gratifying. Making a career choice based on another person's preferences and pressure may lead to strained relationships or possibly an unhappy career.
- Consider the cultural issues that may be part of this concern. In certain cultures the expectations of parents, family, and authority figures (often clinical faculty) are accepted over personal preferences. If this is the case, advisors must be careful to not impose their cultural norms (often those of individual freedom and independent decision-making) on the student. There is a delicate balance between honoring the student's cultural traditions of familial/authoritative deference and encouraging complete sublimation of desires and control to an external source. This balance is further complicated because sometimes advisors are seen as that authority figure. It is critical that we consciously check our paternalism throughout the interaction with the student.

25. I see a lot of problems with the specialty I'm interested in.

There are no perfect specialties. You need to look carefully at the problems you are seeing and make sure they are based on accurate information.

Suggested Activities for Students

- List the problems you are seeing with the specialty you are interested in and talk about them with faculty, community physicians, and residents in the specialty.
- Discuss what you have learned about the specialty and the problems you see with your advisor.
- You may need to decide whether or not these are problems you can live with or if there is another specialty that will better meet your career interests and goals.

Advisor Recommendations

- Clarify the problems the student sees with the specialty. Problems may include:
 - A mismatch between academic requirements and performance.
 - Concern about practice opportunities within a given field (e.g., lifestyle, financial, geographic, malpractice issues).
 - Lack of exposure to or misinformation about the specialty.

- Narrowed career choice without completing some self-assessment.
- Fear of the rigors or length of residency training rather than the ultimate career.
- Many of these problems may be rooted in a conflict between personal values: e.g., I like the work of surgery, but the work/call schedule is too much. Encourage the student to complete the Physician Values in Practice Scale (PVIPS), to help clarify his/her values.
- Examine ways of coping with the aspects that would be most challenging and have them talk to practitioners in the field to find out how they cope with these challenges.
 - What is their source of information? Is the source credible and unbiased?
 - What specifically appeals to him/her about the discipline?
 - Are the student's expectations of the specialty realistic?
- Help the student consider practice settings or variations within the desired field to see how concerns might be accommodated.
- Brainstorm related fields that might meet the student's needs and lessen the concern.

32. I can't find one specialty that pays well and lets me serve others.

Finding balance among what seem to be competing values can be difficult. It's important to explore your perceptions about lifestyle and service and make sure that they are based on accurate information. Most specialties can accommodate any number of practice settings and configurations to allow for a comfortable standard of living.

Suggested Activities for Students

- Schedule time to meet with your advisor to discuss these conflicting values.
- Explore the Specialty Pages for salary and compensation information.
- Talk to faculty, community physicians and residents about conflicting values and opportunities for volunteerism or other ways of serving- e.g. medical associations, fund-raising, and mission trips.
- Talk to your financial aid office to review your financial situation, your debt and payment schedules and get information on consolidating loans.

Advisor Recommendations

- Determine if this perception is due to misinformation, misinterpretation of salary data and lack of information about physician salaries, or a realistic interpretation of mismatch with their perceived financial needs.
- Encourage the student to complete the Physician Values in Practice Scale (PVIPS), to help clarify his/her values.
- Questions such as those below can be posed for discussion with the student:
 - Which specialties have they been considering?
 - What is their motivation for medicine?
 - How do they define or see themselves serving others?
 - How much exposure to various specialties have they had?
 - What is their source of information? Is the source credible and unbiased?
 - What specialty will provide the greatest personal and professional satisfaction?
 - If the student believes a real need for a minimum income level exists, what are some options for incorporating the qualities of the specialties they are considering with more lucrative specialties?
- Brainstorm specialties or pathways that might meet their need to serve others and maintain a suitable income level.
- Refer them to the financial aid office to review their amount of debt, projected income, loan consolidation, post graduate loan repayment programs, etc.
- Encourage the student to talk about these issues with practitioners in the specialties they are considering.
- If the perception is realistic and no other solution exists, help the student explore other fields that may suit values and skills, but are associated with higher income ranges.

Indecisiveness: Need to reduce internal conflicts

5. I'm interested in several specialties, but haven't found the perfect one.

The perfect specialty does not exist for anyone and for most people there will be many specialties that will be equally satisfying. By assessing your personal characteristics such as your values, interests, personality and skills, you will have the best possible chance of finding a specialty that is a good fit for you.

Suggested Activities for Students

- Complete the self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality and practice considerations.
- Seek out experiential opportunities such as shadowing, informational interviews, clerkships or other elective experiences that will allow you to "try on" the specialties you are considering.
- List the pros and cons of each specialty, outlining which aspects appeal to you and which do not. Make sure your list is based on good information about the specialty instead of misconceptions and stereotypes. Review this list with your advisor for further insight.

Advisor Recommendations

- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Help the student define their "perfect" specialty and evaluate the specialties they are considering based on these criteria.
- Divest the student of the notion that there is only one, right, perfect choice. Medical students by nature are often multipotential. They have the ability, drive, and desire to succeed in many disparate fields and as a consequence, it may be difficult to choose just one field.

12. I've identified some good specialty choices, but can't decide among them.

Having several good options that are difficult to choose between may indicate that you would be well-suited for several specialty areas. You may need to get more information and experience in order to make your decision.

Suggested Activities for Students

- Conduct informational interviews with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Attend specialty interest groups or panel programs offered in your medical school.
- Use your clerkship rotations and electives to broaden your knowledge about different specialties. Try to schedule your rotations such that the specialties you are considering fall early in your clinical training.
- List the pros and cons of each specialty, outlining which aspects appeal to you and which do not. Make sure your list is based on good information about the specialty instead of misconceptions and stereotypes. Review this list with your advisor for further insight.

Advisor Recommendations

- Explore possible reasons for the indecision including lack of information or knowledge about self, lack of confidence or trust in judgment, etc.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Review the results of the student's Medical Specialty Preference Inventory (MSPI), focusing not on the specialty scores but the factor scores, with the goal of helping the student develop a language for his/her general medical interests rather than explicitly and immediately connecting these to a specific specialty.
- Explore non-specialty specific issues that are important to them (Doctor/patient relationship, knowledge used, procedures, patient population, practice/environmental factors, etc.). Students will often describe these in the context of the specialties they are considering, often over-emphasizing one specialty.
- Speak directly to their ambivalence. Each of the specialties they are thinking about has something to offer them. By committing to one area, in some ways, they are being asked to give up other things. Have they ever thought about it that way? Is the struggle about giving up more than it is about gaining?
- To promote further reflection, recommend students write a personal statement for each specialty they are considering. Upon attempting to do so, many students have found it easier to write a personal statement for one medical specialty than the others, and this served as an important revelation.
- Have the student make a list of the pros and cons of each specialty and review them in terms of their importance or priorities.
- Assist them in checking their impressions of the specialties against reality.

19. I'm attracted to two quite different specialties.

Being attracted to two very different specialties can indicate that you have broad interests or that you need to do more exploration into your personal characteristics to see if those specialties will be a good fit for you.

Suggested Activities for Students

- Complete the self-assessment exercises, particularly the Medical Specialties Preference Inventory (MSPI) and the Physician Values in Practice Scale (PVIPS).
- Explore the two specialties you are considering on the Specialty Pages. Use the "Links and Readings" tab to conduct more in-depth online research about the specialties.
- Try to schedule clerkships or elective experiences in those specialties early in your clinical training.
- List the pros and cons of each specialty, outlining which aspects appeal to you and which do not or complete the "Choosing Your Specialty" exercise.

Advisor Recommendations

- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Have the student make a list of the pros and cons of each specialty and review them in terms of their importance or priorities.
- Assist them in checking their impressions of the specialties against reality.
- Review the results of the student's Medical Specialty Preference Inventory (MSPI), focusing not on the specialty scores but the factor scores, with the goal of helping the student develop a language for his/her general medical interests rather than explicitly and immediately connecting these to a specific specialty.
- Explore non-specialty specific issues that are important to them (Doctor/patient relationship, knowledge used, procedures, patient population, practice/environmental factors, etc.). Students will often describe these in the context of the specialties they are considering, often over-emphasizing one specialty.

26. I am of two minds about my specialty.

Figuring out where the conflict lies and what is most important to you in your future practice of medicine is crucial to resolving this issue.

Suggested Activities for Students

- List the pros and cons of each specialty, outlining which aspects appeal to you and which do not. Make sure your list is based on good information about the specialty instead of misconceptions and stereotypes. Review this list with your advisor for further insight.
- Complete the self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality and practice considerations.
- Read the "Making Good Decisions" article and complete the "Choosing Your Specialty" exercise.
- If your conflict stems from too little or inconsistent information, conduct informational interviews with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).

Advisor Recommendations

- Help the student clarify this concern. Areas to explore with the student include conflicting values, lack of information or need for more complete information, conflicting information, etc.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Have the student make a list of the pros and cons of each specialty and review them in terms of their importance or priorities.
- Assist them in checking their impressions of the specialties against reality.
- Brainstorm about practice settings or roles within the chosen field that could alleviate the conflict.

33. I like parts of many different specialties.

That's not unusual and there may be a number of specialties that would be a good fit for you. There is rarely one "perfect" specialty for anyone so it may be useful to examine what parts you like and dislike about several different specialties. Then, see if any themes emerge that may point you in one direction over another.

Suggested Activities for Students

- List the pros and cons of each specialty, outlining which aspects appeal to you and which do not. Make sure your list is based on good information about the specialty instead of misconceptions and stereotypes. Review this list with your advisor for further insight.
- Complete the [self-assessment exercises](#) and review your [Personal Profile](#) for insight into your values, interests, skills, personality and practice considerations.
- Read the "[Making Good Decisions](#)" article and complete the "[Choosing Your Specialty](#)" exercise.

Advisor Recommendations

- Help the student clarify this concern. Areas to explore with the student include conflicting values, lack of information or need for more complete information, conflicting information, etc.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Have the student make a list of the pros and cons of each specialty and review them in terms of their importance or priorities. Identify any themes and the specialties that optimize the pros and minimize the cons.
- Speak directly to their ambivalence. Each of the specialties they are thinking about has something to offer them. By committing to one area, in some ways, they are being asked to give up other things. Have they ever thought about it that way? Is the struggle about giving up more than it is about gaining?

Self-Doubt: Need to increase decision-making confidence

6. There are so many choices I don't know where to start.

It can be overwhelming to think about all the options available but breaking the process into small tasks can make starting easier. Instead of focusing on the choices, start with understanding yourself.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated [timeline](#) in the CiM Student Guide and on the [CiM web site](#).
- Complete the following self-assessment exercises to explore:
 - Interests using the [Medical Specialty Preference Inventory \(MSPI\)](#)
 - Values with the [Physician Values in Practice Scale \(PVIPS\)](#)
 - Practice considerations using the [Environmental Factors and Practice Needs](#) inventory- e.g., lifestyle preferences, urban vs. rural location, size of centre, type of patients etc.
 - Skills using the [Informal Skills Assessment](#)

Advisor Recommendations

- Review the steps in the CiM program, how each will help in the decision-making process and the tools and resources used to accomplish these steps. Outline small tasks that the student can do to start the process.
- Introduce the student to the schedule of planned events at your institution and other available resources including the career advising program/staff, departmental and alumni advisors, interest groups, and specialty organizations.
- Discuss programs and/or experiences in which they can participate to get information about specialties and explore their own interests and skills. Examples may include preceptorships, shadowing programs, interest groups, volunteer clinics and specialty mentors.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the [Advisor Manual](#) and on the [Advisor web site](#).
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage them to explore "the 3 R's" - requirements, routines, and rewards of the specialty.
- Brainstorm or provide a list of resources including internet resources such as [FREIDA](#), [ACGME](#), etc., books or journals, community programs and names of mentors that are available to talk to the student, and contact information for faculty advisors in various departments.

13. I'm unsure about my ability to succeed in different specialties.

This is a common anxiety. Gathering more information about your skills and aptitudes as well as information about specialties will help you make a more realistic evaluation of your ability to succeed.

Suggested Activities for Students

- Schedule time to meet with your advisor to discuss your abilities and experiences.
- Conduct informational interviews with residents, faculty, and physicians in practice to get a realistic view of what the work is like.
- Keep a journal or use the Informal Skills Assessment while on your clerkship rotations to record what you feel are your strengths and weaknesses.
- If you have completed clerkships, review feedback on specific aspects of your performance.

Advisor Recommendations

- Explore the reasons for the concern, which may include external pressure to choose a particular specialty, fear of not being competitive, lack of knowledge, motivation, or confidence.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Assist students who have begun their clinical rotations in reflecting on their clerkships to date and help them evaluate those experiences and their skills in terms of specialty choice. Self-reflection on their clerkships could be accomplished through journaling and/or conversations with advisors, friends, family, and mentors.
- It is often hard for students to find out they do not have the aptitude for a specialty in which they are interested. Most of these students, however, can be guided to identify other specialties that may have some characteristics similar to the desired specialty. The most common situation is a student whose academic record may not support their pursuit of a highly competitive specialty. For those students who wish to apply for that specialty insist that they develop a viable and realistic back-up plan.

20. I don't know what factors I need to consider in making this decision.

Factors that are most useful to consider include personal characteristics such as values, interests, skills, personality and practice needs that are important to you. There are also other aspects such as competitiveness and family influence. The factors you consider most important will be different than those of your classmates, but personal characteristics are always a good place to start.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) in the CiM Student Guide and on the CiM web site.
- Complete the self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality and practice considerations.
- Schedule time to meet with your advisor. Most schools provide either formal or informal advising to assist you with career and other concerns.

Advisor Recommendations

- Review the steps in the CiM program, how each will help in the decision-making process and the tools and resources used to accomplish these steps.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage them to explore "the 3 R's" - requirements, routines, and rewards of the specialty.
- Introduce the student to the schedule of planned events at your institution and other available resources including the career advising program/staff, departmental and alumni advisors, interest groups, and specialty organizations.
- Discuss programs and/or experiences in which they can participate to get information about specialties and explore their own interests and skills. Examples may include preceptorships, shadowing programs, interest groups, volunteer clinics and specialty mentors.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.

27. Thinking about choosing a specialty makes me anxious.

It's an important decision so some anxiety is completely normal. There are specific steps to the process that you can take and a number of resources you can use to help you work through this decision.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Develop a plan that outlines the steps you will take and create your own timeline for completing the plan.
- Schedule time to meet with your advisor to discuss your anxiety about this process and review your plan and timeline.

Advisor Recommendations

- Areas to explore with the student include their motivation to go into medicine (if they are questioning it), internal conflicts, external pressure, fear of not being competitive, a personal problem or situation that requires attention, or feeling overwhelmed. All of these areas may be contributing to this concern. You may need to refer the student to a counseling center or psychiatric services if the anxiety is severe.
- It may help to de-mystify the process in an effort to reduce anxiety. Review the steps in the CiM program, how each will help in the decision-making process and the tools and resources used to accomplish these steps.
- Work with them to prepare a step-by-step plan with target dates for each task. Plan a follow-up meeting with specific agreed upon actions that the student will take prior to the next meeting.
- Suggest talking with others - spouse, advisor, parents, etc. - to receive their input and alternative perspectives.

34. Making important decisions is always difficult for me.

You have made important decisions in the past, such as deciding to become a physician and what medical school to attend. It may be useful to review the strategies you have used to make previous decisions and to get some guidance to make it a little easier.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Develop a plan that outlines the steps you will take and create your own timeline for completing the plan.
- Schedule time to meet with your advisor to discuss your difficulty with decision-making and review your plan and timeline.
- Read the "Making Good Decisions" article and complete the "Choosing Your Specialty" exercise.

Advisor Recommendations

- Areas to explore with the student include their motivation to go into medicine (if they are questioning it), internal conflicts, external pressure, fear of not being competitive, a personal problem or situation that requires attention, or feeling overwhelmed. All of these areas may be contributing to this concern. You may need to refer the student to a counseling center or psychiatric services if the difficulty is serious.
- It may help to de-mystify the process. Review the steps in the CiM program, how each will help in the decision-making process and the tools and resources used to accomplish these steps.
- Work with them to prepare a step-by-step plan with target dates for each task. Plan follow-up meetings with specific agreed upon actions that the student will take for each session.
- Review with the student how he/she has made decisions in the past and what strategies worked best when making those decisions.
- A group setting may encourage discussion about the decision-making process and normalizes varied decision-making styles. Provide information about and refer students to any school-sponsored workshops or programs that will assist them in decision-making. Examples include small group advising sessions or CiM workshops. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.

Other Concerns

7. I need more information about requirements and responsibilities of different specialties.

Doing research will help you differentiate the requirements and responsibilities of each specialty in order to move toward a realistic choice. There are a number of ways to get this information including online research, library and journal research, experiential activities, and clinical clerkships.

Suggested Activities for Students

- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- Conduct [informational interviews](#) with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Attend specialty interest groups or panel programs offered in your medical school.
- Use your clerkship rotations and electives to broaden your knowledge about different specialties. Try to schedule your rotations such that the specialties you are considering fall early in your clinical training.
- Visit specialty organization web sites and review journal publications to get an idea of the current issues and opportunities in the specialties. Links to specialty organizations and journals are available through the [Specialty Pages](#).

Advisor Recommendations

- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Encourage them to explore the [Specialty Pages](#) as a good place to begin gathering information.
- Brainstorm or provide a [list of resources](#) including internet resources such as [FREIDA](#), [ACGME](#), etc., books or journals, community programs, interest groups and names of mentors who are available to talk to the student. Provide contact information for faculty advisors in various departments.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the [Advisor Manual](#) and on the [Advisor web site](#).

14. People are telling me different things about the same specialty.

Different people will have different perspectives on the same specialty depending on their practice setting, size, number of years in practice, professional level, etc. Research specialties using reputable sources and talk to a number of different practitioners to get a more complete picture. Then make decisions based on a rational evaluation of all the information.

Suggested Activities for Students

- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- Attend specialty interest groups or panel programs offered in your medical school.
- Talk to your advisor for guidance.
- Seek out experiential opportunities such as shadowing, [informational interviews](#), clerkships or other elective experiences.

Advisor Recommendations

- Explore what the student has done to investigate the specialty of interest, what sources they are using and the variability of responses. Help the student sort through the different things they are hearing and what might account for the differences, including practice setting, professional level, career paths, etc. The goal is to make a choice that is in line with their interests, values and personality.
- Have them define what questions they have and what specialty information they're seeking.
- Assist in redirecting the student if necessary to better, more reliable information resources.
- Encourage the use of reliable sources, such as the [Specialty Pages](#), specialty organizations, trusted clinical faculty and community physicians.

21. I need to know how different specialties impact the balance between work and other life roles.

Lifestyle is an important component of any career decision and most specialties can accommodate any number of practice settings and configurations to allow for a workable balance. Conducting research will help you uncover the extent to which different specialties allow flexibility in work and other life roles.

Suggested Activities for Students

- Conduct informational interviews with clinicians, residents and physicians in various specialties to help describe/elaborate on lifestyle issues.
- Attend specialty interest groups or panel programs offered in your medical school.
- Use your clerkship rotations and electives to broaden your knowledge about the different lifestyles of each specialty.

Advisor Recommendations

- Discuss with the student how you have balanced your lifestyle needs and wants with the demands of your specialty and practice setting. The student needs to consider all aspects of lifestyle: work satisfaction, time with family, income, time to participate in recreational/hobbies, control over time and activities, partner's needs and expectations, etc. Although each different specialty will have some basic demands on lifestyle, part of lifestyle will be determined by practice setting.
- Encourage or coordinate informational interviewing opportunities with physicians in the specialties of interest in a variety of practice settings and work situations.
- Lifestyle needs and wants change over time and by situation. Either in a group setting or individually, conduct a visualization exercise with the student. Guide the student in visualizing 10 to 20 years in the future:
 - Where is he/she is working and living?
 - Does he/she have a family?
 - What kind of patients is he/she working with? (pediatric, adult, aging, etc.)
 - In what type of setting is he/she practicing? (community clinic, hospital, research facility, academic medical center, etc.)
- Discuss how these aspects will affect their lifestyle and what adjustments can be made to meet future lifestyle needs.
- Ask them to also discuss this with their significant others, families and close friends for their reactions.

28. I don't know what I need to do to make this decision.

What you need to do depends on where you are in the process. There are a number of opportunities and resources throughout your time in medical school that will help you move toward a decision.

Suggested Activities for Students

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- If you are in your third year or later, schedule time to meet with your advisor to discuss choosing a specialty.

Advisor Recommendations

- Review the steps in the CiM program, how each will help in the decision-making process and the tools and resources used to accomplish these steps.
- Encourage the student to gather information about themselves via a thorough assessment of their interests, values, skills and personality. This will help them assess their fit in the specialties they are considering.
- Explore what the student has done or plans to do to investigate the specialty(ies) of interest.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage them to explore "the 3 R's" - requirements, routines, and rewards of the specialty.
- Discuss programs and/or experiences in which they can participate to get information about specialties and explore their own interests and skills. Examples may include preceptorships, shadowing programs, interest groups, volunteer clinics and specialty advisors.
- Review with the student how he/she has made decisions in the past and what strategies worked best when making those decisions.
- A group setting may encourage discussion about the decision-making process and normalizes varied decision-making styles. Provide information about and refer students to any school-sponsored workshops or programs that will assist them in decision-making. Examples include small group advising sessions or CiM workshops. Outlines and handout materials for the CiM workshops are available in the Advisor Manual and on the Advisor web site.

35. I don't know how the specialties differ from each other.

Having so many choices can be overwhelming but there is a lot of information available to help you learn about differences among specialties. Choose three or four that you may be interested in and begin researching and participating in experiential activities to help you differentiate and move closer to a specialty decision.

Suggested Activities for Students

- Explore the [Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information
- Conduct [informational interviews](#) with doctors and residents in an array of clinical settings (academic medicine, private practice, public health, etc.).
- Attend specialty interest groups or panel programs offered in your medical school
- Use your clerkship rotations and electives to broaden your knowledge about different specialties. Try to schedule your rotations such that the specialties you are considering fall early in your clinical training.

Advisor Recommendations

- Explore what the student has done or plans to do to investigate the specialty of interest.
- Have them define what questions they have and what specialty information they're seeking.
- Encourage the use of reliable sources, such as the [Specialty Pages](#), specialty organizations, interest groups, trusted clinical faculty and community physicians.
- Encourage them to explore “the 3 R's” - requirements, routines, and rewards of the specialty.
- Provide information about and refer students to any school-sponsored workshops or programs that will assist them in their specialty exploration efforts. Examples include specialty panels, interest groups or CiM workshops. Outlines and handout materials for the CiM workshops are available in the [Advisor Manual](#) and on the Advisor web site.

Appendix 3. Overall Scale Recommendations

In some cases, a student may score high (e.g., above 60) on a scale, but does not assign a four (4) to any items within the scale. In those cases the following recommendations and feedback are provided to the student.

The following general statement is provided on each scale report.

Your score was high on this scale overall indicating it as a concern for you; however, you did not have any individual items scored as a four. You may want to complete some of the suggested activities listed below.

For each scale the following feedback is provided.

Readiness

This usually means that you are not ready to make a decision for a number of reasons. You may feel that it is too early to decide or that other events are more important than your need to make a decision.

Suggested Activities:

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Complete the CiM self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality, and practice considerations.
- Explore the [Careers in Medicine Specialty Pages](#) for nature of the work, training requirements, competitiveness data, and links to additional information.
- If you are in your third year or later, schedule time to meet with your advisor to discuss choosing a specialty.

Information

This concern addresses a need to find out more about how to make career decisions – who to talk to, what to do, where to go. Often this concern is prevalent in students who are just beginning the process of career decision-making or specialty choice, or who have never completed the career decision-making process

Suggested Activities:

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.

- Explore the Careers in Medicine Specialty Pages for nature of the work, training requirements, competitiveness data, and links to additional information.
- Schedule time to meet with your advisor or contact your student affairs office. Most schools provide either a formal or informal advising program to assist you with career and other concerns.
- Attend specialty interest groups, panel programs or other workshops offered in your medical school

Identity

This concern focuses on your need to know more about yourself – your interests, values, personality and work skills – to help you explore appropriate career options or specialties.

Suggested Activities:

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Complete the following CiM self-assessment exercises to explore:
 - Interests using the Medical Specialty Preference Inventory (MSPI)
 - Values with the Physician Values in Practice Scale (PVIPS)
 - Practice considerations using the Environmental Factors and Practice Needs inventory- e.g., lifestyle preferences, urban vs. rural location, size of centre, type of patients etc.
 - Skills using the Informal Skills Assessment
- Review the personal statement you wrote for admission into medical school. It may remind you or help you clarify your goals.

Barriers

This area of indecision usually identifies external conflicts or barriers that keep you from making a choice. The external “issues” could be related to characteristics of the specialty or specialties themselves or to difficulties created by other people important to you.

Suggested Activities:

- List the barriers you see with the specialties you are considering and talk with faculty, community physicians, and residents in the specialty to further explore these issues.
- Explore the Careers in Medicine Specialty Pages for accurate information and other resources.
- Review AAMC resources such as Monetary Decisions for Medical Doctors (MD)2, the Financial Wellness for Medical Students curriculum, and the CiM Budgeting and Financial Management section to develop a budget for finishing medicine and applying for residency.

Indecisiveness

This cause of indecision identifies internal conflicts that impede the ability to decide. Often this concern focuses on two or more specialties that are equally appealing to you or that may have competing characteristics that you find difficult to choose between.

Suggested Activities:

- List the pros and cons of each specialty, outlining which aspects appeal to you and which do not. Make sure your list is based on good information about the specialty instead of misconceptions and stereotypes. Review this list with your advisor for further insight.
- Complete the CiM self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality, and practice considerations.
- Read the “Making Good Decisions” article and complete the “Choosing Your Specialty” exercise on the CiM web site.
- Seek out experiential opportunities such as shadowing, informational interviews, clerkships or other elective experiences that will allow you to “try on” the specialties you are considering.

Self-Doubt

Psychosocial factors, such as self-confidence, anxiety, or a feeling of being overwhelmed with the decision are important causes for high scores on this area of concern.

Suggested Activities:

- Review the process of career planning (understanding yourself, exploring options, choosing a specialty and getting into residency) and the associated timeline in the CiM Student Guide and on the CiM web site.
- Complete the CiM self-assessment exercises and review your Personal Profile for insight into your values, interests, skills, personality, and practice considerations.
- Schedule time to meet with your advisor. Most schools provide either a formal or informal advising program to assist you with career and other concerns.
- Develop a plan that outlines the steps you will take and create your own timeline for completing the plan.

Appendix 4: National Panel on Career Decision Making Difficulties

George Blackall, Psy.D., MBA
Director of Student Development
Pennsylvania State University College of Medicine

Laurie Brown, M.A.
Director for Student Affairs Years 1 & 2
Mount Sinai School of Medicine of New York University

Dawn Cannon, M.D.
Associate Dean, Stu Aff & Admiss
Howard University College of Medicine

G. Anne Cather, M.D.
Associate Dean for Student Services & Prof Dev
West Virginia University School of Medicine

Ilsa Centeno
Counselor
University of Puerto Rico School of Medicine

Peggy Dupey
Assistant Dean of Student Affairs
University of Nevada School of Medicine

Leigh Fraser Roberts, M.D., F.R.C.P.
Acting Associate Dean, Student Affairs
University of Manitoba Faculty of Medicine

Denise Gibson, Ph.D.
Assistant Dean, Academic Support
Office of Student Affairs/Admissions
University of Cincinnati Medical Center

Candace Gillespie
Director for Student Affairs
Medical University of South Carolina College of Medicine

June Harris, M.D.
Director of MedCareers
Memorial Univ of Newfoundland Faculty of Medicine

Caroline Haynes, M.D., Ph.D.
Associate Dean
Duke University School of Medicine

Donald Kenney, Ph.D.
Director of Student Services
University of South Carolina School of Medicine

JoAnn Larsen, Ed.D.
Assistant Dean for Student Affairs
Texas Tech University Health Sciences Center SoM

Angela Nuzzarello, M.D., MHPE
Assoc Dean, Stu Prgms & Prof Dev
Northwestern University The Feinberg School of Medicine

Sharon Phelan, M.D., FACOG
Director, Career Advisement
University of New Mexico School of Medicine

Charles Pohl, M.D.
Assoc Dean for Stud Aff & Career Counseling
Jefferson Medical College of Thomas Jefferson Univ

Anita Pokorny, M.Ed.
Director Student Services and Registrar
Northeastern Ohio Universities College of Medicine

Steven Ricanati, M.D.
Dean, Joseph Wearn Society
Assistant Professor of Medicine
Case Western Reserve University School of Medicine

Suzanne Sarfaty, M.D.
Assistant Dean for Students
Boston University School of Medicine

Robin Schroeder, M.D.
Assistant Professor of Family Medicine
UMDNJ--New Jersey Medical School

Christopher Stillwell
Career Advising Program Director
University of Wisconsin School of Medicine and Public Health

Anita Taylor, M.A., M.Ed.
Associate Professor & Director of Career Advising
Oregon Health & Science University School of Medicine

Beverly Vidaurreta, Ph.D.
Assistant Professor and Program Director
University of Florida College of Medicine

Brian Zink, M.D.
Associate Dean for Student Programs
University of Michigan Medical School

Denise Yates, M.A., NCC
Assistant Director, Urban Health Program