University of Colorado School of Medicine

Office of Faculty Affairs

GUIDE TO PREPARING A DOSSIER FOR PROMOTION OR TENURE

May 2016

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GUIDE TO PREPARING A DOSSIER FOR PROMOTION OR TENURE

FREQUENTLY ASKED QUESTIONS

What is a dossier?

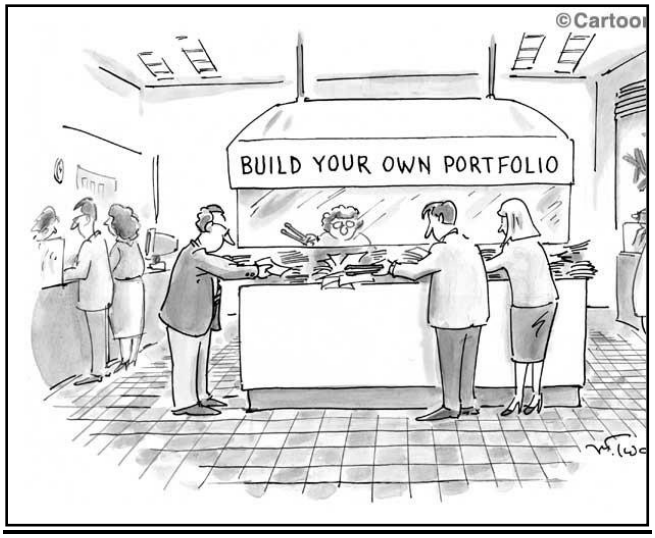
Almost every discussion of promotion and tenure begins with the word "dossier." Indeed, all candidates for promotion and tenure at the School of Medicine must prepare a comprehensive dossier before promotion or tenure can be considered.

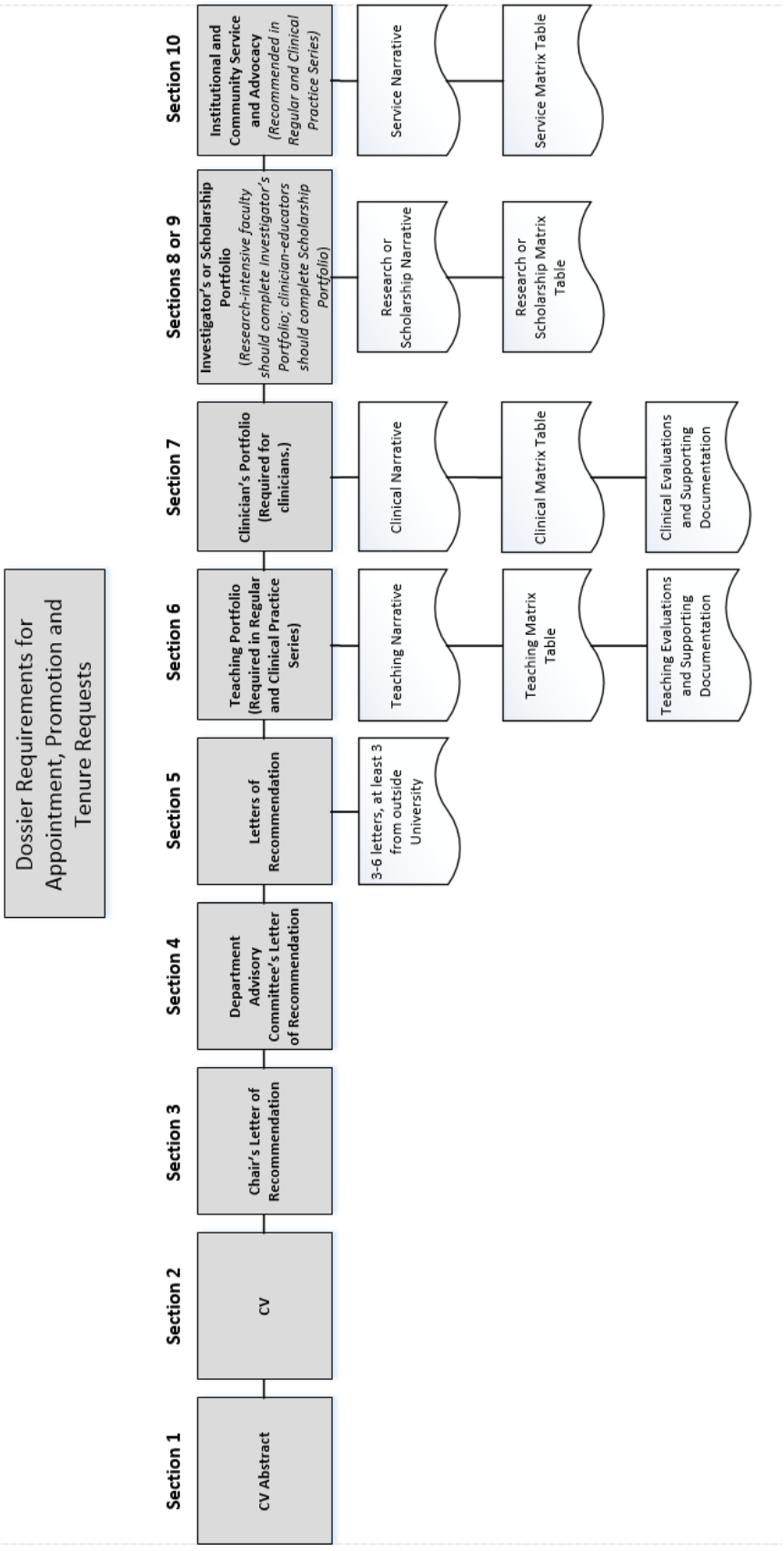
According to various dictionaries, a dossier is "a file containing detailed records on a particular person or subject." A dossier may also be defined as "the accumulation of records, reports, miscellaneous pertinent data and documents bearing on an individual's subject of study or investigations."

A dossier is more complicated than a simple curriculum vitae; in fact, the CV is just one component of a complete promotion dossier. Dossiers also include internal and external letters of reference, promotion matrix tables and learner evaluations. **Most importantly, dossiers also include carefully assembled clinicians,' teachers' and investigators' portfolios (as appropriate), which in turn must include narratives that explain the faculty member's activities, effectiveness and accomplishments as a clinician, educator or scholar.**

Dossiers are not the same as "portfolios." At the SOM, dossiers are the encompassing "binders" that contain, in separate sections, a faculty member's clinical, teaching and investigators' portfolios, promotion matrix tables, curriculum vitae, letters of reference and teaching evaluations. Refer to the diagram on the next page.

All dossiers are submitted electronically, using *ByCommittee,*® an electronic submission and routing platform.




Dossier Requirements for Appointment, Promotion and Tenure Requests
Section 1
CV Abstract
Section 2
CV
Section 3
Chair's Letter of Recommendation
Section 4
Department Advisory Committee's Letter of Recommendation
Section 5
Letters of Recommendation
3-6 letters, at least 3 from outside University
Section 6
Teaching Portfolio (Required in Regular and Clinical Practice Series)
Teaching Narrative
Teaching Matrix Table
Teaching Evaluations and Supporting Documentation
Section 7
Clinician's Portfolio (Required for clinicians.)
Clinical Narrative
Clinical Matrix Table
Clinical Evaluations and Supporting Documentation
Sections 8 or 9
Investigator's or Scholarship Portfolio (Research-intensive faculty should complete Investigator's Portfolio; clinician-educators should complete Scholarship Portfolio)
Research or Scholarship Narrative
Research or Scholarship Matrix Table
Section 10
Institutional and Community Service and Advocacy (Recommended in Regular and Clinical Practice Series)
Service Narrative
Service Matrix Table

When should dossier preparation begin?

Ideally, you should begin to prepare your dossier during your second or third year as Assistant Professor. Dossiers are unwieldy documents; preparation requires time and is dependent upon careful documentation of your teaching, research, service and clinical activities over several years. Dossier preparation is, therefore, a continuous process, that should begin early, with guidance provided by your chair and mentors.

When should dossiers be reviewed? By whom?

Your dossier, even in its earliest stages, should be reviewed periodically by your mentor(s). Also, you should ask your department chair, division head or other academic supervisor to review your promotion dossier periodically, more frequently as you near promotion. **Most important, for all Assistant Professors: Your draft promotion dossier must be presented and reviewed during your mid-course comprehensive review that takes place during your third or fourth year in rank.**[1]

What are the deadlines for submission of dossiers?

The deadline for submission of all dossiers (appointments, promotions and tenure awards) to the Office of Faculty Affairs is December 31st of each year. However, each department has an earlier deadline for submission of dossiers for review by the Departmental Advisory (Promotion and Tenure Review) Committee; these deadlines vary by department.

How long should my dossier be?

Ideally, your entire promotion or tenure dossier will not exceed 100 pages, excluding your curriculum vitae and your internal and external letters of reference. You should exceed this limit only if you feel that a more extensive dossier is necessary to ensure adequate consideration and evaluation of your accomplishments. Depending on your academic focus, your dossier should include separate *portfolios* that summarize your work in teaching, clinical care, and research or scholarship. Each portfolio, in turn, will include your narratives, promotion matrix tables, teaching or other evaluations and may also include letters of commendation and other relevant supporting documents.

How long should each *narrative* be?

Each candidate for promotion or tenure must provide a narrative summary of his or her accomplishments in teaching, research or scholarship and clinical practice or service. **While there is no minimum or maximum length for your narratives, we suggest preparing succinct narratives (which may include full paragraphs, charts**

[1]According to the Laws of the Regents and the Rules of the School of Medicine, each Assistant Professor must undergo a comprehensive academic review in the third or fourth year in rank. The comprehensive review should resemble a "mock" promotion or tenure review and should include a detailed evaluation of the faculty member's promotion dossier, which must be prepared by the faculty member. Following the mid-course review, a written evaluation must be provided to the faculty member; this evaluation must comment on areas of strength and areas needing improvement and provide an overall assessment of the faculty member's progress toward promotion or tenure.

or bulleted lists) of 3-6 pages for each area. In each area, your narrative should focus specifically on the scope of your activities, your accomplishments and successes, and the impact and importance of your work. Be sure to include a description of each of the activities and accomplishments that you have listed in your **personalized promotion matrix**. Provide links to all supporting documentation (such as curricula, journal publications, policy papers, or other relevant products of scholarship). For more information about preparing narratives, please refer to later sections of this *Guide to Building a Dossier for Promotion and Tenure.* Also, consider attending a *Promotion 101* workshop, which focuses on dossier preparation.

Are there documents that should *not* be included in my dossier?

You should not include reprints of original articles or course syllabi. Instead, you can include links to these documents. If you have questions about how to create links from PubMed for your publications, please contact the Health Sciences Library. Try to limit the number of letters and emails from colleagues, patients, trainees and others, including only those that are substantive. Also, it is usually not helpful to include announcements of your lectures, slides prepared for your lectures, meeting agendas or copies of awards.

How will I know when my dossier has been reviewed?

Once your dossier has been reviewed by the Faculty Promotions Committee, your department will be notified of the outcome of the review. Your department should then provide this information to you. After approval by the Faculty Promotions Committee, all promotion recommendations are forwarded to the School of Medicine Executive Committee and then to the Chancellor's Office for final approval. Tenure awards are also subject to approval by the Board of Regents.

Which promotion series is right for me?

School of Medicine faculty members, in consultation with their mentors and their chairs, must decide whether to seek promotion in the Regular Series, the Clinical Practice Series or the Research Professor Series. Refer to Appendix D for a chart outlining the different faculty series.

The Regular Series is the appropriate promotion pathway for the majority of School of Medicine faculty members, including basic scientists, clinician-scientists and clinician-teachers. Faculty members seeking promotion to Associate Professor in the Regular Series must demonstrate excellence in one of the principal areas of accomplishment: teaching; research; or clinical practice. Importantly, at least meritorious achievements (the lower standard) must be demonstrated in scholarship, teaching and clinical work or service. "Scholarship" is broadly defined and includes not only research (the scholarship of "discovery"), but also the scholarship of teaching, application and integration. See later sections of this *Guide* and the *Rules of the School of Medicine* for more information. All faculty members in the Regular Series who are employed by the University of Colorado are eligible for tenure.

The Clinical Practice Series is an academic pathway designed for faculty members who focus the majority of their time on direct patient care and other activities

related to improving health care quality (for example, outcomes, access to care, efficiency, patient safety or the health of populations). There is an expectation of greater clinical effort, and excellence in clinical work (as measured against the School of Medicine Promotion Matrix) is required. There is no requirement for written scholarship, although clinically-relevant scholarship is encouraged. Teaching (at least at the meritorious level) is required. Because scholarship is not required, faculty members in the Clinical Practice Series are not eligible for tenure.

Instructors, Senior Instructors and Assistant Professors may not be assigned to the Clinical Practice Series; rather, they will hold titles in the Regular Series. Prior to undergoing departmental review for promotion from Assistant Professor to Associate Professor, all faculty members who are clinicians, in consultation with their chair and mentor(s), must choose whether to seek promotion to Associate Professor in the regular or clinical practice series. Normally, they will make this election after undergoing a comprehensive mid-course review, based on their interests and accomplishments in clinical work, service, teaching and scholarship.

Faculty members who devote almost all their time to grant-funded research, with limited teaching and service responsibilities, may be appointed and promoted in the **Research Professor Series.** Faculty members in the Research Professor Series will be supported by funds from external grants and contracts. They may be independently-funded or collaborative scientists, as defined in the *Rules of the School of Medicine.* Faculty in the research professor series are at-will employees and are not eligible for tenure, in accordance with Colorado laws and University of Colorado Policies. See Appendix E for the Research Professor Series Policy.

For more information about each of the promotion series, see II.G of the *Rules of the School of Medicine*.

How do I get started?

This *Guide to Preparing a Dossier for Promotion and Tenure* will help. It is organized just like a promotion dossier, and it includes helpful information and examples for all the required sections.

Section 1 includes instructions for preparing your C.V. Abstract. Section 1 also includes the required C.V. Abstract template, plus an example of a well-done C.V. Abstract.

Section 2 includes the School of Medicine's suggested format for organizing your curriculum vitae.

Section 3 (your department chair's letter) and **Section 4** (the Department Promotions Committee letter) are left blank in this *Guide.* Refer to **Section 5** (internal and external letters of reference) for helpful information about the selection of referees.

Section 6 (the Teacher's Portfolio) includes detailed information to help you prepare your Teacher's Portfolio. All candidates for promotion in the Regular or Clinical Practice Series or tenure are required to submit a Teacher's Portfolio. Look in this section for examples of teachers' statements, narratives, charts, bulleted lists and other tools that you can use to document your effort and effectiveness as a teacher --- whether you are a classroom lecturer, research mentor, clinician-teacher, course or training program director, teaching administrator or teaching scholar. An example of a completed

Teaching Promotion Matrix is also provided.

Section 7 (the Clinician's Portfolio) will help you document your clinical activities, incorporating narrative descriptions of your area of focus and expertise, measures of quality of care, patient care outcomes, regional or national reputation, clinical program administration, national service and feedback from peers, patients and other health professionals. A sample Clinical Promotion Matrix is included. Obviously, non-clinicians should omit this section.

Faculty members in the Regular and Research Professor series should prepare a Scholarship Portfolio (Section 8) OR an Investigator's Portfolio (Section 9).

Section 8 (the Scholarship Portfolio) – for clinician-educators and other non-research-intensive faculty members -- is the section of your dossier where you can highlight your scholarship, which may include the scholarship of discovery (i.e., research), teaching, integration or application. Your C.V., which lists your grants and publications, is not enough. You must prepare narrative summaries and annotated bibliographies (examples are provided in this section), in order to explain the scope, importance and impact of your scholarship to members of the Faculty Promotions Committee. You must also include a personalized Scholarship Promotion Matrix Table demonstrating that you have met the School of Medicine's standards for "meritorious" or "excellent" scholarship.

Section 9 (the Investigator's Portfolio) – for research-intensive faculty - is where you describe and document your success as an investigator. Your C.V., which lists your grants and publications, is not enough. If you prepare narrative summaries and annotated bibliographies (examples are provided in this section), you will be able to explain the scope, importance and impact of your research to members of the Faculty Promotions Committee. In the Investigator's Portfolio you will also have an opportunity to describe your unique contributions to the success of multi-disciplinary, or multi-investigator, research teams. You must also include a personalized Scholarship Promotion Matrix Table demonstrating that you have met the School of Medicine's standards for "meritorious" or "excellent" research.

Section 10 (Institutional and Community Service and Advocacy) is the section where you should describe your most important advocacy or service activities.

Dossier Building Guide

Table of Contents

SECTION 1 – C.V. ABSTRACT

The C.V. Abstract is the first document that is reviewed by members of the School of Medicine Faculty Promotions Committee. The C.V. Abstract highlights your most important activities in teaching, clinical practice and community and university service. The C.V. Abstract also includes a section where you will summarize (*but not reproduce*) your publication and grant funding records.

The C.V. Abstract serves as an *introduction* to your dossier; it should not exceed two pages, and you should not attempt to duplicate whole sections of your Curriculum Vitae. Rest assured that members of the Faculty Promotions Committee will also read your complete curriculum vitae and your entire promotion dossier.

The required format for the C.V. Abstract is reprinted on the next page. You may also access this document in electronic format at CV Abstract (*http://medschool.ucdenver.edu/faculty*).

On the following pages you will find an example of a brief, well-organized C.V. Abstract.

(Please type) **CURRICULUM VITAE - ABSTRACT** Revised 3/2010)

NAME:_____**Current Rank**_____

EDUCATION (Residency, fellowship or graduate school training):

School/Program	**Degree**	**Date**

****

PROFESSIONAL EXPERIENCE: (Academic appointments - List current appointment first)

Institution	**Rank**	**Dates**

****

TEACHING ACTIVITIES: Briefly summarize major classroom, laboratory or clinical teaching responsibilities over the past 5 years. Each candidate must also submit a teaching portfolio. See Teaching Portfolio in the Dossier Building Guide *(http://medschool.ucdenver.edu/faculty)* for suggested format.

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CLINICAL ACTIVITIES: Briefly summarize your principal clinical activities over the past 5 years (e.g., type of activity [clinics, attending, surgical, consultation), average number of hours/week or months/year). Faculty members with extensive clinical duties should submit a Clinician's Portfolio. See Clinician's Portfolio in the Dossier Building Guide *(http://medschool.ucdenver.edu/faculty)* for suggested format.

****

RESEARCH AND SCHOLARSHIP: Briefly summarize research and scholarly activities over the past 5 years, including research focus, major discoveries or other important aspects of your work. See Investigator's Portfolio in the Dossier Building Guide *(http://medschool.ucdenver.edu/faculty)* for suggested format.

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PUBLICATIONS/SCHOLARSHIP:

Number of original articles in peer-reviewed journals (TOTAL): _____

First-author _____ Senior-author _____ Other co-author _____

Number of books: _____

Number of other publications (scholarly reviews, symposium papers, editorials & book chapters): ___

Number of published or presented scientific abstracts (TOTAL): _____

Refereed abstracts _____ Un-refereed abstracts _____

Letters-to-the-editor, other publications: _____

Patient education materials, case studies or other creative works). *List only if completed and available for review in written or electronic format*_____

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PUBLIC AND UNIVERSITY SERVICE ACTIVITIES/ PROFESSIONAL SOCIETY MEMBERSHIPS/HONORS: List highlights.

****

MAJOR GRANTS (RESEARCH, TRAINING OR OTHER) IN PAST 5 YEARS (List PI grants only)

Active Grants	Number of Grants	Total Costs (Direct & Indirect)
Federal (NIH, NSF, VA, etc.)	_____	$_____
Foundation (RWJ, AHA, etc)	_____	_____
Industry	_____	_____
Other non-competitive awards	_____	_____
Inactive Grants (past 5 years)	**Number of Grants**	**Total Costs (Direct & Indirect)**
Federal (NIH, NSF, VA, etc.)	_____	$_____
Foundation (RWJ, AHA, etc)	_____	_____
Industry	_____	_____
Other non-competitive awards	_____	_____

EXAMPLE OF A C.V. ABSTRACT

(Please type) **CURRICULUM VITAE - ABSTRACT** Revised 3/2010)

NAME: Mary C. Welch, M.D. **Current Rank :** Assistant Professor

EDUCATION (Residency, fellowship or graduate school training):

School/Program	**Degree**	**Date**
Northwestern University, Chicago	MD	1990 - 1994
Stanford University SOM	Surgical Internship	1994 - 1995
Stanford University SOM	Residency in Orthopedics	1995 - 1999
University of Colorado SOM	Fellowship, Spine Surgery	1999 - 2001

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PROFESSIONAL EXPERIENCE: (Academic appointments - List current appointment first)

Institution	**Rank**	**Dates**
University of Colorado (Orthopedics)	Assistant Professor	2003 – present
University of Colorado (Orthopedics)	Senior Instructor	2001 - 2003

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TEACHING ACTIVITIES:

In 2008 I was appointed co-director of the Sports Medicine Fellowship training program. My responsibilities include: coordination of recruiting activities; organization and leadership of the biweekly sports medicine case conference; career mentorship for 7 orthopedics and sports medicine residents and fellows; and, in collaboration with the fellowship director, development of a new, competency-based sports medicine curriculum. The Sports Medicine Fellowship program was re-accredited in 2009.

I co-authored a 58-page evidence-based syllabus, "Principles of Caring for Musculoskeletal Injuries," which is now distributed to all medical students and interns rotating on the orthopedics service.

I developed 6 web-based patient encounters demonstrating knee examination and approach to common knee injuries

Since 2004 I have been co-director of the multi-disciplinary CME course, "Sports Medicine for Primary Care Clinicians"

Since 2005 I have been co-chair of the departmental Medical Student Education Committee.

I participate in a large variety of teaching activities in classroom and clinical settings; these are summarized in my Teacher's Portfolio.

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CLINICAL ACTIVITIES:

Inpatient Service: I am the ward attending for the orthopedic and spine services for 6 weeks each year. I am also the on-call attending for orthopedic trauma and other emergency cases one weekend per month. As a ward attending, I am responsible for all patients admitted to the orthopedic service, including those that require emergent or urgent operative care. On average, our inpatient service is responsible for 12-15 patients at any given time. During my ward service weeks, I am also responsible for inpatient consultations to the general medicine, oncology, emergency medicine and surgical services of University of Colorado Hospital.

Outpatient Service: I staff 2 orthopedic and 2 sports medicine clinics each week (20 hours per week), where I care for a variety of new patients as well as post-operative patients and those recovering from injuries. My outpatient responsibilities also include the full spectrum of sports medicine procedures, especially arthroscopic procedures. Additional details are provided in my Clinician's Portfolio.

Clinical Leadership and Administrative Activities: As outlined in my Clinician's Portfolio, I have served as: a) Director of Sports Medicine for 5 university athletic teams; b) co-director of the UCH sports medicine program at Lowry; and c) past chair of the Rocky Mountain Society for Sports Medicine (2006 – 2007).

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RESEARCH AND SCHOLARSHIP:
My scholarly activities are driven by my clinical practice and surgical responsibilities. As noted above, a large portion of my scholarship time has been devoted to education; I was sole author or co-author of the web-based case simulations and the evidence-based musculoskeletal care syllabus listed above.

I am also focusing on clinical research related to prevention of concussion and traumatic brain injury in middle-school, high school and college athletes. I have served as a member of the UCH Traumatic Brain Injury Interdisciplinary Team; together with my colleagues, we have analyzed more than 800 sports-related TBIs in Colorado. We have focused on delayed recognition of TBI and also unmet needs for follow-up care in underserved populations. We have presented our results at two regional and two national meetings, and we have published 3 review articles and one original scientific paper in peer-reviewed journals. The TBI Interdisciplinary Team received funding ($180,000) from the state Department of Public Health and Environment to continue these investigations.

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PUBLICATIONS/SCHOLARSHIP:
Number of original articles in peer-reviewed journals (TOTAL): 9
First-author 3 Senior-author 3 Other co-author 3
Number of books: _____
Number of other publications (scholarly reviews, symposium papers, editorials & book chapters): 4

Number of published or presented scientific abstracts (TOTAL): 3
Refereed abstracts 1 Un-refereed abstracts 2
Letters-to-the-editor, other publications: 2
Patient education materials, case studies or other creative works. *List only if completed and available for review in written or electronic format* 2

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PUBLIC AND UNIVERSITY SERVICE ACTIVITIES/ PROFESSIONAL SOCIETY MEMBERSHIPS/HONORS:
Chair, Department of Orthopedics Medical Student Education Committee (2005 – present)
Member, UCH Operating Room Efficiency Committee (2006 – present)
Member of the UCH Traumatic Brain Injury Interdisciplinary Team (2007 – present)
Chair of the Rocky Mountain Society for Sports Medicine (2006 – 2007)
Program co-chair (2005 – present), Western Chapter, Society for Academic Sports Medicine
Volunteer tutor, Denver Urban Horizons High School Sciences Program (2005 – present)

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MAJOR GRANTS (RESEARCH, TRAINING OR OTHER) IN PAST 5 YEARS (List PI grants only)

Active Grants	Number of Grants	Total Costs (Direct & Indirect)
Federal (NIH, NSF, VA, etc.)	_____	$_____
Foundation (RWJ, AHA, etc)	_____	_____
Industry	1	38,000
Other non-competitive awards	_____	_____
Inactive Grants (past 5 years)	**Number of Grants**	**Total Costs (Direct & Indirect)**
Federal (NIH, NSF, VA, etc.)	_____	$_____
Foundation (RWJ, AHA, etc)	1	65,000
Industry	1	18,500
Other non-competitive awards	_____	_____

SECTION 2 – SUGGESTED CURRICULUM VITAE FORMAT

Personal history or biographical sketch
Begin with "Current Position" --- include title(s) and professional address (with email and FAX)
Optional: Marital status, spouse's name, children
Do NOT include birth date or Social Security Number

Education
In chronologic order, list institutions attended and degrees (Begin with college or university)
Include internship, residency, fellowships, post-doctoral training
Do not include CME or other courses; this information may be included in a teacher's or clinician's portfolio

Academic appointments
List these chronologically (including dates)
Include full-time and adjunct faculty positions

Hospital, government or other professional positions
List positions chronologically
May divide into sections (hospital, government, etc.)
Include military service, if applicable
May list consulting positions

Honors, special recognitions and awards
Graduate school honors and distinctions
Clinical, teaching, research or service awards
Elected and honorary society memberships
Honorary fellowships

Membership in professional organizations
List organizations (and dates)
Include offices held and other leadership positions

Major Committee and Service Responsibilities
Group (as appropriate) under headings: Departmental, SOM, university and hospital
Include state and national committees, tasks forces, boards and commissions
List important community service or public health activities
Note leadership positions, key responsibilities

Licensure and board certification
Include dates of state certification, board certification and recertification
Do NOT list medical license numbers

Inventions, intellectual property and patents held or pending

Review and referee work
Service on editorial board (Include dates)
Grant review committees and study sections

Service as ad hoc reviewer for journals professional societies or scientific meetings (State dates, journals, meetings)

Invited extramural lectures, presentations and visiting professorships
As list lengthens, may divide into headings: Local, regional, national, international

Teaching record
In separate sections, list major presentations to medical (or other undergraduate) students, graduate students, house officers
List course numbers and dates
State ward/clinic attending duties (e.g., *"2000-03: Supervision and bedside teaching of residents, high-risk hypertension clinic - 6 hours/week"*)
Key administrative positions (course or training program director) and dates
List specific accomplishments (course development, innovative syllabus, etc)
Teaching awards may be listed here or in Section 5
All supporting details should be provided in separate teacher's portfolio
Trainees and mentees may be listed here; however, it is preferable to list them, with a summary of their accomplishments, in your teacher's portfolio

Grant support
List all grants awarded; list active grants first
Include your role (e.g., principal investigator, co-investigator), funding source (and grant number), dates, percent effort, and total direct costs
As list lengthens, may divide into headings as appropriate (current and prior funding, whether competitive, by type of funding agency, etc)

Bibliography
Check all bibliographic citations for accuracy
Number all publications (beginning with the earliest) and list in order of publication
Underline your name (or highlight in bold) as it appears in author list
Include, *in separate sections*, the following items:
Papers published in peer-reviewed journals (may include in-press and accepted articles)
Books and monographs
Book chapters, invited articles & reviews in non peer-reviewed journals
Other publications, non-published documents, reports, research or policy papers, lay press articles (must be complete and available for review)
Other "products of scholarship" (software, CD's, case simulations, videos, etc.)
Letters to the Editor
Scientific abstracts published or presented at scientific meetings
List meeting, journal reference and type of abstract (plenary, oral or poster)
Divide into headings (Competitive, non-competitive)
Do not list manuscripts that have been submitted or that are "in preparation"

SECTION 3 – CHAIR'S LETTER OF RECOMMENDATION

SECTION 4 – LETTER FROM DEPARTMENT EVALUATION COMMITTEE

The letter from the Department Evaluation Committee must include the vote and an explicit statement explaining how the candidate meets each of the criteria for the proposed rank.

SECTION 5 – LETTERS OF REFERENCE

Three to six letters of reference must be included, *at least three of which must be from outside the University ("external").* If the candidate is applying for tenure, all external letters of reference must address specifically whether the candidate meets the School of Medicine's standard for tenure.

Letters of recommendation from referees who are outside the candidate's primary department are confidential under Colorado law and may not be reviewed by the candidate.

How External Referees Are Selected

According to the *Rules of the School of Medicine* and University policies, external letters of reference must be requested by, and submitted to, the Department Chair (or Division or Section Head) or to the Chair of the Departmental Advisory (Promotion and Tenure) Committee. External evaluators are selected by the department, in consultation with the candidate. Candidates for promotion or tenure must be given the opportunity to suggest possible evaluators and also to indicate specific scholars to exclude from consideration, because their evaluations might constitute a conflict of interest or be prejudiced against the candidate.

External Letter Writers

External referees should be able to "accurately evaluate the major activities and qualifications of the candidate." Ideally, external letter writers will provide an objective, "arm's-length" evaluation. While letters from former trainees, colleagues, thesis supervisors or fellowship directors are welcome, additional weight is given to letters from academicians who do not have such a relationship with the faculty candidate. At least some of the external letters should be from faculty members holding an academic rank at least as high as that sought by the candidate.

External letters are also required for faculty members seeking promotion in the Clinical Practice Series. These letters may be solicited from referring physicians or others who are qualified to judge the candidate's clinical work or his or her local, regional or national reputation.[2] External evaluators may comment on the candidate's clinical skill, quality improvement activities, responsiveness, teaching ability, professionalism, service to the community, contributions to the professional organizations or leadership in the field. Individuals who hold clinical or other faculty appointments at the University of Colorado may not serve as external evaluators.

[2] Faculty members seeking appointment or promotion in the Clinical Practice Series are required to demonstrate a regional reputation (for appointment or promotion to Associate Professor of Clinical Practice) or a national reputation (at the rank of full Professor).

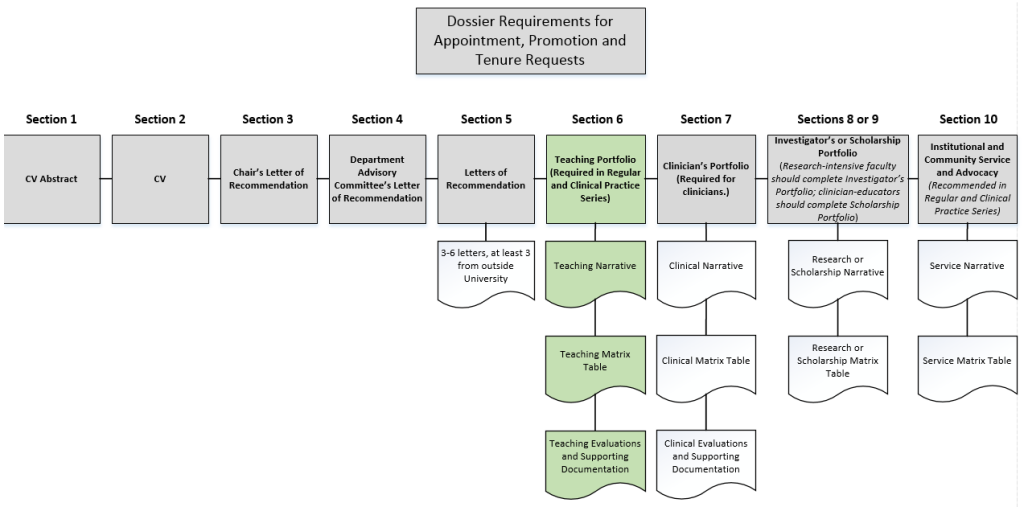
SECTION 6 –BUILDING A TEACHER'S PORTFOLIO

Teaching is an important responsibility and privilege of faculty members at the School of Medicine. Evidence of accomplishments in teaching is also required for promotion and tenure. **Each candidate for promotion or tenure (except those applying for promotion in the Research Professor series) must submit a formal teaching portfolio as part of a comprehensive promotion dossier**.

The purpose of a "teaching portfolio" is to document a faculty member's teaching activities, effectiveness and impact. The teaching portfolio does what a C.V. cannot: it captures and explains what teachers do. More specifically, a teacher's portfolio accomplishes the following goals:

- Describes the faculty member's every-day activities as an educator;
- Helps the faculty member take credit for specific accomplishments;
- Assists the Faculty Promotions Committee to conduct a semi-structured evaluation of the faculty member's achievements, adding weight, rigor and parity to this component of the promotion evaluation; and
- Helps match the activities and accomplishments of the educator to the SOM's promotion rules.

It is also likely that preparation and submission of a teacher's portfolio can foster a culture of teaching at the SOM and prompt reflection, self-improvement and career development by faculty members.
Please refer to the Rules of the School of Medicine ***(http://medschool.ucdenver.edu/faculty)*** **(especially the** Promotion Matrices ***http://medschool.ucdenver.edu/faculty)*****, which are included as Appendix C) for examples of "meritorious" and "excellent" performance in teaching.**



STRUCTURE OF A TEACHER'S PORTFOLIO

Narrative (Suggested limit of 3-6 pages)

Although faculty members are not expected to have activities in every area of teaching, the following outline will help you structure your teaching narrative. Your teaching narrative may include descriptive summaries, charts, bulleted lists or tables. Keep in mind that the purpose of these narratives is to summarize and explain the scope, importance and impact of the your teaching activities. Examples of teacher's statements, narratives, charts of teaching activities and other documentation tools are provided in this section of the *Guide*.

Teaching Narratives: Suggested Format

A teacher's statement, which articulates your personal teaching goals and philosophy. The statement may address questions such as: What and how do you teach? What is unique or most important about your teaching? How do you assess students' learning or measure whether your teaching is effective? What, specifically, do you want to improve about your teaching?

Classroom instructional activities: List course name & number, dates, number of students and your role in course (lectures given, laboratory or small-group leader, etc).

Clinical teaching activities (e.g., bedside rounds, ward attending, ambulatory care preceptor): specify site, nature of teaching activity, dates, numbers of trainees.

Other didactic teaching activities (e.g., grand rounds, seminars, journal clubs, morning report). You do not need to prepare narratives for every lecture or clinical teaching activity. However, you should prepare narratives for your *main teaching activities* --- that is, for teaching activities that are repeated, that account for a significant portion of your time, that you initiated or led, that were innovative, that were particularly effective, or that were noteworthy in some other way.

Teaching leadership and administration: List courses, clerkships, training programs or CME programs you developed or have directed; also, list national service, such as board examiner, participation on residency review or curriculum committees, leadership of faculty development activities, etc.

Curriculum innovation and teaching scholarship**:** Describe your work in developing or revising high-quality syllabi, laboratory exercises, novel lectures, problem-based learning cases, simulations, online courses, evaluation tools or other instructional materials. Also, describe research activities, education grants or other written scholarship that focus on understanding the best methods, or outcomes, of teaching. Include references to any publications, web sites, presentations or other "products of teaching scholarship" that are available for review.

Mentorship: List students, residents, fellows or graduate trainees you have mentored; specify *your* role as research preceptor, thesis director or thesis committee member, and list *their* achievements, including publications, grants, national presentations, awards or attainment of academic or other positions. Outside of research, describe your other work in guiding or mentoring students, house officers or junior faculty.

Outside education activities, including outreach: Describe your participation in CME or outreach education, including visiting professor invitations.

Self-study and improvement: List meetings, workshops or fellowships you have attended aimed at improving your skills and effectiveness as a teacher.

Teaching awards or nominations.

Preparing Teaching Narratives: Describing Your Course or Curriculum Leadership

If your work as a teacher includes significant course leadership, curriculum development or innovation, it will be important to describe your accomplishments in an organized, scholarly manner. The goal is to explain to the promotions committee and other reviewers the importance, reach and impact of your work as a teacher, course leader or educational administrator.

In your teaching narratives, consider describing any or all of the following:

- **The goals of the course**: What need or gap in the curriculum did the course fill?
- **Content of the course**: How was the content of the course or program selected (for example, published model curricula, scientific literature review, consensus guidelines)? What literature was reviewed? Did you integrate information and perspectives from different clinical, biologic or sociologic disciplines?
- **Appropriate teaching methods**: What techniques were selected (problem-based learning, lectures, on-line resources, simulations). Why? Did you incorporate methods in your course to encourage and evaluate independent learning and critical thinking by students?
- **Significant results**: What was the impact of the course? Who has taken the course? Was learning measured? Include test scores, changes in attitudes, knowledge or behavior, favorable evaluations or other measures. Describe the manner in which you relied on feedback from learners or colleagues to evaluate or improve the course. Has it been integrated into the core curriculum? Has the course content been presented, published or otherwise disseminated locally or nationally?
- **Educational products**: Include or describe innovative syllabi, laboratory manuals, simulations, web sites or videos that can be reviewed by promotions committee members.
- **Clear description of your leadership or creative role**.

For more information about the difference between "excellent teaching" and teaching scholarship, see Appendix A, "How the Faculty Promotions Committee Defines and Judges Scholarship;" and Appendix B, "Teaching Innovations and Scholarship."

Also, the Academy of Medical Educators provides periodic workshops on preparing your teacher's portfolio. For more information, visit the Faculty Development Seminar Registration site at http://somapps.ucdenver.edu/facultyaffairs/faculty/.

Teaching Matrix Table

Every Teacher's Portfolio must also include a personalized Teaching Matrix Table. The Table will help you document "excellent" or "meritorious" performance in teaching, according to the SOM approved Promotion Criteria Matrix. The Matrix Table is a bulleted list of your teaching activities and accomplishments, presented and categorized according to the SOM's criteria. In other words, the completed Matrix Table helps you tie your activities and accomplishments in teaching to the specific examples of teaching excellence (or meritorious performance) that are included in the School's Promotion Matrices. The completed Matrix Table also helps reviewers understand and assess the range of your teaching activities and accomplishments.

The Matrix Table is only a list; reviewers will refer to your teaching narrative for information about the importance and impact of the activities listed in the Matrix Table.

A sample Teaching Promotion Matrix Table is provided on the next page. In this example, a clinician-educator effectively matched her accomplishments to the criteria for "excellence" contained in the Promotion Matrices *(http://medschool.ucdenver.edu/faculty)*, which are included as Appendix C. In the left column, the faculty member quoted from the different "excellence" standards of the matrices; in the right-hand column, she highlighted (in bulleted lists) her recent accomplishments that proved she had met that standard for teaching excellence. As noted above, the faculty member's teaching narrative provided the necessary additional information regarding each of her principal accomplishments in education. She also provided web site links, copies of important syllabi or other documentation of teaching scholarship, wherever appropriate.

Matrix Table

EXCELLENCE IN TEACHING	
EXCELLENCE	
Regularly assumes greater than average share of teaching duties – in classroom, laboratory, clinical or community settings.	Preceptor, Foundations of Doctoring seminar series for Phase 3 and Phase 4 medical students (2003 – present). Attending physician/clinician-educator: Supervisor for residents, Rose Family Medicine Residency Program (2 half-day clinics per week). Attending physician/clinician-educator: Clinic teaching and direct supervision of sports medicine fellows, CU Sports Medicine Center (1 full day clinic per week). Co-chair, departmental Medical student Education Committee (2000 – present). Associate Director of Primary Care Sports Medicine Fellowship (1999 – present).
Consistently receives outstanding teaching evaluations or teaching awards. *Recognition as an outstanding and influential role model for students, fellows, residents or other trainees.*	Consistently excellent-to-outstanding evaluations from medical students, family medicine residents and sports medicine fellows. (See Appendix to Teacher's Portfolio). Preceptor of the Year, 2003 and 2009 (Award presented by Family Medicine residents). Teacher of the Year, 2000 (Presented by the St. Anthony Hospital Family Medicine residents). Selected as a School of Medicine Teaching Scholar (2009-2010).
Record of successful mentorship of students, residents, fellows or other faculty, as measured by …	A matrix of mentoring activities is included in my Teacher's Portfolio. The matrix includes a list of clinical and research mentees, along with information about their completed projects, presentations, publications, funding and other measures of academic success.
Development of innovative teaching methods, such as educational software, websites, simulations, videotapes, courses, workshops, etc.	Developed workshop, "Supporting the injured competitive athlete." Presented nationally at the Society for Teachers of Family Medicine Annual Spring Conference, Boston, MA, 2006. Developed 6 web-based patient encounters demonstrating the knee examination and approach to common knee injuries.
Demonstration of educational leadership (for example, by serving as a course, fellowship or training program director) or assistant dean. *Development of innovative courses, high-quality syllabi, novel lectures, problem-based learning cases … or other instructional materials.*	Developed "Sports Medicine" teaching module for orthopedic residents. Wrote 84-page evidence-based Sports Medicine syllabus. Authored or co-authored 4 sports medicine textbook chapters. Developed series of seminars and then developed and directed two regional CME courses on "Diagnosing and Treating the Aging Athlete. Courses presented in Denver (3007), Philadelphia (2009) and Boston (2010).
Consistent participation in national educational activities – e.g., Residency Review Committee, programs sponsored by professional organizations, re-certification courses or workshops. .	Co-director of multi-disciplinary CME course, "Sports Medicine for Primary Care Clinicians." Repeated invitations to present Grand Rounds and seminars at regional and national meetings (See C.V. and Teacher's and Clinician's Portfolios).

Teaching evaluations

A teaching portfolio must also contain teaching evaluations, letters from students or mentees or other documents that address your teaching effectiveness. Evaluations may include ratings by learners as well as by peers. Most candidates for promotion or tenure include copies or summaries of teaching evaluations in an "appendix" at the end of their teacher's portfolio.

Learner ratings may include quantitative scores, comments from students or letters from former trainees. Trainees who have been mentored can be asked to write letters describing the ways in which you (the mentor) have helped them advance their careers. For example, research mentees can be asked to comment about the ways in which you helped them understand research methods, scientific writing, team work or research ethics.

Peer ratings may include written comments from peers who have observed you in various teaching settings or who have reviewed your syllabi, handouts, laboratory manuals or other teaching materials. Peer evaluations may include a general assessment of your knowledge, a statement about the clarity and effectiveness of your delivery, comments about the types of methods you employ in teaching or assessments of the scope, organization, clarity and accuracy of your teaching materials and lecture/seminar content.

EXAMPLES:

TEACHERS' STATEMENTS, TEACHING NARRATIVES AND OTHER DOCUMENTATION TOOLS

Each Teacher's Portfolio is different. This section contains examples of teachers' statements and other documentation tools to help you prepare your teaching narrative. These examples were taken, with permission, from the teachers' portfolios of School of Medicine faculty members who were successfully promoted. Remember: The recommended total length of your overall Teaching Narrative is 3-6 pages.

Examples: *Teacher's Statements*

Example 1

Teaching students the principles of microbiology and endowing them with the intellectual tools for continued growth in modern medicine or medical research is a vibrant and challenging aspect of my career. The challenge is that biomedical science is growing at a rapid pace. Given the time constraints and immense size of the medical curriculum, students are asked to undertake a painful memorization process, required as part of their initiation to the clinical sciences.

As a microbiologist and a teacher, I am interested in fomenting a lasting appreciation of microbiology, a field where genetics, biochemistry and cellular biology converge. In my courses and lectures, I establish clear learning objectives. To help students achieve these objectives, I provide organized lecture notes, scientific articles, textbooks and cases for class discussions. I take advantage of direct contact hours within the classes and laboratories to go over concepts that might represent obstacles in mastering the material.

I like to use the Socratic method in my classes, because I have noticed that students who participate actively in the class have fewer opportunities to lose their concentration and become estranged from the material being presented. In other words, I am a strong believer that active participation arouses thinking and curiosity. Even in large lectures, where the Socratic method is far more challenging to implement, I make an extra effort to use questions to encourage students to participate actively and to learn in a more relaxed environment.

The Socratic method of teaching is also invigorating for the instructor, since the answers are not always anticipated, and the students keep me alert as well. Although a good teaching point can be made upon receiving the correct answer, wrong answers are of extraordinary teaching value, because they present the opportunity to correct misunderstandings. I am also very fond of using pictures (for example, dramatic photos of a cholera cot illustrating the profuse watery diarrhea that follows *Vibrio cholerae* infection), newspaper clippings of recent outbreaks, or movies showing the dynamic interactions of bacterial pathogens and their hosts. These graphic teaching aids reinforce concepts and facilitate retention by bringing the subject matter into the students' daily lives. There is no substitute for a good story that is relevant to the subject for capturing students' imagination and bringing the subject matter to life. I am convinced that collecting this varied graphic material has been an important asset in my development as a teacher.

I have discovered over the years that my teaching is continuously evolving. The teacher that I am today is a result of the careful mentoring by past advisors and current coworkers and the thoughtful criticism by my students. In the years to come, with more experience and the unabated support from colleagues and students, I hope to continue to improve my ability to impart the fascinating subject matter that I teach.

Examples: *Teacher's Statements (cont.)*

Example 2

For the past ten years, I have devoted a large portion of my time to teaching the principles and practice of bedside diagnostic ultrasonography.

Emergency bedside ultrasonography challenges the learner to glean clinical information from grey scale 2-dimensional images and to interpret these images in concert with other clinical information to inform medical decision-making. The challenges to teachers are obvious. First, in emergency medicine, none of the learners of ultrasonography is a radiology or body imaging trainee. Second, there is great variation among the learners and among the human subjects who are being scanned. Third, effective teaching of ultrasound imaging techniques and interpretation requires flexibility and patience by the teacher. When teaching bedside ultrasonography, I face the twin challenges of teaching a technical, machine-centered skill along with clinical medicine, and I have to teach, simultaneously, patient assessment, differential diagnosis and clinical management, along with proper ultrasound techniques and the nuances of image interpretation. I pride myself on working with many different learner groups and having the ability to overcome cultural and language barriers to teach these skills effectively and enthusiastically.

Example 3

Almost all my lectures to medical students are on the chemotherapy of parasitic infections. Medical students are required to cover a large amount of material in the second year. Consequently I focus my lectures on the salient features of the drugs used to treat these infections and the major toxicities and contraindications to use, rather than providing a comprehensive discussion of each drug. Wherever possible, I try to use case studies or anecdotal material that assist in learning and understanding the material. For example, in one year, the Denver Nuggets basketball player Dikembe Mutumbo had been diagnosed with Malaria and his treatment was used as illustration of the lecture material. More recently, outbreaks of Malaria originating in Virginia from a local colony of infected mosquitoes provided excellent case studies. Parasitic infections are a relatively minor cause of disease in the USA. However, these infections are some of the most pervasive killers in other parts of the world. It is my philosophy to present this material as part of a much wider perspective of global health care and treatment.

Examples: *Teacher's Statements (cont.)*

Example 4

Most of the students I interact with are advanced learners. They have developed a passion for science, and they come to me to learn more about my favorite topic, tumor immunology. Graduate students who enroll in the Special Topics in Tumor Immunology class that I direct are already curious about tumor immunology. The first-year medical students in the Blood and Lymph Block (which I also co-direct) are also enthusiastic learners. And the graduate students who want to rotate through my laboratory also want to be a part of this interesting field. The fact that my audiences are already motivated and excited means that I have a big responsibility. My primary aim is to support and cultivate their excitement; in fact, I want all these students to leave more excited about the topic than when they arrived.

My own experiences as a student and as a teacher have taught me several principles about teaching and learning.

- First, if I present material that is clearly connected to other information they know and are interested in, they will learn it, retain it and, subsequently, be able to draw new connections of their own. I help them make these early connections by showing how the material relates to other content in their curriculum, and by using analogies and real-world examples that pique their interests.

- Second, I try to encourage them to be active learners; students are asked to develop questions, look up answers, engage in interactive discussions, make presentations and, yes, even surf the internet for current or controversial writings.

Thus, my teaching philosophy is to provide students with appropriate connections and a platform for active learning. I try to avoid lecture hall monologues and focus on trying to help students get the concepts right.

These principles also guide my teaching and mentoring in the laboratory setting. I provide basic content and numerous examples, and students are able to adjust the details to work for them. Learning to do research is about developing a deep understanding of a topic, developing hypotheses and testing them. Students do experiments, and they redo them. They share results in laboratory meetings and seminars, and they learn to write manuscripts for publication. I try to encourage graduate students to learn as much as possible from each other.

Examples: *Teacher's Statements (cont.)*

Example 5

I came to the CU School of Medicine after 10 years of what I commonly call the "real world" of medical practice. At the university, I have found a community of colleagues who thrive on teaching, asking questions, and nurturing and guiding others. Teaching makes me a better physician – it requires me to articulate my practice and answer the question "why?" when I care for patients. Over the past two decades, I have grown to accept the following philosophies and lessons about teaching in medicine:

Positive reinforcement works better than negative reinforcement. This lesson, originally from B. F. Skinner, is true in parenting as well as in teaching. To nurture and encourage a behavior performed correctly is powerful. Correction should not be shied away from – we need to resist the tendency to believe that everybody is "above average." The primary way to help somebody move forward and improve, however, is to encourage the right behaviors by giving them recognition.

Adult learners need to be anchored in the real world of cases and problems that they experience themselves. I think this has been the success of my lecturing over the years. At national conferences, I am asked back to teach on what most of the world considers very mundane topics: abdominal pain in women, vaginal discharge, medical illness in pregnant patients. Much of the ethics content about autonomy, beneficence and justice, which needs to be understood by medical students, is likewise often considered boring or "fluff." My approach – to tell stories from my own experience and to share my own dilemmas and mistakes – has helped others as they recognize their own situation in mine.

Lecturing should be different from book-learning. In an era in which a multitude of facts is available at our finger-tips (literally), the purpose of a teacher should be to present information in shapes and arrangements that are different from the textbook or the hand-held differential diagnosis generator. The teacher's purpose is to give the student tools for organizing, understanding "why," and highlighting important issues in a way the printed word cannot. Usually that is case-based and pragmatic, and it provides a framework from which to access the facts when needed.

The most important modeling comes from our own conduct. Non-verbal language has been shown to be more powerful than verbal language, and how we conduct ourselves as we work is more powerful than what we say or how we tell others to act. The only way to teach respect is to be respectful of patients. We show curiosity and interest in their illnesses by going to the computer and textbooks to answer questions. We can ask for hard work from our students by working hard ourselves and by not taking shortcuts (for example, in performing histories and physicals and collecting clinical data).

The world becomes better one interaction at a time. For those of us raised to awareness in the 1960s, the drive to save the whole world is huge. One of the lessons that life teaches is that you only touch a few people in the course of your life, and you should make the most of those opportunities: one day and one act at a time. It is at the bedside, one on one with a student, that you make a difference.

Learning the patient's story is vital to good patient care. One of the themes that sneaks most into my daily teaching in the emergency department comes from my bioethics perspective. It is the importance of the patient and how she lives her life: what is important to her, what are her hopes, what are her fears? This past year I heard a very good intern presenting a case in the ICU in which he said "social history negative times 3." (That means, by the way, no smoking drinking or drugs.) It was incredible to hear a patient's life outside the hospital narrowed to that. My goal is to keep physicians from marginalizing the rich context and meaning of illness in persons' lives, and instead to bring the patient's situation to the front and center.

"Nothing is less real than realism. Details are confusing. It is only by selection, by elimination, by emphasis that we get at the meaning of things." I end with a quote that hangs in my office, from the painter, Georgia O'Keefe. It is meant to grate in our world of scientific security, so I hope it does. For me it is always a reminder that science and technology do not exist as ends, but as tools to ends that we choose – either intentionally or implicitly. It is so safe and satisfying to get caught up in the myriad facts in which we immerse ourselves as physicians and teachers. But to what end? If we don't know why we are doing these things, and who we are caring for, it is meaningless realism.

Examples: *Teacher's Statements (cont.)*

Example 6

In both the clinical and research environments, I consider myself a "hands on" teacher. History and physical exam skills are honed at the patient's bedside, and it is there that I prefer to teach clinical medicine to students, residents and fellows. Clues obtained from the history and physical exam lead to the formation of a differential diagnosis of the disease process and a management plan. I ask open-ended questions to trainees, allowing them to organize their thoughts on the subject and pushing them to make original medical decisions. I challenge my students to research the literature with regard to the patient's disease and to provide this in-depth information to the team during hospital rounds.

At the same time it is important for me, as a clinical teacher, to present basic knowledge of pediatric gastroenterology, hepatology and liver transplantation. I seek to accomplish this through more formal lectures in the hospital setting.

I measure the effectiveness of my teaching through question and answer sessions during hospital rounds and case studies presented during formal lectures. I try to ensure that the student knows the medical facts, as well as the pathophysiology of the disease. I also try to ensure that students and residents can formulate a broad differential diagnosis and generate a primary and secondary management plan.

Most importantly, I try to teach knowing that trainees will observe my own actions as a physician. My empathy towards patients, the bond that forms with the family and the thoroughness of the medical care that I strive to provide are readily available to students to witness, judge and learn from.

In the research setting, the same concepts of teaching apply. I teach "hands on" in many settings: at the laboratory bench; during conferences; during laboratory meetings; during research-in-progress seminars; while analyzing and troubleshooting data during weekly laboratory meetings; and while critiquing articles and providing advice during journal clubs and during manuscript preparation. I expect the trainees to research their projects thoroughly, to make the first attempt at troubleshooting experiments and to "dig deeper" into the scientific literature to aid in their own research. I know that I have succeeded in teaching in research when trainees begin to develop their own ideas for research projects and can extrapolate what they have learned in the laboratory to areas outside their primary research focus.

Overall, my goals are to be a teacher and role model for physicians-in-training, to inspire trainees to have empathy for their patients and to teach them how to practice evidence-based medicine. I will also take pride in anything I can do to encourage more medical students and residents to become physician-scientists.

Examples*: *Summarizing Classroom, Seminar and Journal Club Teaching

Example 1

IDPT 7801 Biomedical Sciences Core Course
How Proteins are Studied: NMR Spectroscopy

A Lecture- and laboratory-based course, introducing students to the theory and application of NMR spectroscopy to the study of protein structure and dynamics.

Number of students: Approx. 55 graduate students
My contributions: 2 lectures (4 hours)
1 group discussion
Dates: 2002-2003 and 2004-2005

PHCL 7605 Ethics in Research

Seminar presentations and small-group discussions addressing ethical topics in the conduct and reporting of research.

Number of students: 18 students & research associates
My contributions: Facilitator of 5 discussion groups
Dates: 2004 – 2008

Example 2

Seminar Facilitator: Problem-Based Learning Course

The Problem-Based Learning (PBL) course is a required small group seminar spanning the first two years of medical school. Its goal is to introduce students to clinical reasoning and help them integrate information from the basic sciences courses to their future role as a clinician. I have facilitated a small group of 8 students each year since my arrival in August, 2006.

Ratings of Teaching Effectiveness (Best = 5)	2006 – 2007	
	My ratings	Course Average
Discussion facilitation	5.0	4.5
Overall teaching effectiveness	5.0	4.2

Comments: "Best instructor I've encountered here at UCHSC." "Dr. XXX is a great facilitator; she has a perfect mix of allowing our group to work through things when necessary and keeping us on track with suggestions of areas to explore. She has been very helpful and I feel the reason that our PBL group works so well together."

Examples: *Summarizing Classroom, Seminar and Journal Club Teaching (cont.)*

Example 3

Summary of My Classroom and Seminar Teaching Activities

- MICB 7621 – Microbial Pathogenesis. This course is offered each year by the Department of Microbiology. I am responsible for three weeks of classroom lecturing and small-group seminars on the topics of mucosal immunology, host antimicrobial mechanisms and bacterial host cell invasion. For this course, my contributions involve a total of 9 direct contact hours.

- IDPT 7803 – This course is part of the Biomedical Sciences Core Course III, headed by Dr.____. For each of the past three years I have presented the lecture, "Delivery of microbial effectors into cells." My teaching responsibilities included a total of three contact hours, divided into one lecture and two paper discussions.

- MICB 7704 – *Course Co-Director.*
  Beginning in 2006, I have served as one of three co-directors of this course, which emphasizes interactions between pathogen and host. The course consists of lectures and small-group seminars, which focus on the reciprocal changes and adaptations that occur during infectious diseases. The curriculum covers host responses from the innate to the adaptive, and from intracellular to systemic. We discuss a wide range of infections, including bacteria, viruses, fungi and parasites. I am responsible for several lectures and content areas, including "innate defenses and effecter mechanisms," "host-parasite interactions" and "intracellular bacterial infections." I serve as facilitator for a group of about fourteen students for the microbiology laboratory section of this course.

***Examples**: Summarizing Teaching Activities in Clinical Settings*

Example 1

Major clinical teaching responsibilities: 2004 - 2008

Site	Nature of teaching activities	Dates	Examples of lecture topics	Number and types of trainees
Same Day Sick Clinic at Child Health Clinic	Didactic lectures (1-2 45-minute lectures per month)	1999 – present	• Anticipatory guidance in first-year • Surveillance for developmental delay • Immunization review • Impact of television viewing on children	• 2-4 Pediatric and Family Medicine residents • 1-2 medical students • 2 Physician Assistant interns
Same Day Sick Clinic	Patient-centered teaching through precepting	1999 - present	Broad range of primary care topics, depending on patients' presenting illnesses	• 2-4 Pediatric and Family Medicine residents • 1-2 medical students • 2 Physician Assistant interns
Short Stay Unit at The Children's Hospital	Lectures (3-5 one-hour lectures per week, 3 weeks per year)	2003 - 2007	• Fever without focus • Bronchiolitis • Community-acquired pneumonia • Evaluating hematuria	• 2 Pediatric residents • 1 Physician Assistant intern

Examples: *Summarizing Teaching Activities in Clinical Settings (cont.)*

Example 2

Bedside Teaching – University of Colorado Hospital Emergency Department

My main teaching responsibilities lie in the bedside teaching of emergency medicine. I work an average of 20 clinical hours every week in the Emergency Department, side by side with first-, second- and third year Emergency Medicine residents and with interns from Medicine, Surgery and Obstetrics-Gynecology. The interns or residents often will see the patients first, or perhaps together with me. We discuss each patient and design a specific diagnostic plan, after reviewing the history and clinical examination. Importantly, we establish a differential diagnosis for each patient, first in the order of which diagnoses are most emergent and life threatening, and second according to which are most common or likely. I am also responsible for teaching the residents the importance of continually re-triaging the entire ED to establish which patients are the most sick, or potentially sick, and which need priority. Another skill that I teach is the efficient balancing of multiple (sometimes as many as 12) patients simultaneously, while answering calls from paramedics, referring physicians, consultants, pharmacists, lab technicians and patients' family members.

Additional clinical teaching responsibilities:

- I am on the Emergency Medicine Education Committee where I help plan and organize our department's M & M conferences, lectures and bedside educational activities.
- I routinely provide verbal and written feedback to residents after their lectures and M & M conference presentations.
- I participate frequently in monthly EM Residency Journal Clubs and annual resident educational retreats.
- More recently I have been involved in medical simulations at the Wells Simulation Center, where I am responsible for evaluating case scenarios such as beta blocker overdose and tension pneumothorax and using these simulations to enhance resident learning.
- I have mentored a "Foundations of Doctoring" student every year since I joined the faculty. In this longitudinal clinical course, I am responsible for one-on-one mentorship of at least one medical student who is learning bedside skills. These students work directly alongside me for 4-8 hours a week, including nights and weekends, and I am responsible for assessing, evaluating and improving their physical examination and history-taking skills.

Teaching Evaluations

I have always received excellent evaluations from my peers as well as from interns and residents, for both bedside teaching and didactic lectures. The residents continually report that I provide immediate feedback to them at the end of their shifts and I give helpful advice on their monthly evaluations.

My teaching evaluations for 2003 – 2008 are included in a later section of my Teaching Portfolio.

Examples*: *Summarizing Teaching Activities in Clinical Settings (cont.)

Example 3

My principal clinical teaching activities are summarized in the table below:

Clinical Teaching Activity	Teaching Involved
Cardiology service attending	Teach cardiology consult fellows and rotating residents and medical students; includes teaching at the bedside and on rounds, as well as in small didactic sessions.
Non-invasive cardiology attending	One-on-one teaching with the non-invasive cardiology fellow in the following areas: interpretation and performance of transthoracic echocardiography; transesophageal echocardiography (see more detail below); exercise treadmill testing; holter and event monitoring; and ECG interpretation. This rotation serves as a critical introduction to the interpretation of echo-cardiography (TTE and TEE), and is the only rotation with formal one-on-one interpretation of ECG's in our system.
Cardiology outpatient attending	Primary teaching role centers on the staffing of patients being seen by cardiology fellows and nurse practitioners; includes one-on-one presentations, followed by shared patient interviews and examinations and formulation of a diagnostic assessment and treatment plan.
Trans-esophageal echocardiography attending	This is an important teaching role to emphasize, because, it is often the first exposure to this procedure for the cardiology fellows, and has significant patient safety implications (ranging from conscious sedation to the procedure itself).

Examples: *Teaching Leadership and Administration*

Example 1

Director, Advanced Cardiac Life Support Course (IDPT 8002)

I developed and directed (1986-2001) the Advanced Cardiac Life Support curriculum for 4th-year medical students (IDPT 8002). This course was designed to synthesize the clinical and theoretical concepts that underlie diagnosis and management of cardiopulmonary arrest. Each year the course content, the algorithms, the simulated "COR-ZERO" exercises and the examinations were revised, based on new published evidence or consensus recommendations. Two years ago, we further modified the ACLS curriculum to build on the extensive pharmacology and pathophysiology topics the students had recently learned.

Over the past 20 years, more than 1,700 students have taken this course, which provides vital preparation for residency years. Students frequently wrote that this course "finally put all the pieces together" and was "one of the best courses in medical school."

Ideally, the faculty member would expand this narrative to include various measures of the impact of the course, such as numbers of students enrolled, pre- and post-test results, student pass rates or peer evaluations of the scientific content. Also, the faculty member would describe the teaching methods and the development of the clinical algorithms and the case simulations in more detail.

Examples: *Teaching Leadership and Administration (cont.)*

Example 2

Senior Associate Program Director, Internal Medicine Residency

Since 2003, I have served as Associate Program Director (APD) of the Department Medicine Residency Program, I meet regularly with the rest of the leadership team and staff for the residency program. This includes bi-weekly APD meetings, as well as monthly Residency Review meetings. A list of duties in this position includes: review of 1/5th of all residency program applications; supervision of 15 interview dates with morning and noon sessions; regular review of evaluation forms submitted by residents after inpatient and outpatient rotations; preparation for site visits; review of scholarly work completed by residents; review of peer teaching talks presented by residents; and assistance, whenever needed, with resident remediation plans and counseling. I also serve as acting Program Director in the absence of the Residency Program Director.

Ideally, the faculty member would also include a description of various measures of success as Senior Associate Program Director. For example, she might include summaries of feedback from residents, programs developed, success in competitive recruitment of top residents, results of accreditation site visits, ACGME compliance measures, resident performance on in-service examinations, summaries of residents' scholarly activities or later board certification examination scores.

Example 3

CME Course Director: Fundamentals of Critical Care Support

For the past 4 years I have directed *Fundamentals of Critical Care Support*, a 2-day course sponsored by the Society of Critical Care Medicine (SCCM). This course teaches health care providers in Colorado the key elements of stabilizing a critically-ill patient. The course consists of lectures and skill stations and offers guidance for decision-making in the care of critically-ill patients during the initial hours of management, when critical care specialty consultations may not be available. Knowledge of these stabilization and early patient evaluation skills hopefully will help avoid patient morbidity and prevent mortality, by increasing diagnostic accuracy and avoiding complications of the underlying critical disease processes. The course is designed for a broad cross-section of health care providers, including paramedics, interns and residents of numerous specialties, emergency department physicians and nurses, family physicians and other interested providers.

As one of only two FCCS franchises in the state of Colorado, and one of only a handful in the Rocky Mountain Region, this course is critical to serving the critical care needs of Colorado. As the founder of the National Jewish/Rose Medical Center FCCS class, as well as the course director for the April and September 2007 classes, I was responsible for returning this course to Colorado. I have trained an additional 4 Instructors, 4 Associate Instructors and 33 trainees to date. In 2008 we anticipate training over 140 additional providers.

Enclosed is the SCCM National Consultant review of our inaugural class, in which the reviewers stated*: "Overall, this was the best directed course I have ever attended or consulted."*

Examples*: *Teaching Leadership and Administration (cont.)

Example 4

Elective in Caring for HIV Patients for Internal Medicine Residents

In 2007 I created an innovative HIV elective for internal medicine residents. This unique experience is not offered anywhere else in the country. The month-long elective includes didactic sessions, journal clubs, case reviews and clinic experiences. Once the elective is completed, primary care residents at the start of their second year of training have the option of entering into a longitudinal track, where they will spend one of their two ambulatory clinic sessions for the next 2 years at an integrated HIV outpatient clinic. The focus is on primary care of the well HIV-infected individual, and the clinic experience includes a continuing series of didactic lectures throughout the training years. The curriculum is modeled after the American Academy of HIV Medicine, and residents also take the AAHIVM certifying examination upon completion. In the first year, 4 residents are taking the elective and 3 are entering the longitudinal program.

Example 5

Development of Novel Lectures

- *Controversies in Prostate Cancer Screening* - Over the past several years, I developed two formal, 50-minute classroom lectures. The most recent, in June, 2007, was for graduate students in the Cancer Prevention and Control course (PRMD 6622), entitled "Controversies in Prostate Cancer Screening." The material included an overview of the test characteristics of the prostate-specific antigen (PSA) blood test, modifications of the PSA to improve accuracy, downstream diagnostic dilemmas in the face of abnormal PSA results, conflicting professional guidelines for screening, and the challenges associated with counseling patients about screening and treatment.

- *Race, Ethnicity and Culture in Biomedicine* - I also developed a lecture, complemented by small group follow-up discussions, entitled "Race, Ethnicity and Culture in Biomedicine" (with special reference to cancer). I presented this material in 2003 to 100 first-year medical students at UCSF during my last year as a general medicine fellow. The goal was to upend students' "taken-for-granted" assumptions about the meaning of "race" and to help them identify overly simplistic uses of this concept in the medical literature. The lectures and discussions that followed were well-received by students and by the social sciences and genetics faculty who participated in the course.

Informed by this experience, I wrote a chapter, "Cross-Cultural Communication" for the Lange textbook, Behavioral Medicine in Primary Care, now in its third edition.

The reference above (bolded) provides clear evidence of educational scholarship. This information should also be included in the "Teaching Innovations and Scholarship" section of the candidate's Teacher's Portfolio. For more information about scholarship, see: Appendix A, "How the Faculty Promotions Committee Defines and Judges Scholarship"; and Appendix B, "Documenting Teaching Scholarship."

***Examples**: Regional and National Leadership in Education*

Example 1

2005 – 2008: Member, Society for General Internal Medicine (SGIM) Education Committee

Our national committee, which includes 14 academic internists, meets quarterly to advise SGIM on educational activities and scholarship opportunities for local and national meetings. We develop workshops and lectures and suggest other new educational initiatives at the local and national levels. Our committee also administers the educational awards within SGIM and provides advice to the *Journal of General Internal Medicine* on educational scholarship. Currently, we are working to develop educational scholarship collaborations at the national level.

I have included a letter from the 2006-2008 national committee chair, outlining my contributions to this national advisory and policy-making committee.

Examples*: *Regional and National Leadership in Education (cont.)

Example 2

For many years I have been interested in teaching about bedside ultrasonography. In 1995 I participated in an ultrasound training course in San Antonio, sponsored by the Society for Academic Emergency Medicine. This led to my serving as lead editor of a monograph on emergency ultrasonography that was published in 1995 in *Emergency Medicine Clinics of North America* [provide reference]. I was also lead author of a frequently-cited review article on "Ultrasound in the Evaluation and Management of Blunt Abdominal Trauma," published in the *Annals of Emergency Medicine* in 1997 (29: 357-366).

As bedside screening ultrasonography began to gain recognition as a critical component of emergency medicine, I sought increasing opportunities to teach these new techniques on a national and international scale:

- Beginning in the spring of 2002, I have joined my colleague, Mark Smith, in teaching over 20 ultrasound courses through the Colorado Chapter of American College of Emergency Physicians. We began giving local courses in Denver to 25 board-certified emergency medicine physicians, with faculty:learner ratios of 5:1, to enable them to begin the credentialing process for bedside clinical ultrasonography. These courses covered trauma, venous access, procedures and clinical evaluations alternating between lectures and hands-on skills laboratories, involving both real patients and mock vascular access models. We expanded these courses to surrounding states, and have taught more than 300 board-certified emergency physicians.
- In 1998, and again in 2003, I was invited to present Grand Rounds at The Johns Hopkins Hospital. After a lecture on ultrasound imaging of the gallbladder, I presented a two-hour, hands-on teaching session to the Johns Hopkins Emergency Medicine faculty and residents, which was very well received (See "Evaluations" section of my Teaching Portfolio).
- In 2003 I lectured to hundreds of emergency physicians at the national conference of the American College of Emergency Physicians (ACEP); my teaching sessions involved extensive hands-on and one-on-one skills and laboratory sessions.
- I was also an invited instructor for the "Bedside Emergency Medicine Ultrasonography" course at the Rocky Mountain Winter Conference for Emergency Medicine from 2002-2004.
- I served as a faculty member for the Rocky Mountain Summer Conference on Trauma in June 2007. Again, I provided small-group ultrasound training with a heavy emphasis on individualized learning.
- Beginning in 2004, I have been invited to teach Advanced Bedside Emergency Ultrasound techniques to emergency physicians in Hong Kong. These 2-day courses, which are comprised of lectures as well as hands-on teaching, have been so well received, that my colleagues and I have been invited back to give at total of six two-day courses in Hong Kong on *Advanced Emergency Ultrasound*.
- I was author lead on an important chapter entitled "First Trimester Pregnancy Evaluation" in Cosby and Kendall's *Practical Guide to Emergency Ultrasound* (Lippincott, 2006). This chapter discusses the evaluation of emergency department patients in the first trimester of pregnancy presenting with pain or bleeding and the manner in which ultrasound guides patient management. This chapter has been well-received and is an important teaching tool for many audiences.

Examples: *Summarizing Mentoring Activities*

Example 1

NAME	MY RESPONSIBILITIES AS MENTOR	ACHIEVEMENTS OF MENTEE
Kevin Smith, Ph.D. Post-doctoral fellow (2003-2008)	*[Include a description of your role as research supervisor, thesis committee chair, instructor, career counselor, or other duties]*	• AHRQ R01 (2008) • Hartford Scholars Award (2006) • Current Position: Assistant Professor, Stanford University • *Also list important presentations and publications by mentee*
Manual Josephs Graduate student (Neurosciences Ph.D.)	*[Include a description of your role as research supervisor, thesis committee chair, instructor, career counselor, or other duties]*	• RWJ Clinical Outcomes Research Award , 2002 • Current Position: Associate Professor and Director of Pediatric Research, University of Iowa • *Also list important presentations and publications by mentee*

***Examples**: Summarizing Mentoring Activities (cont.)*

Example 2

I have provided supervision and direction for the following graduate school research projects that have led to advanced degrees. Research presentations, peer review publications and awards received by the students are listed. "*Chair*" indicates that I served as project director and thesis committee chair. *"Director"* indicates that I served as project director (but not thesis committee chair)

STUDENT, RESIDENT OR FELLOW	DEGREE (DATE)	THESIS TITLE	MENTEE'S PUBLICATIONS, PRESENTATIONS, AWARDS
Mary Ann Jones, RN	MS, School of Nursing (1989) *Project Director*	Lack of Utility of Orthostatic Vital Signs in Emergency Department Patients	*Annals Emerg Med*, 1991 1989 Emergency Nursing Scientific Assembly, 1989 *ENA/Micromedex Best Original Research Award*
Michael McGee	Master of Science, Public Health (1989) *Funding: Colorado Department of Transportation* *Project Director*	An Evaluation of the Colorado Mandatory Safety belt Law	Report to the Colorado General Assembly and Colorado Department of Transportation Colorado Public Health Association Annual Meeting, 1989
Francis Foster, M.D.	Master of Science, Public Health (1991) *Chair*	Prevalence and Clustering of Injury Risk Factors in a Primary Care Medical Practice Safety Belt Use by Internal Medicine Patients: A Missed Opportunity in Clinical Preventive Medicine	*Ann Intern Med*, 1990 *J Gen Intern Med*, 1992 *Amer J Med*, 1995 Ann Meeting, Society Gen Intern Med, 1991; Ann Mtg, Southern Section, SGIM, 1992; Ann Mtg, SGIM, Wash DC, 1992 *Mark Lipkin Sr. Award, Best Scientific Research*

***Examples**: Summarizing Mentoring Activities (cont.)*

Example 3

Below, I list 5 clinical trainees to whom I have provided research mentorship and career guidance:

- **Kenneth Maloney, M.D.**, Categorical Resident in Internal Medicine (R2-3)
    - I Supervised Dr. Maloney's research project, "Barriers to colorectal cancer screening: Patients' perspectives." Dr. Maloney was involved in background library research, development of a survey instrument, data collection and analysis and presentation to faculty members and residents at three UCD research conferences. He also presented his work at a regional meeting of the Society of General Internal Medicine, and he co-authored a manuscript published in 2008 in the *Annals of Internal Medicine.* Dr. Maloney was awarded the Resident Research Top Honors award at the 2006-2007 meeting of the Mountain West Society for Ambulatory Care Medicine.

- **Joanna Pepper, M.D**., Gastroenterology Fellow
    - I served as both a career advisor and a research mentor for Dr. Pepper, during her three-year gastroenterology fellowship. Dr. Pepper participated in two studies related to identifying patients' preferences regarding timing and types of cancer screening. Her work involved patient interviews and tracking of visit "no-shows" and patient non-adherence to screening recommendations, and we published two manuscripts (with Dr. Pepper as first-author) in the *Journal of Community Health* (in 2006) and the *Archives of Internal Medicine* (in 2008). Dr. Pepper also presented this work at the Western Regional Meeting of the Society of General Internal Medicine and at the 2008 Annual Meeting of the American College of Physicians. I also mentored Dr. Pepper on a narrative literature review of Barriers to Effective Screening for Cancer in Geriatric Patients," which has been accepted for publication in the *Journal of the American Geriatrics Society.*

***Examples**: Summarizing Mentoring Activities (cont.)*

Example 4

Trainee: **MaryAnn Horton, Ph.D.**
Position: Postdoctoral Fellow
Training Period: 1998-2000
Research Project: Role of the JNK pathway in SCLC stress signaling
Current Position: Biotech Industry, Paris, France

Publications:

- **Horton M**., Butterfield L, Zentrich, E, Heasley LE.. Akt negatively regulates the cJun N-terminal kinase pathway in PC12 cells. J Neurosci. Res. 2000; 62:799-808.
- Stack KL, Hunter S, Heasley LE, **Horton M,** Leon RP, DeGregori, J, Anderson SM. Prolactin stimulates activation of cJun N-terminal kinase. Mol. Endocrinol. 200; 14:1592-1602.
- **Horton M**, Marek L, Blumberg D, Heasley LE. Regulation of platinum compound cytotoxicity by the cJun N-terminal kinase and cJun signaling pathway in small cell lung cancer cells. Mol. Pharmacol. 2002; 62:689-697.
- Marek L. **Horton M**, Amura C, Zentrich E, Van Putten, V, Nemenoff RA, Heasley LE. Multiple signaling conduits regulate global differentiation-specific gene expression in PC12 cells. J. Cell. Physiol. In press.

Grants obtained:

- Fellowship grant from the Cancer League of Colorado (1999-2000)
- Career Development award, UCHSC Lung SPORE grant (1999-2000)

TEACHING INNOVATIONS AND SCHOLARSHIP

See the following page for examples of narratives describing educational innovations and scholarship. In each of the examples, the **bolded sections** provide clear evidence of educational scholarship.

For more information about scholarship, see: Appendix A (How the Faculty Promotions Committee Defines and Judges Scholarship); and Appendix B (Documenting Teaching Scholarship).

***Examples*: Narratives Describing Teaching Innovations and Scholarship**

Example 1

Gastroenterology Bench-to-Bedside Seminar Series

I developed, directed and taught a novel case-based, bench-to-bedside course for fellows and residents in gastroenterology. This course emphasized principles of immunology, genetics and molecular science that apply to GI diseases. One effective teaching tool that I employed was to use quotations from textbooks of gastroenterology published over the pasts 5 decades, to illustrate how our understanding of basic disease mechanisms has changed with advances in cell biology, biochemistry and genetics. The course also include a critical review of 12 recent, published articles illustrating common flaws in using animal models to simulate human disease.

Last year, in response to feedback provided by fellows, we expanded the "critical appraisal of the literature" module. Participants actively debated the role of blinding and randomization in animal studies, the use of statistical methods such as repeated measures ANOVA with random allocation, and the importance of measuring time-group interactions. As indicated by the course evaluations, these exercises appeared to be an important addition to the evidence-based medicine curriculum for residents who must evaluate the validity and applicability of research conducted using animal models.

Since 2001, 24 medical residents and fellows have taken this course. I have included the course objectives and syllabus, along with course evaluations and the results of pre- and post-tests in my teaching portfolio.

In May, 2006 I presented an abstract describing this innovative course at the Western Group on Educational Affairs of the Association of American Medical Colleges.

Example 2

Recently, I have developed an Internet-based course entitled, "Improved Strategies for Detecting Ketoacidosis and Monitoring Patients for the Prevention of Diabetic Ketoacidosis." This course is mainly targeted toward diabetes care providers; it was sponsored by a New Jersey-based company, Postgraduate Healthcare Education, LLC and Abbott Laboratories. This course is addressed to multiple groups of providers who see patients with diabetes, particularly those who take care of life-threatening complications, including DKA. **The course is available online at** http://www.powerpak.com.

Last year I was also involved in the development of another web-based interactive course intended for Emergency Department physicians addressing new modalities in the treatment of DKA. **This course --- *Umpierrez G, Rewers A: New Advances in the Diagnosis and Management of Diabetic Ketoacidosis – Web Conference, September, 2008* --- is available at** http://www.accesscme.org.

***Examples**: Narratives Describing Teaching Innovations and Scholarship (cont.)*

Example 3

Beyond my traditional attending duties, I have been fortunate to be involved in a unique and innovative project for resident education. My time at Denver Health has coincided with the new ACGME work hour mandates, which were implemented at the time I assumed administrative leadership for the Hospital Medicine service. Prior to 2003, and for as long as anyone can remember, the Denver Health wards were staffed in a traditional call format, with one team taking the vast majority, if not all, the admissions for a twenty-four hour period.

With the new work hour restrictions, we added a day float, moonlighters and a backup call system, but we still ranked "first" among all the University of Colorado affiliated institutions in duty hour violations. These continuing violations placed our accredited training programs in jeopardy. I was charged with redesigning the ward coverage system to accomplish three goals: a) Meet all ACGME work hour requirements; b) improve patient care; and c) improve the educational environment on the medical service at Denver Health.

In conjunction with a working group of housestaff and attendings, we created a completely new system of staffing for the medical wards at Denver Health. The new system eliminated work hour violations, making it the leader in work hour compliance.

And along with decreased work hour violations, we accomplished our other goals. As a result of the ACGME work hour standards, a national phenomenon has emerged, with decreased continuity of care that house officers have with their patients. So, in implementing our new ward call system at Denver Health, we anticipated an increased need for improved transfers of care (handoffs) of patients from one clinical team to the next.

It was my responsibility to develop a "handoff teaching curriculum" for our residents. For the past three years, every intern rotating at Denver Health has received individual instruction feedback regarding the efficiency and effectiveness of their handoffs. Additionally, they have received specific instruction on best practices for patient handoffs. Formal, anonymous surveys have shown that our program has been well-received by our house staff (See summary included in the "Evaluations" section of my Teacher's Portfolio). **Our innovative curriculum has also garnered considerable interest from residency programs around the country. Two letters from other internal medicine training programs are also included in the "Evaluations" section; they provide evidence that our program has been implemented successfully in other institutions**.

Our Handoff Curriculum was developed with a specific goal: to help interns and residents perform safe patient handoffs. The content for this course was selected de novo, as no prior attempts at teaching medical students or house officers about best practices in patient handoffs could be identified. **In a separate Appendix to my Teacher's Portfolio, I have included a summary of our course manual, including background studies of the risks of poorly planned patient handoffs, communication challenges and best practices.**

I presented the results of our handoff teaching program, including duty hour and patient care outcomes and interns' perceptions of the program's utility, at the national meeting of the Society for Hospital Medicine in May, 2007. Our abstract was selected as a finalist in the "Innovations" category. I am first-author of a publication describing our handoff curriculum, which was recently published in *Academic Medicine* *[provide reference].*

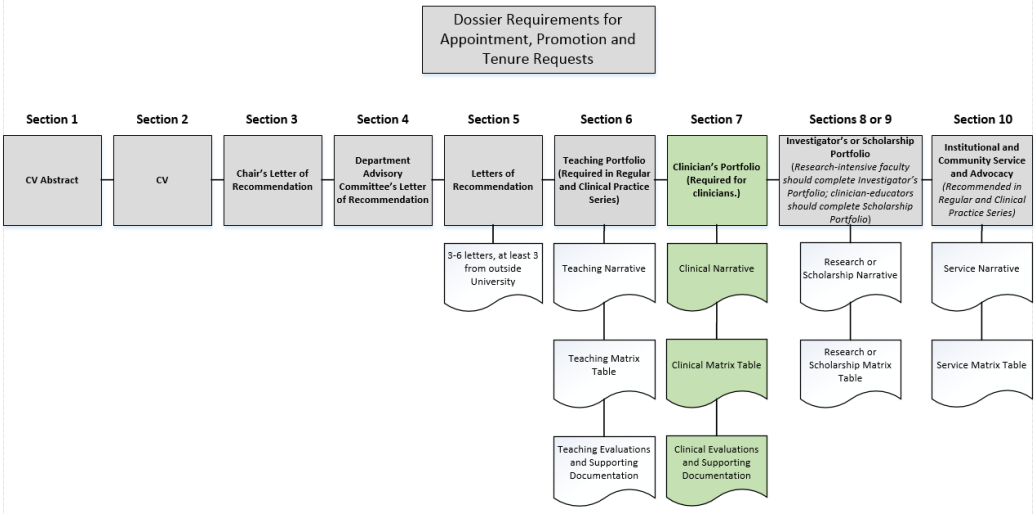
SECTION 7 – BUILDING A CLINICIAN'S PORTFOLIO

The purpose of the clinical portfolio is to make your patient care activities and accomplishments understandable to a diverse group of people, who may not understand the nature of your clinical practice, but who are charged with reviewing faculty members for promotion.

The clinical portfolio presents a picture of your clinical work over a period of years. The portfolio summarizes your efforts and accomplishments, including direct patient care (inpatient, outpatient or surgical responsibilities), quality improvement activities, continuing medical education, practice leadership and national service. The clinical portfolio also includes evidence of the quality of your clinical care, which may be gathered from clinical peers, nurses, advanced practice providers or other professional colleagues, practice managers or patients themselves. Clinical excellence may also be demonstrated through introduction of new techniques or models of practice, invitations to speak or write about clinical topics, book chapters, reviews or other clinical scholarship, studies that demonstrate favorable health outcomes or receipt of local, regional or national awards.

Your clinician's portfolio should contain detailed descriptions of your clinical effort and activities, plus supporting documents that demonstrate clinical effectiveness. A carefully assembled clinical portfolio provides essential documentation for the Faculty Promotions Committee, which must judge whether your clinical accomplishments meet the School's "meritorious" or "excellent" standards.

Please refer to the Rules of the School of Medicine *(http://medschool.ucdenver.edu/faculty)* **(especially the Promotion Matrices** *(http://medschool.ucdenver.edu/faculty)***, which are included as Appendix C) for examples of "meritorious" and "excellent" performance in clinical service**.



STRUCTURE OF A CLINICIAN'S PORTFOLIO

Narrative (Suggested limit of 3-6 pages)

The clinical portfolio is a highly individualized product; there is no single format that perfectly fits every faculty member's clinical activities, and most faculty members will not have activities in every area. Nonetheless, the following outline is suggested, to help you describe your clinical contributions in a manner that is understandable to members of the Faculty Promotions Committee. The purpose is to summarize and explain the highlights of your clinical career. Examples of "reflective statements," charts and summaries of clinical effort are provided in this section of the *Guide.*

Clinical Narratives: Suggested Format

Reflective Statement: Outline your areas of clinical focus and expertise. Explain what is unique about your clinical practice. Explain how you evaluate your clinical effectiveness and outcomes.

Scope of Clinical Activities: Describe your clinical activities and responsibilities in detail. Note that the first expectation in the "excellent" column of the Promotion Matrix (Section on Clinical Activity) is, *Regularly assumes greater than average share of clinical duties.* Therefore, you should include information about sites of practice, hours or months, numbers of patients (or procedures) and responsibilities, RVUs or other measures of clinical effort. You may include a sample weekly calendar that depicts the range of your clinical duties. Also, describe mastery of specific clinical techniques.

Self-improvement: Describe steps taken to improve your knowledge or clinical practice skills, such as CME courses or recertification examinations. Describe any changes in practice that resulted from self-evaluation, outcomes studies or acquisition of new skills.

Role as a clinician-teacher: Describe your activities as a clinician-educator, including numbers of students, residents or fellows supervised on a monthly or yearly basis. Often a tabular presentation is helpful. List teaching rounds, didactic lectures and seminars. NOTE: *If you have included this information in your Teacher's Portfolio, you do not have to repeat the details here. Simply state, "See my Teacher's Portfolio for additional information."*

Administrative Leadership and Service:

Local leadership activities - Describe active participation on, or leadership of, departmental or hospital clinical committees. Include, for example, membership on committees for quality improvement, patient safety, infection control, utilization review, operating rooms, etc. Note any important leadership positions such as

committee chair, medical staff president, clinic or practice director, division head, etc. Supporting letters that describe your leadership role and how you positively influenced patient care programs are helpful.

Regional or national service - List important contributions to professional societies, clinical task forces and state and national agencies. Do not simply list the same memberships that are included in your C.V.; instead, describe your specific contributions to these regional and national commissions. Letters from national committee chairs should be sought to help you document the impact of your service.

Development of Innovative Techniques or Patient Care Practices:
Describe innovative techniques that have changed or influenced practice. Describe quality improvement work, health outcome studies, clinical pathways, leadership of inter-disciplinary teams or other creative activities designed to evaluate and improve the quality of medical care. Also include practice reorganizations, analyses of health care delivery, improvements in access or cost-effectiveness or other creative interventions that have addressed health disparities or improved the health of populations.

Scholarship: Contributions to books, journals or clinical information systems.
Highlight your contributions to clinical scholarship and your regional and national reputation, by summarizing your most important invited lectures, leadership of CME courses, books, book chapters, review articles, videos, case reports or other contributions in your field of interest. Summarize any published or unpublished materials relating to the care of patients, including new practice modules, clinical guidelines, quality improvement studies, utilization reviews or health care outcomes reports. Describe participation in clinical research, including clinical trails. *If you wish, you may include this information in your "Scholarship Portfolio." In that case, simply refer to it here.*

Clinician's Promotion Matrix

Every Clinician's Portfolio must also include a personalized Promotion Matrix Table. The Table will help you document "excellent" or "meritorious" performance in clinical practice, according to the SOM approved Promotion Criteria Matrix. The Matrix Table is a bulleted list of your clinical activities and accomplishments, presented and categorized according to the SOM's criteria. In other words, the completed Matrix Table helps you tie your activities and accomplishments in clinical practice to the specific examples of clinical excellence (or meritorious performance) that are included in the School's Promotion Matrices. The completed Matrix Table also helps reviewers understand and assess the range of your clinical activities and accomplishments.

The Matrix Table is only a list; reviewers will refer to your teaching narrative for information about the importance and impact of the activities listed in the Matrix Table.

A sample Clinician's Promotion Matrix Table is provided on the next page. In this example, a clinician-educator sought to match his accomplishments to the criteria for "excellence" contained in the Promotion Matrices *(http://medschool.ucdenver.edu/faculty)*, which are included as Appendix C. In the left column, the faculty member quoted from the different "excellence" standards of the clinical performance matrix; in the right-hand column, he highlighted (in bulleted lists) his recent accomplishments that proved he had met that standard for clinical excellence. The faculty member used his succinct "Clinical Narratives" (discussed above) to describe each of his principal administrative and leadership accomplishments in clinical service.

Matrix Table

CLINICAL ACTIVITIES	
EXCELLENCE	
Continuing significant participation for an extended period of time in clinical activities that are highly effective	Beginning in 1999, I have provided direct patient care as a member of the UCH Trauma Surgery Team; as outlined in detail in this portfolio, I participate in emergency trauma call and operative, inpatient and outpatient care of patients totaling > 40 hours per week.
	Served on, or led, 8 clinical task forces focusing on inpatient and surgical trauma care, including infection control, blood product utilization, nutritional support and alcohol and drug use screening.
Development of new techniques, therapies, clinical guidelines, patient care practices or or health care delivery systems that have improved the health of patients or populations.	Chaired the UCH Task Force to Improve the Care of Patients with Multi-System Trauma.
	Developed evidence-based treatment guidelines for the emergency management of patients with suspected traumatic brain injury.
	Chaired the UCH collaborative effort to "Improve trauma care efficiency and outcomes;" after two years of work with surgical, medical, radiologic, laboratory and nursing colleagues, we achieved reductions in ICU length of stay, lower rates of infectious complications, a reduction in duplicate radiology and laboratory utilization, improved adherence to national guidelines for managing hyperglycemia and overall improvements in patient outcomes. These favorable results were presented to the UCH Board of Directors and at the 2008 regional meeting of the Western Society for Trauma and Critical Care
Recognition for excellence in clinical activity at the local, regional or national level through letters of reference, awards, institutional evaluations, invitations to speak, requests to write reviews, etc.	Invited contributor (3 chapters) to the Mosby publication, *Evidence-Based Care of the Multiply-Injured Adult* (2008). Served as Program Chair, 2007 meeting of the Western Society for Trauma and Critical Care. 7 Invited talks at regional and national meetings on topics related to trauma resuscitation (listed in my C.V.). Winner, UCH Leadership Award (2009 by the UCH Medical Staff). Winner, 2007 Faculty Professionalism Award (by the housestaff). Invited four times to serve as a site visitor for trauma center accreditations (American College of Surgeons).
Creative, active participation in the evaluation of the effectiveness (quality, outcomes, patient safety, utilization, access, cost).	Developed electronic medical record system to facilitate documentation of care and adherence to clinical guidelines for trauma patients.
	Lead investigator, "An evaluation of trauma care provided to patients in Colorado: A comparison across racial and ethnic lines" (publication forthcoming in the *Journal of Minority Health*).
Demonstration of effective leadership at the site of clinical practice – ie.g., director of a clinical service, head of an interdisciplinary team that creates and manages a clinical pathway and outcomes evaluation …	Served as Trauma Surgery Director, University of Colorado Hospital, 1999 – present.
	Led the UCH multi-disciplinary (surgery, emergency medicine, radiology, neurosurgery and nursing) team that prepared for the successful 2001 trauma center accreditation site visit; resulted in 5-year (maximum) accreditation.
Assumption of a substantive leadership role at the regional or national level – chairing committees, national meetings, professional task forces … journal editor.	Western States Regional Director, American College of Surgery Committee on Trauma.
	Lead author of 3 evidence-based guidelines for trauma care, published in both the *Annals of Emergency Medicine* and the *Journal of Trauma.*
	Member, Committee to Improve Trauma Care in Rural Colorado (Colorado Department of Public Health and Environment), 2003 – present.
	Manuscript reviewer and member of the Editorial Board, *Journal of Trauma and Critical Care.*
	Chair, National Task Force on Trauma Care for Underserved Populations (American College of Surgeons, Committee on Trauma)

Evaluations and Supporting Documentation

In an appendix at the end of your Clinician's Portfolio, you should include evaluations or supporting documentation of outstanding clinical care or clinical leadership. For example, you could include some or all of the following:

- Statements from colleagues who have observed you at a clinical site or who have referred patients to you. Include letters from consultants, specialists or referring physicians inside or outside the institution. Surgeons and specialists often submit supporting letters from referring doctors, while primary care physicians often obtain letters from colleagues who can describe the faculty member's commitment to primary care, quality, continuity and accessibility.

- Results of quality or utilization reviews, practice audits or health outcome studies that directly measure your performance in providing personal care to patients.

- Statements from the clinical service directors, chairpersons, practice managers or others that define clearly your role in the clinical enterprise. The practice director or chair's letter is especially helpful if it: Highlights how your performance compares with other practitioners (inside or outside the institution); enunciates the quantity and value of your contributions as a clinician and educator; or describes how the practice has benefited from your clinical talents.

- Letters or evaluations by students, interns, fellows or residents that comment specifically about your professional behavior and clinical excellence (as opposed to teaching skill).

- Information from patients, which may include letters or emails or the results of ongoing patient satisfaction surveys. **Do not include any patient identifiers or protected health information.**

- Honors or recognition from colleagues (for example, "clinical excellence" awards), or election to medical staff or professional society leadership positions.

To demonstrate, regional or national standing, summarize local, regional and national invitations from other campuses, outside agencies or health providers to discuss clinical topics or health care delivery issues. Invitations from public and lay groups, including news media, should also be listed here, if they reflect on the faculty member's standing as a clinician.

EXAMPLES:

CLINICIANS' STATEMENTS, CLINICAL NARRATIVES

AND OTHER DOCUMENTATION TOOLS

This section contains examples of clinician's statements and other documentation tools that you can use to help you prepare your Clinician's Narrative Statement. These examples were compiled (with permission) from School of Medicine faculty members who were successfully promoted. Remember: The recommended total length of your overall Clinician's Narrative is 3-6 pages.

Examples*: *Clinicians' Reflective Statements

Example 1

I recently reviewed my personal statement for residency applications in Primary Care Internal Medicine. In it, I alluded to my love of the "diagnostic puzzle" of human illness, and the importance of the biopsychosocial model of care. My purpose was to explain the importance I placed on determining the cause of the patient's symptomatic complaints, while never forgetting the context of this illness in the life of the person sitting near me in the examination room. Since that time, I have traveled down several clinical paths, with titles that have included primary care physician, urgent care doc and hospitalist. I have worked in academic settings, private practice and a staff model HMO. I have grown as a physician and a person. However, it is still these principles that provide the foundation of my love for clinical work.

My love of learning has kept me deeply engaged in my clinical work. There are few careers in which people can honestly say that they learn something new every day. Yet, I can and do. Whether it is a new diagnosis, a medical breakthrough, or a discovery about the personal lives of my patients, a day does not pass that I do not learn something new. Each day, this keeps me excited about coming to work. In addition, it has inspired me to train others, and to serve as a role model, mentor and advisor for trainees. I love to see the excitement that I feel for my work reflected in their faces, as we see a patient together and discover what we will learn today.

Although I feel blessed by a career that constantly challenges and teaches me, it is my personal relationship with patients that sustains me. I have found that it is possible to develop healing relationships with patients regardless of the clinical setting. Whether caring for a patient over years in the clinic, or for 10 minutes in the urgent care clinic, I have found it is possible to forge a bond. For me, the key seems to be being present in the moment – listening, hearing and responding. I am constantly amazed at what I can learn about people in such a short period of time – features of their life that are critical to understanding their illness, their response to it, or the appropriate treatment plan. In addition to helping me provide the best possible care for the patient, it gives back to me a reward that is impossible to measure.

As I reflect upon my clinical work, I can say there is no clinical theme. I have not focused on a single disease, a single population or even a single clinical setting. Rather, my theme is one of a love of learning and a love of patient care in all its forms. I have been blessed to work in a variety of settings, with different clinical populations, different clinical teams and different forms of care. In each, I have found the same thing. Each day there is something new to learn; all I have to do is listen.

***Examples**: Clinicians' Reflective Statements (cont.)*

Example 2

Pediatric Emergency Medicine is a unique field. We are at the bedside 24 hours a day. We routinely have to perform as well at 3 am as we do at 10 am. The faculty must share the collective clinical responsibility for days, nights, weekends and holidays. There is no such thing as a routine shift, but rather a continually changing milieu of acutely ill and injured children. As someone who feels the need to be constantly challenged, I find the practice of pediatric emergency medicine a perfect fit. Nowhere else in medicine is there the juxtaposition of a major trauma resuscitation requiring life-saving procedures such as intubation, chest tube placement and central line placement in a room next to a concerned first time mother with a fussy infant (who may not be sick at all). Although these different cases may require different assessment and treatment skills, the same standard for professionalism and interpersonal communication must be met.

It is not without some irony that I note that we care for patients and their families in the most stressful and most intense situations, without the luxury of a prior relationship or its accompanying trust. Often, we remain anonymous to the family, as they may have only vague memories of their visit. Being an ED physician has forced me to forego the continuity of consistent relationships with patients and their families. But the opportunity to provide excellent clinical care with compassion during stressful events such as injuries or illness, even if I remain nameless, is still gratifying to me. For those families, I strive to match the Flight for Life motto: "To be the best part of your worst day."

Examples*: *Describing the Scope of Your Clinical Activities

Example 1

Inpatient Service: I am the ward attending for Gastroenterology and Transplant Hepatology for 6 weeks per year and the ward attending for Transplant Hepatology for another 6 weeks per year. I am on weekend call for inpatient Transplant Hepatology one weekend per month and also for Gastroenterology one weekend every 3 months.

As a ward attending, I am responsible for all patients admitted under Transplant Hepatology or Gastroenterology; the number of patients averages from 4-12 inpatients at any given time. During my ward service I am also responsible for inpatient consultations to Gastroenterology and Hepatology; the number of inpatient consults requested in any given week is approximately 5-10 patients.

Outpatient Service: I staff 2 Liver Clinics each month (8 hours per month), where I care for children with a variety of liver diseases as well as post-liver transplant patients. I see approximately 16-20 patients per month. In the outpatient setting I also staff the GI Procedure Unit one afternoon every other month and perform endoscopies, colonoscopies, liver biopsies and variceal banding or sclerotherapy. I perform approximately 30-40 procedures per year.

***Examples*: Describing the Scope of Your Clinical Activities (cont.)**

Example 2

The focus of my clinical work over the past 14 years has been general surgery, general trauma and orthopedic trauma. Since I started my practice at Denver Health Medical Center in June, 2006, I have been focusing on orthopedic trauma exclusively, especially the management of spine injuries.

- I have personally performed a total of 4,500 to 5,000 surgical procedures until present. These include general surgery procedures, general and orthopedic trauma surgery, elective orthopedic surgery and spine surgery.
- Here at Denver Health Medical Center, where I've worked since June, 2006, my surgical specialty comprises the management of musculoskeletal injuries, complex periarticular fractures, non-unions and spine injuries.
    - I take about 6-8 orthopedic trauma calls per month and about the same number of spine calls, whereby I usually cover these two specialty calls on identical days.
    - I work 5-7 days a week as a clinician at the Denver Health Medical Center.
    - My duties also include daily attendance and leadership of the morning fracture conference. This is a review of all the night's work with the residents, fellows, students and other attendings, in which we review every admission as well as operations from the previous day. This is an educational as well as quality assurance meeting, which is followed by rounds, operations or clinics during the remainder of the day.
    - I operate every Monday, Wednesday, and Thursday. Tuesday is my academic day, which is split as follows: 50% is for work related to the patients on our ward (morning), and 50% is allotted to research activities (afternoon).
    - I supervise a full clinic with about 50 to 70 outpatients every Friday.
    - I also direct the quality assurance (QA) program for our Orthopedic Department at Denver Health, which includes a weekly 30 minute peer-review. I've expanded the prior QA program, which consisted of bimonthly peer review of selected complications, to a once-a-week event every Friday morning that now includes a review of all major and minor complications, including "near-miss" events and "no harm" events. All too often, the latter two scenarios are ignored, neglected or trivialized, instead of being reported and reviewed as "true" complications. The aim of this detailed weekly peer-review process is to increase patient safety in our Department. **I have further expanded this task by founding a new online, open-access, peer-reviewed journal on "Patient Safety in Surgery," which was recently launched by BioMed Central.** (www.pssjournal.com). **This is described in more detail in a later section of my dossier (See "Clinical Innovations and Scholarship").**
    - I take call every Wednesday night, which is technically an out-of-house call, but due to our high volume at Denver Health Medical Center is primarily in-house call. In addition, I take a full weekend call from Friday 5 p.m. until Monday 7 a.m. for orthopedics and spine, once every 4 to 6 weeks. I directly manage all the patients under my care in association with the resident and fellows. I am present and assist or perform all the surgical procedures on my patients. This operative case load is split 50:50 with my partner, Dr. Steven Morgan.
    - Overall, I work approximately 80 hours per week, of which about 60 hours are clinical work, while an additional 20 hours are related to basic and clinical research and administrative work. On the weekends when I'm on call, I usually spend and extra 30 to 40 hours on primarily clinical work. I perform approximately 40 to 50 operative procedures per month.

***Examples*: Describing the Scope of Your Clinical Activities (cont.)**

Example 3

My primary clinical responsibilities are in direct patient care (70%) and program leadership and administration (30%). The latter includes my service as Director of the Breast Center and the WISH (Women's Integrated Services for Health) program. My administrative responsibilities are described in a later section of my Clinician's Portfolio.

Weekly Schedule:

	Monday	Tuesday	Wed	Thurs	Friday
7-8 am	Administration	Breast Cancer Research Conference	OR	OR	
8-9 am	Administration	Multidisciplinary Path/Radiology Conference	OR	OR	Administration
9-12 am	Administration	Multidisciplinary Breast Cancer Clinic	OR	OR	Administration
1-5 pm	Administration	Breast Surgery Clinic	OR	OR	Breast Surgery Clinic

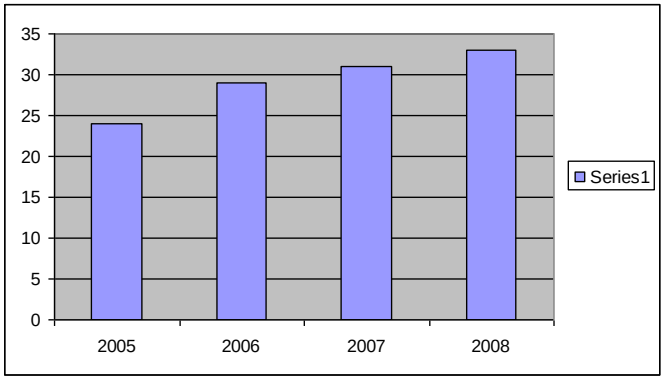
Case Review Responsibilities

I participate on, and help to lead, the Multidisciplinary Pathology-Radiology Case Conference. All patients with breast cancer positive biopsies or surgeries are presented, and information from the clinical history and examination, imaging studies and pathological material is discussed. All patients with surgical, medical oncology, radiation oncology, radiology or pathology questions are presented at this multidisciplinary case management conference.

Operating Room Responsibilities

I operate two full days a week; 85% of my surgical caseload is breast disease, and 15% is general surgery or other malignancies. Operating room volume has been steadily increasing.

Average cases/month



Relative Value Unit (RVU) Data

For fiscal year 2007-08, my total RVU's generated were 9,447. The University Hospital Consortium benchmark for .7 FTE at the 90th percentile is 8,142 RVU.

Examples: *Clinical Leadership and Administration* [3]

Example 1

The Child Health Asthma Initiative

In December, 2006 I assumed responsibility for a new quality improvement program for patients with asthma. The objectives of the Child Health Asthma Initiative were: a) to educate asthma clinic providers about best practices in asthma care, patient education and follow-up; and b) to improve rates of patient compliance with recommended treatments and follow-up care.

Working with my colleagues, we developed the following new components to our asthma care protocols:

- I lead a monthly 8 A.M. conference for clinical staff and trainees. Held on the first Friday of each month, this conference includes case discussions and demonstrations of new approaches to comprehensive asthma care, which I lead.
- A "front desk awareness program" that strengthens scheduling of follow-up visits and stresses the importance of continuity of care.
- Intake questionnaires, administered by medical assistants, to measure patients' current asthma symptom scores.
- Templates for improved asthma documentation in the EPIC electronic medical record system.
- Asthma action plans, with systems to ensure patient understanding and charting in the electronic medical record.
- Streamlined referrals, where indicated, for pulmonary function tests, allergy testing or other recommended specialty care.
- System for prompt contact by medical assistants with each "asthma no-show."
- Weekly telephone calls to families of all hospitalized asthma patients and those treated in the emergency department.

Clinical Outcomes Measures

Quality improvement and outcomes data are now being collected. *Preliminary data indicate that development and documentation of Asthma Action Plans increased from 10% of all asthma patients in the Child Health Clinic to 40%* (See attached graph). **We recently presented our preliminary quality improvement data at the 2007 meeting of the Regional Society for Pediatric Asthma Care.** [Attach or list reference to published or presented abstract].

[3] In many of the examples in this section there is evidence of the scholarship of application (**See bolded sections**). As a general rule, to qualify as scholarship, the clinical innovation, the utilization review, quality assessment or other project should include: evidence of creativity and leadership; clear objectives; use of appropriate methods to assess quality or measure outcomes; significant results that can be reviewed; and evidence of dissemination of the results, through articles or presentations or integration into current practice. For more information about scholarship see Appendix A, "How the Faculty Promotions Committee Defines and Judges Scholarship."

***Examples*: Clinical Leadership and Administration (cont.)**

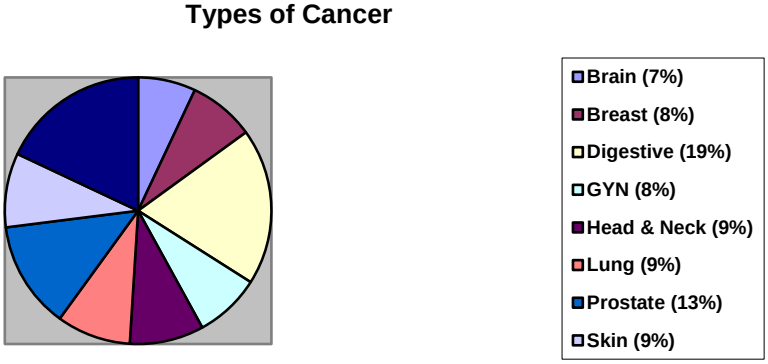
Example 2

Director of the University of Colorado Hospital Breast Center

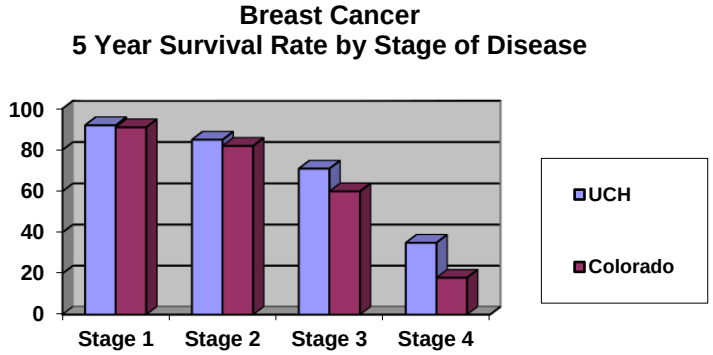
- At the time I assumed leadership of the Breast Center in 1997, I performed an average of 7 breast operations per month; the non-surgical medical oncology service saw an average of 10 patients per month.
- I introduced sentinel lymph node biopsy technology to Colorado and performed the first of these procedures at the University Hospital.
- The focus of our building efforts was to provide best clinical care in the world, exemplary customer service and quick access. I built upon the unique strengths of a medical school faculty practice in designing processes that provided, as much as possible, "one stop shopping." Our goal for a woman presenting with a new breast complaint was that she would leave with a diagnosis that day. This was accomplished by a visit with me, immediate access to breast imaging (located in an adjacent space) and the on-call services of cyto-pathologists who could perform a fine needle aspiration (FNA) with a real-time reading. Today, our visits are a bit long, but over 80% of our patients leave the center at the end of the day with a diagnosis. We developed a similar program for one-stop shopping for multidisciplinary management of breast cancer, which is described more completely later in this document.
- We currently average 600 patient visits per month to the breast center and 33 breast operations per month. The growth in our clinical volume has also led to the desired outcome of building a very robust clinical research program.

Other Clinical Practice and Quality Measures

- Today, breast cancer represents 8% of the cancers seen at the University of Colorado Cancer Center.



- Breast cancer survival rates for patients treated at the Dianne O'Connor Thompson Breast Center are consistently above the state average, after adjustment for disease stage.



Examples: *Clinical Leadership and Administration (cont.)*

Example 3

Development of the International Adoption Clinic at The Children's Hospital. The primary innovative clinical endeavor that I have been involved with is the development of the International Adoption Clinic at the Children's Hospital. During the 1990's the number of children adopted into the U.S. from abroad soared, from 7,088 in the year 1990 to 18,120 in the year 2000. In 1999, a small number of international adoption clinics existed in the U.S., specializing in the assessment of medical records prior to adoption and evaluation of children after adoption. No such clinic existed in the Rocky Mountain region.

In the summer and fall of 1999, working in collaboration with another pediatrician (Sara Carpenter, M.D.) and with the support of my section head (Stephen Berman, M.D.), I helped to start The International Adoption Clinic at The Children's Hospital. The clinic was founded on the premise that international adoptees often face unique medical, behavioral and developmental issues, and that many would benefit from health care that bridged these distinct areas. Dr. Carpenter and I both had an interest in pediatric infectious diseases, broad training in developmental issues and international health experience. I co-directed the clinic with Dr. Carpenter from 1999 to 2001, and I have been the sole clinic director since 2002.

The clinic is multi-disciplinary and provides general pediatric care, nutrition services, clinical psychology and counseling, occupational therapy and physical therapy. Speech therapists also participate on an as-needed basis. The clinical services provided include: 1) pre-adoption assessments of the medical records of prospective adoptees; 2) pre-adoption evaluations of photographs and videotapes; 3) preparation for foreign travel for children; 4) consultation by telephone or email while abroad; 5) post-adoption screening for infectious diseases; and 6) comprehensive post-adoption evaluations addressing medical, nutritional, developmental and behavioral issues.

The clinic has seen and evaluated children from Russia, Ukraine, Belarus, Moldova, Romania, China, South Korea, Vietnam, Cambodia, Thailand, India, Nepal, Ethiopia, Liberia, Guatemala and Columbia. The clinic sees an average of 75 children per year for post-adoption assessments and 50 families per year for pre-adoption assessments of medical records. Therefore, in the 8 years that the clinic has been in existence, the clinic has provided international adoption expertise to approximately 1,000 families.

In addition to serving families, the clinic serves as a resource for community pediatricians and family physicians, as well as for local international adoption agencies.

<u>Impact</u>

Several letters of support from community pediatricians are included in this packet. In addition, the clinic staff and I have frequently been asked to give talks at adoption agencies, such as Adoption Alliance in Aurora and Chinese Children's Adoption International (CCAI) in Englewood. Finally, from 2001 to 2006 I served on the Board of Directors of CCAI, which is reported to be the largest international adoption agency for Chinese children in the world. In that role, I provided medical guidance to the agency regarding the broad array of health issues encountered in international adoptees.

Examples: *Clinical Leadership and Administration (cont.)*

Example 4

Regional and National Impact: Establishing Denver Health's Medical Intensive Care Unit as a Leader in Quality Improvement

Since November, 2004 I have served as Medical Director of the Denver Health Medical Intensive Care Unit. In June, 2007 I was also appointed Section Head of Pulmonary and Critical Care Medicine at Denver Health. In my role as Medical ICU Director and more recently as Section Chief for Pulmonary and Critical Care Medicine, I have committed significant time and energy over the last five years to build an integrated, academic, multi-professional medical critical care program for gravely ill adults admitted to Denver Health. By working closely with colleagues in nursing, respiratory therapy, pharmacy and the other medical services, the program is widely recognized as a model for integrated critical care and regularly attracts national and international visitors to review and evaluate the performance characteristics of this highly reliable model of safe, effective and equitable critical care for vulnerable patients.

Today, the DH MICU is an "out-performer" when benchmarked against other major academic medical centers participating in the University HealthSystem Consortium (UHC) program.

- In the area of "outcomes for patients requiring mechanical ventilation for respiratory failure," Denver Health critical care has improved over the last three years to become a top performer among the 153 affiliated academic hospitals for many reporting periods. [Provide data]
- I have worked to integrate the science of critical care and evidence-based practice by integrating electronic protocols and clinical decision support into the CPOE system. This has attracted national and international attention. With hospital administration, I have hosted visits by the CDC, NIH, CMS leadership and the Surgeon General during a recent multi-city tour. We have also hosted State and Federal congressional delegations, leadership from CMS, the Joined Commission, IHI and Leapfrog groups. In recent months, visiting international delegations from South Africa health service, the United Kingdom NHS and Singapore have visited the MICU with the specific purpose of learning how medical critical care has become a core component of the integrated health model at Denver Health.
- At a regional level, I founded and am vice-chair of the Colorado Critical Care Collaborative - a multi-professional care provider group under the umbrella of the Colorado Hospital Association that champions the implementation of evidence-based care for critically ill adults throughout Colorado. We have worked to build this organization into a highly influential and productive consortium now representing 16 healthcare systems in Colorado. This type of initiative seeks to influence clinical care for individual patients and public policy in the region and nationally. We are presently seeking federal and foundation funding for ongoing statewide implementation of a post-cardiac arrest induced-hypothermia protocol.
- Nationally and internationally, I serve on several committees of the American Thoracic Society and the Partnership for excellence in Critical Care. For example:
    - I served on the program committee for the ATS International ***Conference*** in 2007 and chaired a scientific symposium at the meeting.
    - I serve on the international steering committee for a pivotal multi-national critical care trial currently underway that test the safety and efficacy of activated protein C in patients with severe sepsis and shock.
    - I serve on the Editorial Board of the *CHEST*, the Journal of the American College of Chest Physicians.
    - I recently received a young-leadership award from the ACCP.
    - I will be an alternative reviewer for the NIH/NHLBI Lung Injury Repair and Remodeling Study Section, beginning in 2008.

It is always helpful to provide letters from state or national committees or program chairs that document faculty member's roles, responsibilities and contributions.

Examples: *Clinical Leadership and Administration (cont.)*

Example 5

As a Hospitalist Clinician-Educator, I have devoted myself to the study and practice of team-based care --- and the manner in which team-based care can improve flawed hospital systems to benefit vulnerable patient populations. In this section, I describe my role in developing and directing an inpatient unit to the care of elderly patients.

I developed and am the Medical Director of the Acute Care for the Elderly (ACE) clinical service; I also serve as the medical director of the 12W unit, which is the primary site of care for elderly patients at the University of Colorado Hospital. This service includes novel interdisciplinary rounds to facilitate effective team-based care, measures to increase patient involvement in their care and improve patient satisfaction, and a standardized brief geriatric assessment for all patients to assist in recognizing and compensating for frailty.

The ACE service has been studied in a grant-funded randomized trial and demonstrated to improve clinical process measures and staff and patient satisfaction. As a result of my experience with the ACE service, I have been asked to present conferences and workshops at regional and national meetings on optimizing care for the geriatric hospital patient. I believe strongly in the importance of objective measures to track clinical outcomes for patients on our service. As a result, we have systematically analyzed the quality and cost effectiveness of care on the ACE service and, consequently, have initiated and monitored a number of quality improvement projects.

<u>Acute Care for the Elderly: Missions and Values</u>

The mission statement of the University of Colorado Hospital (UCH) Acute Care for the Elderly (ACE) service is to improve the outcomes of care of elderly hospitalized patients while providing an educational training model for exceptional care that graduates can incorporate into their post-training practice. Guiding values set forth prior to commencing the service include compassionate, evidence-based care that maximizes patient autonomy, prioritizes quality of life and enhances resident education. Data-driven continuous process improvement is identified as essential to create and sustain system modifications and to provide an example for learners rotating on the service.

<u>Leadership and Planning Process of the Unit</u>

In order to develop the ACE service as a clinical and educational program, a number of essential pieces were needed each of which required commitment from hospital and university leadership. Curriculum development occurred first, but system engineering was critical to maximize improvements in clinical outcomes for elderly inpatients. As there was no explicit funding for this activity, meetings individually with managers in pharmacy, physical therapy, occupational therapy, case management/social work, and nursing obtained support for daily team rounds. Leaders in each of these disciplines were critical to creating the expectation of team-based care on the new unit. Later, as the issue of mobility, social isolation and need for re-orientation was addressed, chaplains were added to the team, and the Director of Volunteer services was contacted. Through this channel, pet therapy visits and community volunteers were brought in to provide cheer, structured social stimulation and orientation. (***Continues on next page)***

Examples: *Clinical Leadership and Administration (cont.)*

Example 5 - continued

This interdisciplinary model has attracted the attention of top hospital leadership. The hospital Chief Operating Officer has attended interdisciplinary rounds with the ACE team. The ACE team model has been applied to achieve other hospital quality improvement initiatives such as improving hospital throughput, and there is an ongoing grant-funded project to export the successful methods hospital-wide. The ACE service has undergone a successful external review in 2008 by Dr. Brandon Koretz from UCLA through a program supported by the Reynolds Foundation. [*Include letter or summary of results of external review*].

Patient Activation

Patients were asked to actively participate in their own care with a handout on admission explaining the role and expectations for patients and caregivers to facilitate communication, mobility and recovery. The patient handout was created with input from the hospital's Patient and Family Centered Care Council, and it encouraged use of sensory aids and increased mobility in the hospital. It emphasized asking questions and participating by raising awareness of problems with the hospitalization. It committed the medical team to keeping the outpatient physician informed of hospital progress. It also encouraged family or other caregiver's contribution to daily rounds and sets forth a specific time when the family and patient could expect to see the physicians. Whiteboards in each patient room were used to describe daily patient goals as well as the care team's plan for the day. Volunteer services was involved in the ACE team including a role to elucidate, clarify and bring to the care team's attention any patient questions not addressed on rounds. [*Include novel patient handout in dossier*].

State of the ACE Service

The ACE service has been successful along a number of lines. The service has been held up as an example of excellence in resident education, hospital teamwork and improved patient throughput through use of hospital teams. Objective review of the accomplishments of the ACE service shows impressive results, and I continue to strive for national recognition of the University of Colorado Hospital as a center of excellence for the care of the hospitalized elderly.

Clinical Volume

The Acute Care for the Elderly Service cared for 700 admissions during the 2008-2009 academic year. This represents an incremental increase in patient volume of 59% from the prior year. The ACE service maintains an average daily census greater than the general ward teams. As a result of the increased census, my annual billing has increased 32.8% from $212,714 to $293,376 over the last two years.

Resource Utilization

- Case mix index for ACE patients was 1.15
- Length of stay 3.4 days
- Mean Patient Charges $24,617
- 30 Day readmission rate 12.3%

Referral Patterns and Payer Mix

Among all admissions, 30% were from UCH General Internal Medicine Clinics. The remainder were: 14% from UCH Geriatric Clinics; 2% from UCH sub-specialty clinics; 38% from non-UCH primary care clinics in town; 4% from non-UCH geriatric clinics in town; 4% from Kaiser system PCP clinic; 4% from VA system; and 4% with out-of-town PCP or no PCP. (***Continues on next page)***

Examples: *Clinical Leadership and Administration (cont.)*

Example 5 - continued

Not surprisingly, the majority of patients had Medicare (57.04%). The other payer sources were; Government Managed Care (22.68%); Medicaid (9.27%); DFFS Managed care (4.24%); Medically Indigent (3.43%); and Self Pay (3.34%).

Organizational Performance and Patient Outcomes

The performance of the ACE service has been assessed across a number of domains including patient satisfaction, objective performance on clinical process measures, and outcomes. A 360-degree evaluation was performed during the first year of the clinical service to assess staff, resident, and patient attitudes toward the care provided on the ACE service. **A pseudo-randomized study compared the ACE model to general ward care of the elderly with randomization between groups by the last digit of the medical record number.**

Patient Satisfaction

Patient satisfaction was compared between patients on the ACE service with controls from the same unit who were not cared for by the ACE service during a 360-degree evaluation from January to March 2008. Seventeen ACE patient respondents were compared to 73 non-ACE respondents. **Increased ACE patient satisfaction was demonstrated.**

Satisfaction Survey Question	ACE Patients strongly agreeing	Non-ACE Patients strongly agreeing
My doctors did a good job of managing my medical problems	94%	58%
My doctors answered my questions	100%	64%
My opinion was respected by the team	94%	54%
My team tried to find out more about me than just my medical problem	88%	53%
Overall I received very good care	94%	71%

Financial Performance

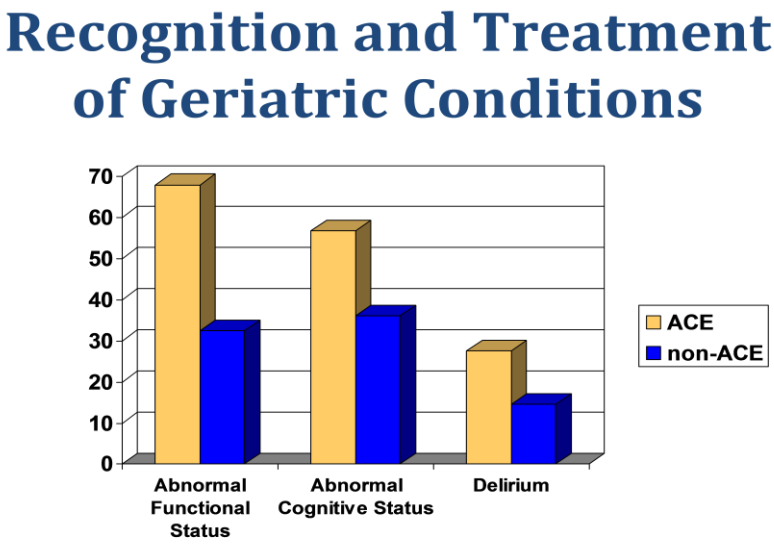
The service is financially self-sufficient and requires no external support greater than that provided to the general ward teams in the hospital, other than 5-10% time for the medical director (supported by the hospital for quality improvement). **A hospital Patient Safety and Quality Improvement small grant funded a professional research assistant for data collection of clinical impact of the service in comparison to standard ward care for the first year. There were no significant differences in length of stay or mean charges between ACE and non-ACE care of essentially identical elderly populations in the hospital. This demonstrated the model is capable of improving processes of care with equivalent costs. The case mix index for ACE patients was 1.15, and that for usual care control patients was 1.05. The difference potentially reflects improved documentation of co-morbidities and improved recognition of complications of hospitalization such as delirium.** **(*Continues on next page)***

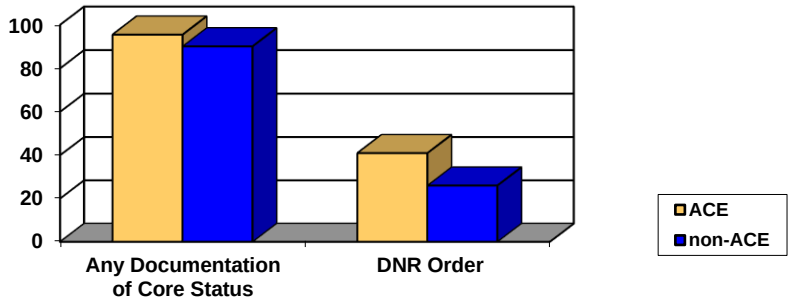
***Examples*: Clinical Leadership and Administration (cont.)**

Example 5 – continued

Quality

The ACE model is now proven to improve processes of care for the elderly hospitalized patient.





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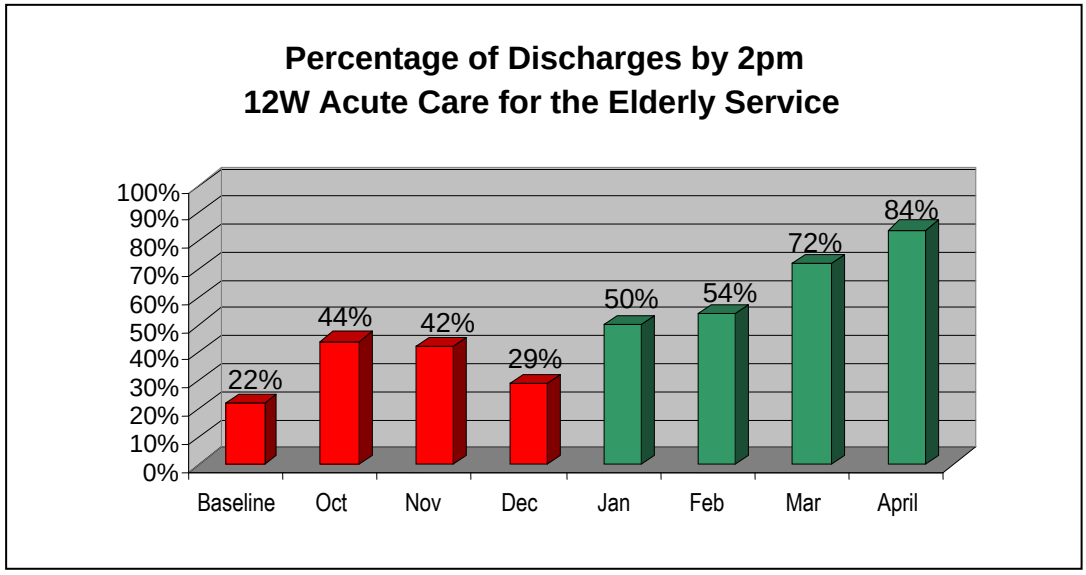
***Examples*: Clinical Leadership and Administration (cont.)**

Example 5 – continued

LEAN Throughput Project

In the second year, the ACE service was chosen to champion and pilot a hospital quality initiative using LEAN process improvement methods to increase the percentage of discharges before 2 pm. It set a goal of > 48% discharges before 2 pm. Percentage discharged at goal increased from baseline of 22% to end percentage of 84% This advances the patient-centered goal of reducing wait times in the Emergency Department for geriatric patients who require an inpatient bed.



Social Responsibility

Improving processes of inpatient geriatric care is considered critical to meeting the needs of the growing population of the elderly. Increased attention to functional limitations and attention to transitions via mandating communication with primary care physicians on both admission and discharge serves to improve safety at transitions. Patient activation and increasing patient/family participation in hospital care is considered part of social responsibility to maximize patient autonomy. Finally, integration of pet therapy visits, recreational therapy, chaplains, and volunteer services as core elements of the care model is an attempt to decrease social isolation and provide a humanitarian touch to hospital care which can be frightening and disorienting for some elderly patients.

***Examples**: Clinical Innovations and Scholarship*

As a general rule, to qualify as scholarship, the clinical innovation, the utilization review, quality assessment or other project should include: evidence of creativity and leadership; clear objectives; use of appropriate methods to assess quality or measure outcomes; significant results that can be reviewed; and evidence of dissemination of the results, through articles or presentations or integration into current practice. For more information about scholarship see Appendix A, "How the Faculty Promotions Committee Defines and Judges Scholarship."

Example 1

Development of a Kiosk-Based Tool for Patient Self-Care

Working closely with Dr. Ralph Gonzales at UCSF, I developed two innovative kiosk-based management tools for patient self-care. The first of these was a program for the evaluation and management of uncomplicated urinary tract infections in women. This program used existing telephone triage algorithms to develop an easy-to-use computer-based program that allowed women with this condition to be treated without waiting to see a physician. **We carefully evaluated the kiosk program and found that it was safe and effective; it also resulted in extremely high patient satisfaction (See references to presentations and publications, listed below).**

We recently developed a similar program for the evaluation of sore throat in adults, which is currently under investigation. In addition, our group has begun development of an investigation of similar programs for non-English speaking and medically indigent patients, with the hope that such programs may be able to improve access and quality of care in these important, but underserved, populations.

Aagaard EM, Nadler P, Adler J, Gonzales R. An interactive computer kiosk model for the treatment of recurrent uncomplicated cystitis.

Aagaard, EM, Nadler P, Adler J, Maselli J, Gonzales R. An interactive Computer Kiosk Module for the Treatment of Recurrent Uncomplicated Cystitis in Women. Oral presentation, Society of General Internal Medicine Annual Meeting, May, 2005. Also: *Journal of General Internal Medicine*. 2006 Nov. 21(11):1156-9.

Example 2

As outlined in an earlier section of my clinical portfolio, I direct the quality assurance (QA) program for our Orthopedic Department at Denver Health, which includes a weekly, 30-minute peer-review of important cases. I've expanded the prior QA program, which consisted of bimonthly peer review of selected complications, to a once-a-week event every Friday morning that now includes a review of all major and minor complications, including "near-miss" events and "no harm" events. All too often, the latter two scenarios are ignored, neglected or trivilialized, instead of being reported and reviewed as "true" complications. The aim of this detailed, weekly peer-review process is to increase patient safety in our Department.

I have furthermore expanded this task by founding a new online, open-access, peer-reviewed journal on "Patient Safety in Surgery", which was recently launched by BioMed Central. (www.pssjournal.com). *[Provide additional details of the objectives, content, editorial leadership of this new journal]*

***Examples**: Clinical Innovations and Scholarship (cont.)*

Example 3

Innovations in Intensive Care at Denver Health

Clinical Pathways to Improve Intensive Care Practices at Denver Health

As noted in an earlier section of my Clinician's Portfolio, since November, 2004 I have served as Medical Director of the Denver Health Medical Intensive Care Unit. In my role as Medical ICU Director and more recently as Section Chief for Pulmonary and Critical Care Medicine, I have committed significant time and energy over the last five years to build an integrated, academic, multi-professional medical critical care program for gravely ill adults admitted to Denver Health. The program is widely recognized as a model for integrated critical care and regularly attracts national and international visitors to review and evaluate the performance characteristics of this highly reliable model of safe, effective and equitable critical care for vulnerable patients.

With respect to leadership, innovations and scholarship, I have developed or helped develop the majority of the clinical protocols being utilized in the medical intensive care units at Denver Health. Many of these protocols have been adopted and modified by colleagues at Rose and University Hospitals. These protocols include:

- Standard ICU Admission Order Set**.** *Primary author*.
- Alcohol Withdrawal Management Protocol. *Primary author.*
- Diabetic Ketoacidosis Management Protocol. *Co- primary author*.
    - This protocol has resulted in a significant and sustained reduction in time to resuscitation and resource utilization since it was initiated in 2004. **These findings were published in a manuscript entitled: *A Mandatory Protocol for Treating Adult Patients with Diabetic Ketoacidosis Decreases Intensive Care Unit and Hospital Lengths of Stay*.** [Insert journal reference]
    - Post cardiac arrest hypothermia Protocol. *Primary Author*.
    - Major gastrointestinal hemorrhage management protocol. *Co-primary author.*
    - Standard Mechanical Ventilation and ARDS Ventilation Protocols. *Primary author*. These protocols have been standardized for implementation in both the MICU and SICU at Denver Health.
    - ARDS Fluid management Protocol. *Co-author and physician champion.*
    - Ventilator liberation protocol (weaning protocol**).** *Primary author*. Initiated in 2003 in all the ICUs, this protocol has significantly decreased our days of mechanical ventilation. **Our internal data have been presented to and corroborated by UHC external administrative dataset review.** [Provide link to data or summarize here]
    - Deep Venous Thrombosis (DVT) prevention protocol. *Primary author*. This protocol was initiated in the medical and surgical ICUs in 2003.
    - Sepsis Guidelines (Early Goal Directed Therapy). *Co-Primary author*. Initiated in 2006 in collaboration with the DH emergency medicine group**. Data from this initiative were presented as an abstract as part of the Colorado Critical Care Collaborative's *Surviving Sepsis Initiative*** [insert reference]; ***a manuscript is in preparation***.
    - Electrolyte replacement and stress Ulcer prophylaxis: *Primary author.*
    - *Physician leader* for the UHC evaluation of mechanical ventilation outcomes in patients requiring 72 or more hours of ventilation.

***Examples*: Clinical Innovations and Scholarship (cont.)**

Example 4

Clinical Scholarship

For the past 12 years I have served as a member of the Appropriate Criteria for Radiation Oncology-Breast Cancer committee; I have been the Chair of this committee for the last 3 years. The committee's work is designed specifically to develop and disseminate treatment guidelines, narrative summaries of clinical scenarios and source material as teaching instruments for radiation oncologists. **All of these educational materials are published as open-access documents on the ACR website, where they serve the widest audience for teaching purposes. *The current list of topics available is listed below, for which I am a co-author on all*. The full documents are available in PDF format online at:**

http://www/acr.org/SecondaryMainMenuCategories/quality_safety/app_criteria/pdf/ExpertPanelonRadiationOncologyBreastWorkGroup.aspx

1. Conservative Surgery and Radiation – Stage I and II Breast Carcinoma (Revised)
2. Ductal Carcinoma in Situ
3. Local Regional Recurrence and Salvage Surgery – Breast Cancer
4. Locally Advanced Breast Cancer (Revised)
5. Postmastectomy Radiotherapy (Revised)

Example 5

National Leadership and Scholarship: Cardiac Care and Resuscitation

The International Liaison Committee on Resuscitation (ILCOR) is the umbrella organization that reviews all the scientific evidence prior to issuing updated recommendations for cardiopulmonary resuscitation. The ILCOR represents the American Heart Association, the European Resuscitation Council and several other resuscitation committees. This worldwide umbrella group meets every five years to review the state of emergency cardiac and stroke care and to set worldwide standards.

As an expert in advanced cardiac life support (ACLS), I was one of 384 world-wide content experts appointed to the scientific review board. As a primary worksheet author, I reviewed the scientific evidence for vasopressin, epinephrine, endothelin, metaraminol, norepinephrine, alphamethylnorepinephrine and their effects on coronary perfusion pressure and patient outcomes after cardiac arrest. **These monographs are now published in *Circulation* and *Resuscitation* [provide references] as resource documents for the new international guidelines for advanced cardiac care. This work helped establish the basis for the new American Heart Association guidelines for Advanced Cardiac Life Support (ACLS) in 2005.**

***Examples**: Clinical Innovations and Scholarship (cont.)*

Example 6

Development of the Denver Health Chest Pain Observation Unit

Since my arrival as a faculty member at Denver health, I have led efforts to create an efficient and effective chest pain observation unit at DHMC. I worked with Emergency Department and Cardiology colleagues to create a staffing system and evidence-based clinical guidelines to best serve patients presenting to DHMC with chest pain. **Our evaluations show that after implementation of the program, patients presenting with chest pain to the DHMC ED have a shorter length of stay, with evidence of improved outcomes.**

Krantz M, Zwang O, Rowan S, Statland B, Chu E, Reid MB, Cantrill S, Havranek E, Albert RK. A Cooperative Model: Cardiologists and Hospitalists Reduce Length of Stay in Chest Pain Observation Unit. *Critical Pathways in Cardiology*. 2005 (4) 55-58.

Example 7

Development of a Novel Clinical Information System

As alluded to in my Clinician's statement, I led the development of a national VA clinical information system, *The VA Cardiovascular Assessment Reporting and Tracking (CART) system*. CART is the VA's national reporting system and data repository for procedures done in cardiac catheterization laboratories. **CART is now fully implemented in all 76 VA's that have catheterization laboratories, and it will be installed in all remaining VA medical centers in the coming year as the program expands to capture other procedures and events (starting with in-hospital cardiac arrest).**

CART supports standardized procedure reporting (embedded in the VA's electronic health record), device safety tracking and clinical workload capture. Moreover, CART is the 'backbone' of a national quality improvement program for cardiovascular procedures including feedback with benchmarking on quality measures – internal VA benchmarking as well as external benchmarking through participation in the American College of Cardiology National Cardiovascular Data Registry. Data capture is part of routine documentation of care at the point of care, and thus CART has been described as a model of "transactional quality and clinical management" by VA leadership (See letter by Dr. Robert Jesse, Chief of Medical and Surgical Services, VA Central Office, Washington, D.C.).

The CART data repository also supports health services research, including the longitudinal care, outcomes, and costs of patients who undergo cardiac procedures in the VA.

I serve as the national Clinical Director for the CART program, and direct the CART Coordinating Center (located at the Denver VAMC).

[If possible, insert references to publications, VA internal reports, on-line sites or other documentation of the impact of CART.]

***Examples**: Clinical Innovations and Scholarship (cont.)*

Example 8

Leadership and Clinical Scholarship in Ambulatory Pediatrics

I have been involved in a number of quality improvement efforts in the Child Health Clinic. These have been in the areas of immunization delivery, asthma management and electronic medical record documentation.

- After a pneumococcal conjugate vaccine was licensed in 2000, I helped coordinate the use of letter and telephone reminders to parents to encourage them to come into clinic for this new vaccine. **Results of this project were published in *Ambulatory Pediatrics* in 2002: "Immunization registry-based recall for a new vaccine."**
- I also helped evaluate a year-long quality improvement project to increase overall immunization rates in the Child Health Clinic. The quality improvement interventions were designed to: 1) increase the use of medical record releases to document immunizations received elsewhere; 2) improve the accuracy of parental contact information; and 3) reduce missed opportunities to vaccinate by utilizing chart prompts, provider education and provider reminders. **The results of this project were also published in *Ambulatory Pediatrics* (2004): "Quality improvement in immunization delivery following an unsuccessful immunization recall."**
- With respect to asthma management, the clinic is currently involved in a comprehensive program to improve long-term asthma management, through identifying children with moderate or persistent asthma, standardizing treatment protocols, referring children to pulmonologists and using case management to increase visit rates. While I was not involved in designing this project, I have been involved in identifying children to enroll in this project.
- Finally, I have been involved in the developing and revising the electronic templates used for clinical documentation in the Child Health Clinic, with the goal of designing templates that are user-friendly but also meet the documentation required for billing purposes.

Examples: ***Describing Your Role as a Clinician-Educator***

For examples of narratives, charts, bulleted lists and other documentation tools, see Section 6 (Building Your Teacher's Portfolio). If you have included information about your clinical teaching in your Teacher's Portfolio, you do not have to repeat the details here. Simply state, "See my Teacher's Portfolio for additional information."

Examples: *Describing Self-Improvement in Clinical Practice*

Example 1

I feel it is critical and essential to partake in yearly CME courses related to pediatric gastroenterology and hepatology. Each year I attend either the annual meeting of the North American Society for Gastroenterology, Hepatology and Nutrition or the annual meeting of the American Association for the Study of Liver Diseases. In addition, twice a month I attend our division's Liver Team Meeting, where each clinic patient seen is discussed. I receive constructive criticism regarding diagnostic workup and management from senior attendings that improves my ability to care for some of the more complex children.

Example 2

From 1999-2003 I attended the Society for Adolescent Medicine (SAM) annual meeting. In 2004, as I began to present my research, I attended the Pediatric Academic Societies (PAS) meeting, and I attended that meeting in 2005 and 2006 as well. The PAS meeting has more material regarding my research interest of obesity, whereas the SAM meeting focuses on general adolescent topics. In 2007 I presented a workshop on screening for obesity complications and attended the SAM meeting in Denver.

At Denver Health, we have a weekly CME conference on Wednesday mornings, which I regularly attend. In addition, I attend quarterly CME meetings of the local chapter of SAM.

I passed my adolescent medicine boards in 1999 and recertified in 2006. I recertified for my general pediatrics boards in 2001.

Since a significant number of patients at Denver Health are Spanish speaking, I have worked to improve my Spanish language skills. Last year I took a 3-day medical Spanish course. I work with our interpreter here at the Eastside Clinic to continually improve my Spanish skills.

Section 8 – BUILDING A SCHOLARSHIP PORTFOLIO

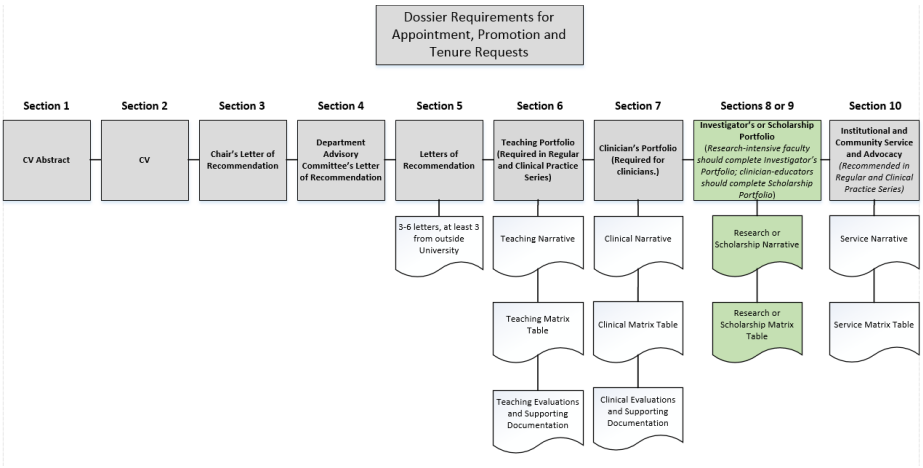
This section is for clinicians and teachers who are less focused on research. Research-intensive faculty members should utilize Section 9, "Building an Investigator's Portfolio."

The "Scholarship" section of your dossier is the place where you describe and document your scholarly work --- that is, your written, electronic or other "products" that reflect the scholarship of discovery, teaching, integration or application. Your C.V., which lists your grants and publications, is not enough. You should prepare a narrative summary, which may include an annotated bibliography (examples are provided in this section), in order to explain the scope, importance and impact of your scholarly work to members of the Faculty Promotions Committee.

The SOM recognizes four types of scholarship: the scholarship of discovery, application, integration and teaching. For more information on these types of scholarship, and about how scholarship is judged during the promotion review process, please see the "Four Types of Scholarship" in the School of Medicine Rules *(http://medschool.ucdenver.edu/faculty)*. Also see Appendix A: "How the Faculty Promotions Committee Defines and Judges Scholarship."

NOTES:

- *Faculty members who focus on the scholarship of discovery (that is, research) will prepare a formal Investigator's Portfolio (See Section 9).*
- *If you are a clinician-educator, you have probably summarized your clinical or teaching scholarship earlier in your dossier (in your clinician's or teacher's portfolio). In this case, your narrative statement about your scholarship should be very brief and should refer to those earlier descriptions*.
- *Faculty members seeking promotion in the Clinical Practice Series may, but are not required to, submit a Scholarship Portfolio.*



The "Scholarship" section of your dossier should contain, at a minimum, the three sections listed below.

1. Scholarship <u>Narrative (Suggested limit of 3-6 pages)</u>

Use the narrative to summarize the focus of your scholarship. Emphasize your most noteworthy insights or advances. Remember that this section of your dossier provides information about the importance, impact and reach of your creative and scholarly work, in a manner that your C.V. cannot.

The following format is suggested:

Scholarship Focus. Briefly describe the focus of your scholarly work, whether it reflects the scholarship of discovery, teaching, application or integration. Explain the importance and impact of your work and whether it has been disseminated locally or nationally. If your scholarly products reflect the work of teams of collaborators, explain your unique role and contributions.

Summary of funded scholarship. For your most important funded projects only,list the grant and describe (briefly) the purpose of the project. Highlight your role, especially if you are not the Principal Investigator. Provide a brief summary of the nature and importance of the problem (the "context") and the expected results or implications of the work.

Annotated bibliography. Limit this section to a summary of your "best" publications or other creative works --- those that have been the most innovative or that have received the most attention. For each publication or creative product, provide a brief summary of the nature and importance of the problem (the "context") and the most important results. You may provide links, but not reprints, for the publications described in this section.

There is no absolute minimum number of publications for clinician-educators to achieve a rating of “meritorious” scholarship, although the majority of successful candidates for promotion to associate professor have at least 5 publications or other scholarly products. Greatest weight is given to publications or other creative works that are first- or senior-authored, that are innovative and impactful, and that reflect a defined area of focus.

See the following pages for examples of each of these documentation tools.

Scholarship Matrix Table

Every Scholarship Portfolio must also include a personalized Promotion Matrix Table. The Table will help you document “excellent” or “meritorious” performance in scholarship, according to the SOM approved Promotion Criteria Matrix. The Matrix Table is a bulleted list of your scholarship activities and accomplishments, presented and categorized according to the SOM’s criteria. In other words, the completed Matrix Table helps you tie your activities and accomplishments in scholarship to the specific examples of scholarship excellence (or meritorious performance) that are included in the School’s Promotion Matrices. The completed Matrix Table also helps reviewers understand and assess the range of your scholarship activities and accomplishments.

The Matrix Table is only a list; reviewers will refer to your scholarship narrative for information about the importance and impact of the activities listed in the Matrix Table.

***Examples*: Narrative Statement and Annotated Bibliography**

Example 1

My research interests include: (1) Injury epidemiology and prevention; and (2) Clinical preventive services in emergency departments. As summarized in the grant and publications sections of my C.V., I have directed and published numerous original investigations in each of these areas.

For more than ten years, my research activities have centered around injury epidemiology and prevention, with a particular focus on injuries and fatalities related to traffic crashes and domestic violence. In particular, I have emphasized the use of rigorous data analysis and epidemiologic methods to inform public policy. Often, I have conducted studies that are of importance, not only to the academic community, but to legislators and to state and federal agencies. I have tried to focus on "consequential epidemiology" --- using research methods to help solve contemporary public problems.

Of the injury-related publications listed in my C.V., the following have received the most attention in Colorado and nationally:

1. *An Evaluation of the Colorado Mandatory Safety Belt Law: The First Year (Report to the Colorado General Assembly, October, 1989).* This study used time-series analysis to show an effect of the new safety belt law, after adjusting for other laws, changes in speed, driver licensure, weather and economic conditions, and temporal trends. The law led to an increase in seat belt usage and had a measurable, but temporary, effect on injuries and fatalities.
2. *Facts vs. values: Why legislators vote "No" on injury control laws (J Trauma, 1993).* This study was the first to examine decision-making by elected officials in the area of injury prevention. Legislators' knowledge, injury experiences, attitudes and beliefs were measured in a written survey and compared to their votes on Colorado's safety belt law. Knowledge of injury facts and data was not the key determinant of legislators' votes for or against a seat belt law. The strongest predictors of voting behavior were concern for personal freedoms, perceived constituent support and attention paid to policy effectiveness.
3. *Domestic violence against women: Incidence and prevalence in Emergency Department populations (JAMA, 1995).* For years it had been asserted that one-third to one-half of women visiting Emergency Departments were there because of domestic violence. Prior chart reviews appeared to suffer from selection bias, non-uniform definitions of domestic violence, lack of blinding and confusion between acute violence and past exposures. This study was performed to provide accurate estimates of the incidence, one-year period prevalence and lifetime prevalence of domestic violence among women seeking care in Emergency Departments. Two ED's, a community ED and two walk-in clinics were studied. Our results, published in JAMA, have since been replicated by other investigators in academic and community hospitals.
4. *Detecting partner violence in the emergency department: The accuracy of three brief screening questions (JAMA, 1997).* Intimate partner (domestic) violence is an important health risk for many women; as a result, routine screening has been recommended for women presenting for care in office and emergency department settings. However, no brief, accurate screening instrument had been developed or validated. This study tested a new three-question screen for partner violence among 491 women in two urban Emergency Departments. The screen was validated against two standardized measures of partner violence. The study found that three brief, directed questions accurately detected a large number of women with a history of partner violence.
5. *Motor vehicle fatalities: A comparison of Hispanic and non-Hispanic motorists in Colorado. Ann Emerg Med (In press)*. Traffic safety has emerged as a key public health priority in Hispanic communities. This study linked two population-based data bases (death certificates and the Fatality Analysis Reporting System) to compare fatally injured Hispanic and non-Hispanic motorists. Compared to non-Hispanic whites, Hispanic motorists had higher population-based traffic-related fatality rates. After adjustment for age, gender and rural locale, Hispanic drivers had significantly higher rates of safety belt non-use, alcohol intoxication, speeding and invalid licensure, and they had older vehicles. Prior to publication, there data were shared with Hispanic community leaders in Colorado.

Examples: *Narrative Statement and Summary of Funded Research*

Example 1

My research program focuses on improving care at the end of life.

I have been developing aging research at the University of Colorado Denver since beginning my research fellowship training in 1994. My research career trajectory demonstrates a commitment to: 1) initially developing my own skills as a researcher; 2) quickly assuming a role as a mentor for others who are interested in aging research; and 3) developing research, clinical and educational programs aimed at improving care for older persons with serious advanced illness. I have established a highly successful aging-focused research program that is addressing fundamental issues in the care of persons with advanced illness.

I have demonstrated a consistent track record of peer-reviewed research funding since 1996, including more than $4 million in competitive research grants as Principal Investigator. These are listed on my C.V. and are described briefly below:

The Population-Based Palliative Care Research Network (PoPCRN)

The 2004 NIH "*State of the Science Conference Statement: Improving End-of-Life Care"* concluded that research networks are necessary to advance the palliative care evidence base. My principal contribution to the field is the development of the Population-based Palliative Care Research Network (PoPCRN). PoPCRN is a national network of organizations providing palliative care that facilitates multi-site studies of hospice and palliative care, addressing operational as well as clinical issues. Building on the experience and model of primary care practice-based research networks, PoPCRN has demonstrated its effectiveness as a means of conducting high quality, clinically relevant end-of-life research in settings where palliative care is provided.

To date, the network's research has focused primarily on symptom distress and quality of life, contributing significantly to the literature in these areas.

- To date, over 250 hospice and palliative care organizations from across the U.S. have expressed interest in participating in 27 PoPCRN-based studies.
- The multidisciplinary PoPCRN research team meets monthly to review research in progress and discuss development of new research ideas.
- Over the past 10 years of conducting PoPCRN-based studies, my research team and I have evolved novel experimental approaches to most effectively utilize the network. For complex studies, patient-focused data are often collected locally; alternatively, sufficient resources are budgeted to train and financially support on-site personnel and to conduct frequent site visits to assure adherence to study protocols. For less complex studies, PoPCRN has effectively employed web-based, email, telephone and mailed data collection approaches. A national Advisory Committee composed of representatives from participating sites, provides guidance regarding study topics, design, implementation, and data interpretation. A web page (www.ucdhsc.edu/popcrn), email updates and a newsletter facilitate communication. Site-specific study results are disseminated to participating sites for use in internal quality improvement activities. Aggregate reports are distributed via the web site, newsletter, and the peer reviewed literature.

By including hospice/palliative care organizations that provide care through a variety of models and in diverse settings, PoPCRN is representative of a spectrum of end-of-life care. The collaboration between clinicians and administrators from the participating organizations and the PoPCRN research team ensures that the issues being studied are clinically relevant and that the studies themselves are rigorous. PoPCRN serves as a "laboratory" for addressing key issues in the care of persons with advanced illness and provides a rich resource for nurturing the development of research skills and careers.

[Provide information about key publications and novel findings and discoveries]

Examples: *Summaries of Funded Research*

Example 2

Improving Patient Safety by Examining Pathology Errors

1 RO1 HS 13321-01
Funding Agency: Agency for Healthcare Research and Quality
Dates: _____
Grant Amounts: _____

I direct this multi-institutional project, which has involved the creation of a patient safety database, defining and characterizing laboratory medicine error, and designing and implementing quality improvement initiatives to decrease medical error. Our research team showed successful quality improvement implementation in many areas, including lung cancer diagnostic services, cervical cancer prevention services, breast cancer prevention services, thyroid gland fine needle aspiration services, laboratory standardization of diagnostic processes, and clinical office design of laboratory testing.

This funded grant has resulted in over 40 peer-reviewed publications, 41 abstracts and 125 invited lectures. A total of 12 institutions have participated in this study (originally only four were funded), and we identified and analyzed over 30,000 medical errors, 50% of which led to patient harm.

Example 1

Grant: 5 U10HD41919-03 (Chase PI)
Funding Agency: National Institutes of Health
Title: Glucose Sensors in Children with Type 1 Diabetes
Role: Co-Principal Investigator
Effort and Funding: $352,407 annual direct costs ($1,926,831 total award); 21% effort.
Dates: 9/30/01 – 8/31/07
Description:

This grant funds a multicenter collaborative study group with the purpose of developing shared protocols aimed at independently assessing the accuracy and clinical usefulness of new continuous glucose monitoring devices, as well as to answer clinical questions about the cause and prevention of hypoglycemia in children with type 1 diabetes. My role in this grant included the participation in quarterly face-to-face meetings and bi-weekly steering committee conference calls to discuss protocol development and implementation as well as progress of ongoing clinical studies and manuscripts. I also volunteered for various specific protocol development committees as well as manuscript writing committees. As a co-investigator for the Barbara Davis Center, I was also responsible for overseeing patient enrollment and protocol implementation at our site. I was the lead author on two of the manuscripts generated by the Direcnet study group.

Results and Key Publications:

[It is best to provide a brief "annotated bibliography," which highlights presentations of data, important findings, novel insights, discoveries or other important contributions]

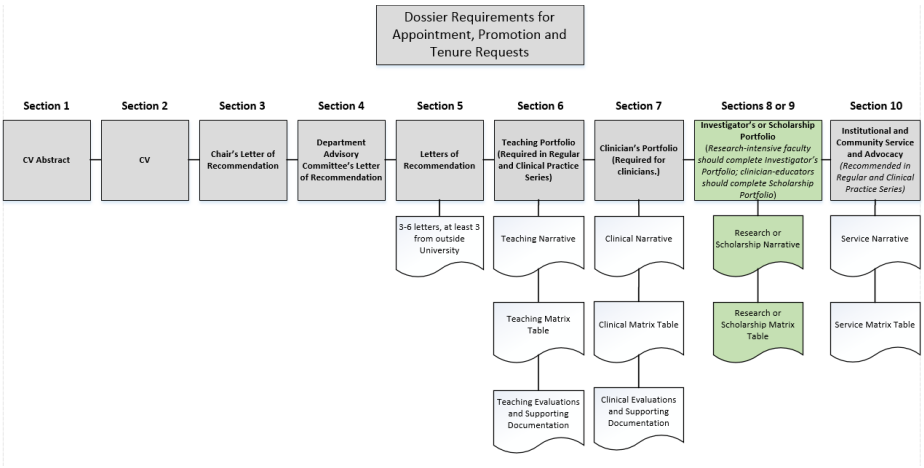
SECTION 9 – BUILDING AN INVESTIGATOR'S PORTFOLIO

If your career focuses on research, you must submit a well-organized "Investigator's Portfolio" as part of your promotion or tenure dossier. This is the section of your dossier where you explain and highlight your most noteworthy discoveries, insights or advances. This is also the place where you can explain your unique contributions to multi-disciplinary ("team") research programs.

Note: Your Curriculum Vitae (C.V.), which lists your grants, publications and other scholarly activities, is not enough to judge research excellence. In your Investigator's Portfolio you will include narrative summaries and annotated bibliographies, which explain the scope, importance and impact of your research and scholarly work to members of the SOM Faculty Promotions Committee. Examples are provided later in this section of the *Dossier Guide*.

Also note that the SOM Faculty Promotions Committee does not distinguish among different types of scientific research. Indeed, according to the Promotion Rules of the SOM, "basic, clinical, translational, educational and other forms of research are highly valued by the School of Medicine." The SOM also recognizes the importance of "inter-disciplinary science and the need for collaboration among investigators." See additional information below regarding "research independence."

As outlined in the SOM Promotion Matrix, "excellence" in research may be demonstrated through peer-reviewed scientific publications, competitive grant funding, a national or international reputation, and evidence of originality, creativity and independence as an investigator. Naturally, when it comes to evaluating the quality of your scientific work, the information that you provide in this Investigator's Portfolio will be supplemented by letters that are written by outside experts and peers in your field of study.



INVESTIGATOR'S PORTFOLIO: SUGGESTED FORMAT

1. Narrative (Suggested limit of 3-6 pages)

The following format is suggested:

I. Research Focus

Explain the focus of your research, and highlight your most noteworthy discoveries, insights or advances. Also, explain how your work has supported the research programs and missions and enhanced the reputation of your department, the SOM or the University. You may include metrics (such as the *h*-index or total citation counts) to help faculty review committees assess the impact of your publications, but these are not a substitute for a clear description of the impact of your work. Remember that, overall, the Investigator's Portfolio seeks to provide information about the importance, impact and reach of your creative and scholarly work, in a manner that your C.V. cannot. Your narrative statement should not exceed 2 pages.

II. Summary of Funded Research

For your most important funded projects: List the grant and describe (briefly) the purpose of the project. Highlight your role, especially if you are not the Principal Investigator. Provide a brief summary of the nature and importance of the problem (the "context") and the expected results or implications of the work. You may want to provide separate descriptions of your efforts in writing the grants and in executing the grants. For multiple-P.I. grants and program project and center grants, be specific about how you contributed to the success of these grants. Limit this section to 250 words per project.

III. Annotated Bibliography

Limit this section to a summary of no more than 10 of your "best" publications or scholarly works --- those that have been the most significant or that have received the most attention. Greatest weight is given to recent publications (typically, since your most recent promotion or tenure award). For each publication or scholarly work, provide a brief summary of the nature and importance of the problem (the "context") and the most important results. Provide electronic links, but not reprints, for the publications described in this section.

You should also highlight the impact that your publications or scholarly work have had on your field. Metrics --- such as the number of article citations, your *h*-index or others (such as those available at ImpactStory.org) --- can be useful in making the case that the publication or scholarly work was significant. The Faculty Promotions Committee discourages the use of journal-based metrics (such as journal impact factors), since it is the quality and importance of the research contribution itself that is the key. Research importance can be measured by its impact on policy, practice or the scientific discipline. Other outputs from scientific research, such as intellectual property, databases, software or others, may also be highlighted.

IV. National Recognition

Provide additional details about the degree to which your publications and discoveries have been recognized by leaders in your field. For example, highlight: invited lectures, visiting professorships and plenary research presentations; work cited in editorials, scientific blogs or the lay press; service on NIH study sections or scientific advisory boards; editorship of scientific journals (or membership on editorial boards); and accomplishments recognized by national prizes or scientific awards.

V. Evidence of Originality, Creativity and Independence.

This section of the Investigator's Portfolio is particularly important for faculty candidates whose research is multi-disciplinary and whose publications and other accomplishments reflect the work of multi-disciplinary teams.

Note: In 2012 the SOM promotion rules were amended, and the following definitions of "independence" were added: *The School of Medicine recognizes the importance of inter-disciplinary science and the need for collaboration among investigators. Therefore, as recommended by the National Academy of Science, the School of Medicine defines an "independent investigator" as one who demonstrates "independence of thought" --- that is, one who has defined a problem of interest, who has chosen or developed the*

best strategies and approaches to address that problem and who has contributed distinct intellectual expertise.

Use this section of the Investigator's Portfolio to clarify the contributions that you have made to multi-author publications and co-PI and co-investigator grants. Be specific about your intellectual contributions and the manner in which you defined the research objectives, led the research efforts, interpreted the results or shaped the overall research program. Additional evidence should also be provided, such as letters from the Principal Investigators or research group heads with whom you have collaborated, outlining in detail your specific contributions and the unique skills that you brought to the team. For multi-authored papers, letters from the first- or senior-authors may also provide evidence of your specific contributions. The overall objective is to convey clearly and concisely to the SOM Faculty Promotions Committee the importance, significance and broad impact of your cumulative research contributions.

VI. Institutional Service

You should include descriptions of committee work and institutional service, if your efforts have been vital in supporting the general research missions of your department, the SOM or the University. Examples might include being a chair or member of an institutional review board or an institutional committee focusing on animal care, safety, conflicts-of-interest or scientific misconduct.

Research Matrix Table

Every Investigator's Portfolio must also include a personalized Promotion Matrix Table. The Table will help you document "excellent" or "meritorious" performance in research, according to the SOM approved Promotion Criteria Matrix. The Matrix Table is a bulleted list of your research activities and accomplishments, presented and categorized according to the SOM's criteria. In other words, the completed Matrix Table helps you tie your activities and accomplishments in research to the specific examples of research excellence (or meritorious performance) that are included in the School's Promotion Matrices. The completed Matrix Table also helps reviewers understand and assess the range of your research activities and accomplishments.

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***Examples*: Narrative Statement and Annotated Bibliography**

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My research interests include: (1) Injury epidemiology and prevention; and (2) Clinical preventive services in emergency departments. As summarized in the grant and publications sections of my C.V., I have directed and published numerous original investigations in each of these areas.

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Of the injury-related publications listed in my C.V., the following have received the most attention in Colorado and nationally:

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I have demonstrated a consistent track record of peer-reviewed research funding since 1996, including more than $4 million in competitive research grants as Principal Investigator. These are listed on my C.V. and are described briefly below:

The Population-Based Palliative Care Research Network (PoPCRN)

The 2004 NIH "*State of the Science Conference Statement: Improving End-of-Life Care"* concluded that research networks are necessary to advance the palliative care evidence base. My principal contribution to the field is the development of the Population-based Palliative Care Research Network (PoPCRN). PoPCRN is a national network of organizations providing palliative care that facilitates multi-site studies of hospice and palliative care, addressing operational as well as clinical issues. Building on the experience and model of primary care practice-based research networks, PoPCRN has demonstrated its effectiveness as a means of conducting high quality, clinically relevant end-of-life research in settings where palliative care is provided.

To date, the network's research has focused primarily on symptom distress and quality of life, contributing significantly to the literature in these areas.

- To date, over 250 hospice and palliative care organizations from across the U.S. have expressed interest in participating in 27 PoPCRN-based studies.
- The multidisciplinary PoPCRN research team meets monthly to review research in progress and discuss development of new research ideas.
- Over the past 10 years of conducting PoPCRN-based studies, my research team and I have evolved novel experimental approaches to most effectively utilize the network. For complex studies, patient-focused data are often collected locally; alternatively, sufficient resources are budgeted to train and financially support on-site personnel and to conduct frequent site visits to assure adherence to study protocols. For less complex studies, PoPCRN has effectively employed web-based, email, telephone and mailed data collection approaches. A national Advisory Committee composed of representatives from participating sites, provides guidance regarding study topics, design, implementation, and data interpretation. A web page (www.ucdhsc.edu/popcrn), email updates and a newsletter facilitate communication. Site-specific study results are disseminated to participating sites for use in internal quality improvement activities. Aggregate reports are distributed via the web site, newsletter, and the peer reviewed literature.

By including hospice/palliative care organizations that provide care through a variety of models and in diverse settings, PoPCRN is representative of a spectrum of end-of-life care. The collaboration between clinicians and administrators from the participating organizations and the PoPCRN research team ensures that the issues being studied are clinically relevant and that the studies themselves are rigorous. PoPCRN serves as a "laboratory" for addressing key issues in the care of persons with advanced illness and provides a rich resource for nurturing the development of research skills and careers.

[Provide information about key publications and novel findings and discoveries]

Examples: *Summaries of Funded Research*

Example 1

Grant: 5 U10HD41919-03 (Chase PI)
Funding Agency: National Institutes of Health
Title: Glucose Sensors in Children with Type 1 Diabetes
Role: Co-Principal Investigator
Effort and Funding: $352,407 annual direct costs ($1,926,831 total award); 21% effort.
Dates: 9/30/01 – 8/31/07
Description:

This grant funds a multicenter collaborative study group with the purpose of developing shared protocols aimed at independently assessing the accuracy and clinical usefulness of new continuous glucose monitoring devices, as well as to answer clinical questions about the cause and prevention of hypoglycemia in children with type 1 diabetes. My role in this grant included the participation in quarterly face-to-face meetings and bi-weekly steering committee conference calls to discuss protocol development and implementation as well as progress of ongoing clinical studies and manuscripts. I also volunteered for various specific protocol development committees as well as manuscript writing committees. As a co-investigator for the Barbara Davis Center, I was also responsible for overseeing patient enrollment and protocol implementation at our site. I was the lead author on two of the manuscripts generated by the Direcnet study group.

Results and Key Publications:

[It is best to provide a brief "annotated bibliography," which highlights presentations of data, important findings, novel insights, discoveries or other important contributions]

Example 2

Improving Patient Safety by Examining Pathology Errors

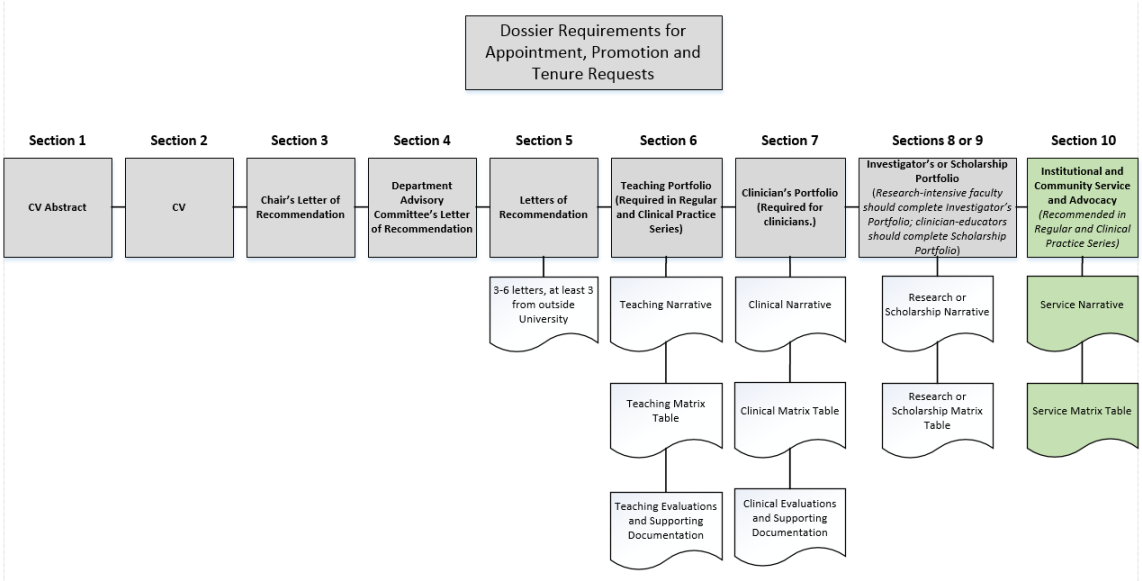
1 RO1 HS 13321-01
Funding Agency: Agency for Healthcare Research and Quality
Dates: _____
Grant Amounts: _____

I direct this multi-institutional project, which has involved the creation of a patient safety database, defining and characterizing laboratory medicine error, and designing and implementing quality improvement initiatives to decrease medical error. Our research team showed successful quality improvement implementation in many areas, including lung cancer diagnostic services, cervical cancer prevention services, breast cancer prevention services, thyroid gland fine needle aspiration services, laboratory standardization of diagnostic processes, and clinical office design of laboratory testing.

This funded grant has resulted in over 40 peer-reviewed publications, 41 abstracts and 125 invited lectures. A total of 12 institutions have participated in this study (originally only four were funded), and we identified and analyzed over 30,000 medical errors, 50% of which led to patient harm.

SECTION 10 – INSTITUTIONAL AND COMMUNITY SERVICE AND ADVOCACY

At least "meritorious" service is required for promotion. This section of your dossier can be brief. However, if you have been especially active in service --- at the departmental, School of Medicine, University, community or professional levels --- you may wish to prepare a more extensive service portfolio. Use bulleted lists and narratives to describe your most important advocacy or service activities. NOTE: If you have summarized your service activities elsewhere (in your teacher's, clinician's or investigator's portfolio), you should not repeat that information here. *Simply state, "See my [Teacher's or Clinician's or Investigator's Portfolio] for additional information."*



APPENDIX A
How the Faculty Promotions Committee Defines and Judges Scholarship

According to the *Rules of the School of Medicine*, all faculty members *in the Regular Promotion Series*, regardless of their job assignments or focus, "are required to participate in scholarship, as broadly defined." The *Rules* also require that faculty members seeking promotion or tenure provide *tangible evidence* of their scholarship, whether published in traditional, peer-reviewed journals or in other formats. Specifically, the *Rules* state: "The products of all scholarship must be in a format that can be evaluated, which would normally mean a written format, but could include web-based or electronic formats."

The SOM lists four types of scholarship:
The scholarship of discovery - traditional, hypothesis-driven research that results in the generation of new knowledge. Successful scholarship of discovery usually results in peer-reviewed scientific publications.

The scholarship of application – efforts to "build bridges between theory and practice" or to "apply knowledge to practical problems." Examples include development of a new medical treatment modality, projects that promote quality of care or patient safety, or efforts to address community health needs or shape public policy on health care. Among the most common "products of applied scholarship:" white papers or reports to state or national organizations; clinical guidelines that improve patient care (published, presented, distributed or posted on web sites); and leadership of quality improvement activities (with documentation of improved services or outcomes). In general, to qualify as scholarship, the clinical guidelines, utilization review, quality assessment or other project should include: a) evidence of creativity and leadership; clear objectives; use of appropriate methods to assess quality or measure outcomes; significant results that can be reviewed; and evidence of dissemination of the results, through articles or presentations or integration into current practice.

The scholarship of teaching – the development of new courses or teaching methods, learning outcomes assessments or preparation and dissemination of high-quality syllabi, laboratory exercises, educational videos or web sites, patient simulations, problem-based learning cases or other instructional materials. For more information about the criteria for demonstrating educational scholarship, see: "Turning Committee Work and Course Leadership into Teaching Scholarship: A guide for educators at the University of Colorado School of Medicine." Also see Appendix B, "Teaching Innovations and Scholarship," for more information about demonstrating educational scholarship.

APPENDIX A (*cont.)*

The scholarship of integration – creative syntheses or analyses. Also known as "horizontal scholarship," the scholarship of integration seeks to define "connections across disciplines" or to bring new insights to bear on original research. The scholarship of integration may include review articles, for example, that seek to "interpret, analyze and draw together the results of the original research." For clinicians, the most common products of scholarship have been works of integration, such as case reports, book chapters or review articles.

For more information about the types of scholarship, and about how scholarship is judged during the promotions process, please refer to the following documents (All are posted on the Office of Faculty Affairs web site):

The SOM Promotion Matrices (PDF) *(http://medschool.ucdenver.edu/faculty)* (also included as Appendix C), which list more than 60 examples of the scholarship of discovery, application, education and integration.

Education Scholarship Memo (PDF) *(http://medschool.ucdenver.edu/faculty):* "Turning Committee Work and Course Leadership into Teaching Scholarship: A guide for educators at the University of Colorado School of Medicine."

Scholarship Alternatives (PDF) *(http://medschool.ucdenver.edu/faculty):* "Alternative Scholarship and Faculty Success: Examples of the scholarship of application, integration and education."

APPENDIX B

Documenting Teaching Scholarship

Promotion in the School of Medicine requires that all faculty members, regardless of their job assignment or focus, participate in scholarship. Scholarship is broadly defined. The SOM lists four types of scholarship: discovery; application; integration; and education.

It is possible to demonstrate the scholarship of teaching without hypothesis-driven research or peer-reviewed publications. However, educational scholarship is more than being "an excellent teacher." To be considered educational scholarship, your work must extend beyond the classroom or the clinic. To count as scholarship, your work must reflect creativity and leadership. And you must be able to show tangible "products" of scholarship. As outlined in the Rules, *"The products of all scholarship must be in a format that can be evaluated, which would normally mean a written format but could include video or computer formats."* Regularly, the Faculty Promotions Committee has accepted educational manuals for students, innovative competency-based curricula, educational videotapes, simulations, problem-based learning exercises and computer-assisted learning programs as examples of the scholarship of teaching. You should include copies of (or references to) these scholarly works in your Teaching Portfolio.

To document educational scholarship, you will also need to prepare one or more descriptive narratives. Several examples follow. To the extent possible, you should use your narrative to demonstrate the manner in which your work meets these concrete tests of educational scholarship:

There are clear goals: What need or gap in the curriculum did the course fill?

Content of the course: How was the content of the course or program selected (for example, published model curricula, scientific literature review, consensus guidelines)? What literature was reviewed? Did you integrate information and perspectives from different clinical, biologic or sociologic disciplines?

Appropriate teaching methods: What techniques were selected (PBL, lectures, on-line resources, simulations). Why? Did you incorporate methods in your course to encourage and evaluate independent learning and critical thinking by students?

Significant results: What was the impact of the course? Who has taken the course? Was learning measured? Include test scores, changes in attitudes, knowledge or behavior, favorable evaluations or other measures. Describe the manner in which you relied on feedback from learners or colleagues to evaluate or improve the course. Has it been integrated into the core curriculum? Has the course content been presented, published or otherwise disseminated locally or nationally?

Educational products: Include or describe innovative syllabi, laboratory manuals, simulations, web sites, or videos that can be reviewed by promotions committee members.

Clear description of your leadership or creative role.

APPENDIX C

PROMOTION CRITERIA MATRIX

July, 2016

NOTE: The following is intended to present examples of various levels of accomplishment in the areas of teaching, research, clinical activity, scholarship and service. It is not exclusionary, but is intended to assist faculty, department chairs and promotion committees in matching candidates' accomplishments to the promotion criteria. Moreover, areas frequently overlap in practice, although they are presented as distinct entities here. It should also be noted that the matrix specifies just two categories, meritorious and excellent. Professors will need to achieve excellence by a number of criteria. Associate professors will have met fewer of these criteria or in not as great depth. The promotion process, and this matrix, are meant to describe and reward continued professional growth and achievement.

TEACHING	
Meritorious	**Excellent**
Active participation in teaching activities of the department, school, campus or university, including two or more of the following: presenting a series of lectures covering one or more topics; coordinating a course; acting as a primary instructor in a course; advising or mentoring students, residents or faculty; attending on an inpatient or outpatient service; organizing or facilitating a seminar series, journal clubs or laboratory exercises; participating as a teacher in continuing education activities.	Regularly assumes greater than average share of teaching duties –in classroom, laboratory, clinical or community settings.
	Consistently receives outstanding teaching evaluations or teaching awards.
	Recognition as an outstanding and influential role model for students, fellows, residents or other trainees.
Meritorious teaching evaluations from students and peers.	Record of successful mentorship of students, residents, fellows or other faculty, as measured by: letters of support from mentees; publications, presentations, grants, awards or other evidence of mentees' academic success; evidence that mentees have pursued outstanding careers.
Development or redevelopment of teaching materials for students, continuing education courses or other faculty training.	
Invitations to present Grand Rounds or seminars here and at other institutions; invitations to present courses outside of primary department.	Development of mentoring programs that focus on career development or academic promotion of students, residents, fellows or faculty.
Self-improvement activities (for example, participation in workshops or courses that are designed to improve teaching or mentoring effectiveness).	Development of innovative teaching methods, such as educational, websites, simulations, videotapes, packaged courses or workshops, etc.
Participation as a mentor on a training grant.	Successful leadership of local, regional or national continuing education courses.

TEACHING (continued)	
Meritorious	**Excellent**
	Consistent participation in national educational activities (for example, residency review committees, programs sponsored by professional organizations, re-certification courses or workshops).
	Invitations to be a visiting professor at other institutions.
	Development of innovative courses, high-quality syllabi, novel lectures, problem-based learning cases, laboratory exercises or other instructional materials.
	Demonstration of educational leadership (for example, by serving as a course, fellowship or training program director or assistant dean).
	Evidence of teaching scholarship (for example, research, grants, publications or national presentations that focus on understanding the best methods, or outcomes, of teaching).
	Completion of advanced faculty development programs that result in a certificate or degree in education, with evidence that the faculty member has applied these new skills or knowledge to improve his or her teaching or pedagogy.

CLINICAL ACTIVITY	
Meritorious	**Excellent**
Active and effective participation in clinical activities of the academic unit.	Regularly assumes greater than average share of clinical duties, as measured by patient care or procedure logs, RVUs, clinical billing statistics or other measures of clinical effort.
Board certification.	
Demonstration of clinical skills that are highly effective (e.g., mastery of important clinical techniques, high degree of patient satisfaction, evidence of high quality and efficient patient care).	Continuing, significant participation for an extended period of time in clinical activities that are highly effective.
Support from peers at the site of practice.	Development of new techniques, therapies, clinical guidelines, patient care practices or health care delivery systems that have improved the health of patients or populations.
Invitations to speak on clinical topics on campus, or participation on institutional clinical care committees.	
Active participation in activities that promote health care quality and patient safety.	Creative, active participation in the evaluation of the effectiveness of care (quality, outcomes, patient safety, utilization, access, cost).
Completion of self-improvement activities (for example, participation in workshops or continuing medical education activities that are designed to improve knowledge or clinical skills).	Recognition for excellence in clinical activity at the local, regional, national or international level through letters of reference, honors, awards, institutional evaluations, invitations to speak, requests to write reviews, etc.
	Demonstration of effective leadership at the site of clinical practice – e.g., director of a clinical service, head of a division, chair of a department, head of an interdisciplinary team that creates and manages a clinical pathway and outcomes evaluation, medical staff president.
	Assumption of a substantive leadership role at the regional level – e.g., chairing committees, or serving as officer of local or statewide professional organizations.
	Assumption of a substantive leadership role at the national or international level - e.g., chairing national symposia and meetings, chairing committees or serving as officer of national professional organizations, journal editor.
	Leadership of structured activities that promote quality of care and patient safety and that advance the science and practice of health care quality improvement.

CLINICAL ACTIVITY (continued)	
	Excellent
	Participation in significant self-assessment activities and audits of one's own practice that have led to improvements in quality, efficiency or outcomes of care.
	Significant involvement in health care advocacy, community service or other activities that shape public policy on health care or that address health disparities.
	Evidence of health care-related scholarship (for example, grants, publications, authoritative review articles, national presentations, innovations or other activities that advance the science and practice of health care quality improvement.)

<table>
<tr><th colspan="2">RESEARCH</th></tr>
<tr><th><u>Meritorious</u></th><th><u>Excellent</u></th></tr>
<tr><td>Authorship of papers in peer-reviewed journals that demonstrate the ability to generate and test hypotheses and represent a significant contribution to the published literature.</td><td>A consistent level of peer-reviewed or other funding for research awarded in a competitive manner over a sustained period of time.</td></tr>
<tr><td>Co-investigator status on grants.</td><td>Demonstrated evidence of originality as an investigator.</td></tr>
<tr><td>A principal and sustained role in the management of a research program with external funding.</td><td>Demonstration of significant independent intellectual contributions to successful research programs.</td></tr>
<tr><td>Development of patents for discoveries.</td><td rowspan="2">Principal investigator status on competitive peer-reviewed research grants (for example: R03 or R21 awards or mentored K08 or K23 awards from NIH or private foundations for associate professors; R01, P01 or other independent awards for professors).</td></tr>
<tr><td>Presentations at national meetings; invited research seminars at this and other institutions; service as an ad hoc member on study sections.</td></tr>
<tr><td rowspan="3"></td><td>Development of a significant number of patents.</td></tr>
<tr><td>An ongoing, peer-reviewed publication record with first- or senior-author publications.</td></tr>
<tr><td>A national or international reputation, as evidenced by: external letters of reference; invitations to present at national or international meetings; invitations to write reviews or chapters, or to provide unique expertise as a collaborator on a research project; visiting professorships; service on as a regular member on study sections; organization of national meetings; service as a national consultant or on editorial boards of journals.</td></tr>
</table>

SERVICE	
Meritorious	**Excellent**
Service on committees or task forces within the program, division, department, school, campus or university.	Regularly assumes greater than average share of administrative responsibilities, including service to the School, University, professional discipline or community.
Service to local, state, national or international organizations through education, consultation or other roles.	Appointment to leadership positions within the institution, such as: chair of a committee; faculty officer; program director; course or curriculum director; academic clinical coordinator; or membership on major decision-making School of Medicine or Anschutz Medical Campus committees.
	Service as an officer or committee chair in clinical, educational, scientific or nonprofit organizations.
	Significant involvement in health care advocacy, community service or outreach, community-based participatory research programs, or other activities that shape public policy on health care or that address health disparities.
	Leadership of activities or programs that address challenges in education, such as workforce diversity, training of scientists, assessment of competencies or learning outcomes, mentorship, professionalism or educational technology.
Service as an article reviewer for clinical, educational or scientific journals.	Service as a member of a scientific study section, or service as an editor or editorial board member of a professional or scientific journal.
	Appointment to leadership positions dealing with scientific, health care or educational issues at the local, state, regional, national or international levels.
	Service awards from the University or from a local, national, or international organization (civic, scientific or professional).

SCHOLARSHIP

This section of the Promotion Matrix presents examples of the scholarship of discovery, teaching, integration and application. The Matrix specifies only two categories ("meritorious" and "excellent"). The line between "meritorious" and "excellent" scholarship may not be easy to define; however, excellence in scholarship generally signifies a higher level of accomplishment and implies that the work meets one or more of the following tests: R*ecognition:* the work is recognized as excellent by peers; *Impact and importance:* it has contributed to an improved understanding of the discipline; *Coherence:* the publications, innovative curricula or other scholarly products represent a coherent body of work; and *Creative Leadership:* There is evidence of creativity and leadership by the faculty member.

There may be considerable overlap between scholarship and other areas of faculty accomplishment (teaching, clinical activity and service). However, as defined in the *Rules*, "the products of all scholarship must be in a format that can be evaluated, which would normally mean a written format, but could include web-based or electronic formats."

SCHOLARSHIP OF DISCOVERY

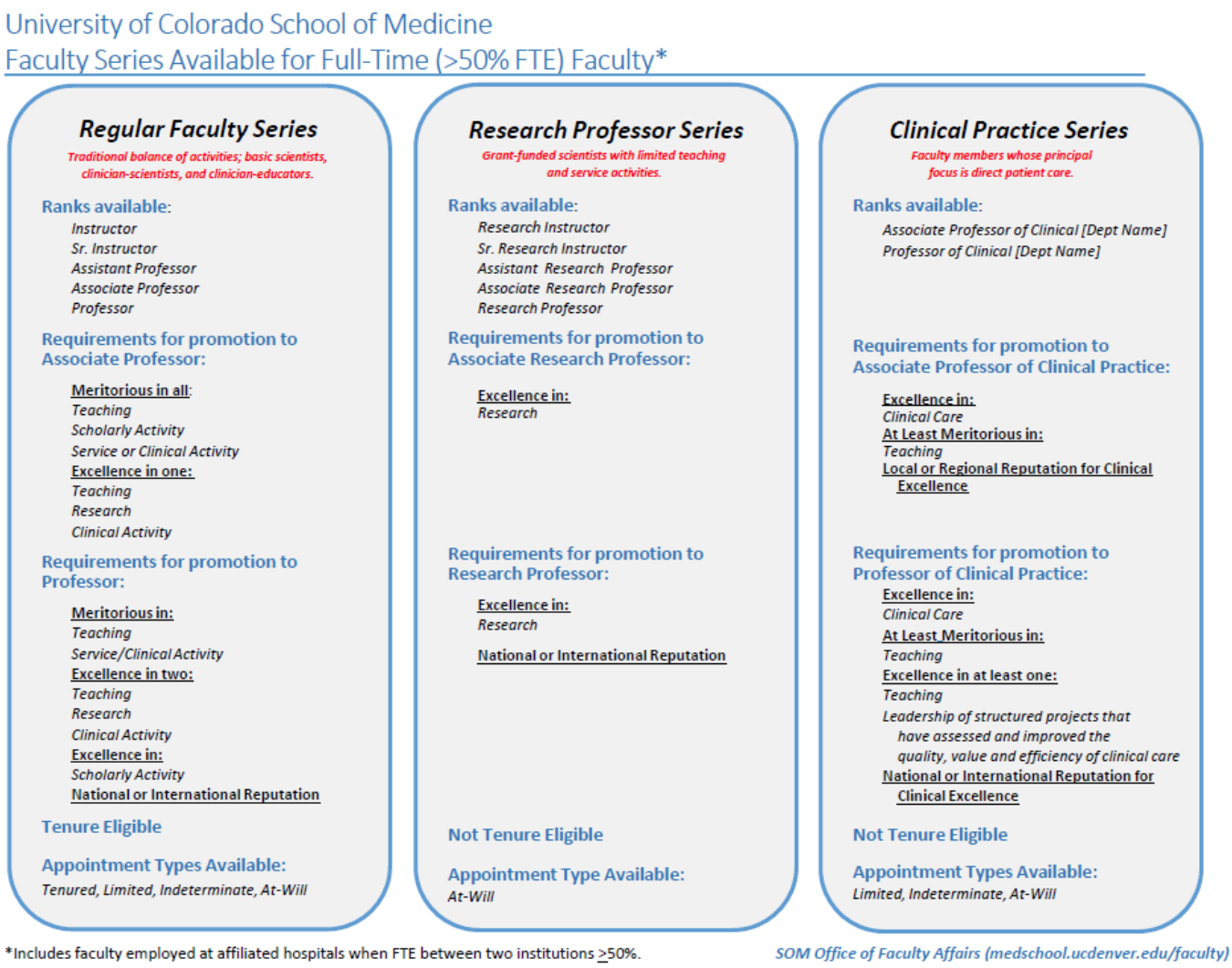
The "scholarship of discovery" refers to traditional, hypothesis-driven research that results in the generation of new knowledge. Successful "discovery scholarship" usually results in peer-reviewed scientific publications.

Meritorious	Excellent
Serves as a collaborator in a basic science, clinical, translational or other research program.	Designs and directs a basic science, clinical, translational or other research program and plays a major role in writing up the results.
Authorship or co-authorship of papers in peer-reviewed journals that demonstrate the ability to generate and test hypotheses and represent a significant contribution to the published literature.	Has an ongoing record of first- or senior-author publications in peer-reviewed journals that: a) represent significant contributions to the published literature; b) demonstrate the ability to generate and test hypotheses; and c) demonstrate originality and independence as an investigator or represent significant independent intellectual contributions to successful research programs.
Co-investigator status on grants	A consistent level of peer-reviewed or other funding for research awarded in a competitive manner over a sustained period of time.
A principal and sustained role in the management of a research program with external funding.	Principal investigator status on competitive peer-reviewed research grants (for example: R03 or R21 awards or mentored K08 or K23 awards from NIH or private foundations for associate professors; R01, P01 or other independent awards for professors).
	Development of a significant number of patents.
Service as an ad hoc reviewer or member of an editorial board for a medical or scientific journal.	Service as an editor or section editor for a medical or scientific journal (Include a written summary of the faculty member's activities and contributions to the success of the journal).
	Service as a regular member on scientific study sections.
Facilitates the research programs of the SOM through substantive contributions to COMIRB (or the COMIRB Scientific Advisory Committee-	

SARC), which must include: regular attendance at meetings over at least a three-year period; active and effective participation in discussions; review and presentations of protocols to the committee; and a demonstrated understanding of key topics (e.g. informed consent, risk assessment, protection of vulnerable populations, adverse event reporting or waivers of informed consent). Additional aspects of COMIRB service that may be considered evidence of meritorious scholarship may include: mentoring of new COMIRB members in the elements of proper review and presentation of protocols; active participation in COMIRB "education days;" training of SOM clinical investigators in techniques of protocol writing; and serving as a positive spokesperson for COMIRB service. A supporting letter from the Director of COMIRB is required.	
SCHOLARSHIP OF APPLICATION **The "scholarship of application" includes activities that build bridges between theory and practice or that apply knowledge to practical problems. Examples include development of new medical treatment modalities, clinical care pathways, or other activities that address community health care needs, that shape public policy on health care or that that promote quality of care and patient safety and advance the science and practice of health care quality improvement.**	
Active participation in activities that promote health care quality, cost-efficiency, access or patient safety within the institution (Provide documentation of interventions and outcomes)	Leadership of projects that have improved the quality of care, cost-efficiency, access, or patient safety locally, nationally or internationally (Provides documentation of interventions and outcomes).
Co-authorship of articles, policy reports or other publications related to clinical or health services topics.	A record of multiple publications related to clinical or health services topics, which may include clinical trials, investigative reports, case studies, policy reports or other publications that have advanced the science and practice of health care quality improvement.
	Articles, white papers or other products of scholarship that focus on health care advocacy, community service or other activities that shape public policy on health care or that address health disparities.
	Other evidence of clinical scholarship (for example, research, authoritative review articles, grants, contributions to clinical information systems, publications or national presentations) that promote health care quality or patient safety or that advance the science and practice of health care quality improvement.
	Development of new techniques, therapies, clinical guidelines, patient care practices or health care delivery systems that have improved the health of patients or populations.

SCHOLARSHIP OF INTEGRATION **The "scholarship of integration" (horizontal scholarship) includes creative synthesis or analyses that define "connections across disciplines" or bring new insights to bear on original research. The scholarship of integration seeks to interpret, analyze and draw together the results of the original research. Review articles and book chapters are examples of the scholarship of integration.**	
Co-authorship of articles integrating knowledge in a field and assessing overall value of discoveries in relationship patient care, teaching or other areas.	Consistent record of senior-author review or other scholarly products; these reviews or other integrative works represent a major body of scholarship that provides a demonstrable national or international reputation.
Publication of review articles, book chapters, case series or other reports that integrate knowledge and put new discoveries into perspective.	
SCHOLARSHIP OF TEACHING **The "scholarship of teaching" focuses on the development of new teaching methods, assessments of learning outcomes and preparation and dissemination of highly effective curricula or other instructional materials.**	
Improvement or expansion of an existing course or curriculum.	Development of innovative courses, high-quality syllabi, novel lectures, problem-based learning cases, laboratory exercises or other instructional materials.
	Development of innovative teaching methods, such as educational websites, simulations, videotapes, packaged courses or workshops, etc.
	A strong record of first- or senior-author publications in health professions education.
	Other evidence of teaching scholarship (for example, research, grants or national presentations that focus on understanding the best methods, or outcomes, of teaching).
Facilitates the educational programs of the SOM through ongoing and substantive contributions to the Student Admissions Committee, Participation must include submission of end-of-year reports reflecting on knowledge and insights gained from admissions committee meetings and applicant interviews or discussion of applicant recruitment, measures of applicant readiness, premed advising, pipeline activities, class diversity or other relevant challenges and topics. A supporting letter from the Associate Dean for Admissions is required.	

APPENDIX D
Faculty Series Information



APPENDIX E
Research Professor Series

Faculty members whose duties are to conduct research may be given titles in the Research Professor series. Faculty in the Research Professor series may be independent or collaborative investigators. Faculty members appointed in this series will have limited involvement in instructional programs.

Faculty appointed or promoted to the ranks of Associate Research Professor or Research Professor may be serving as senior investigators with independent funding, scientists reporting to regular faculty principal investigators, co-principal investigators, or directors or co-directors of core scientific facilities. Faculty in this series are expected to demonstrate evidence of excellence in research.

Faculty appointed to the rank of Research Professor must demonstrate skill as an investigator, originality and creativity, outstanding contributions to the research programs of their department and the School of Medicine, and a national reputation. Creativity and originality imply that the faculty member has contributed to the generation of new observations, new concepts, new techniques or new interpretations in his or her field of scholarly endeavor. Evidence of a national or international reputation may include letters of praise from external referees, service on scientific review panels or study sections, invited scientific presentations or other evidence of national standing. Research professors will usually have a record of funding as a principal investigator and will have published high-quality first- or senior-author scientific papers in peer-reviewed journals.

The following is a list of accomplishments in research and scholarship that will be used to guide the appointment and promotion of faculty in the Research Professor series. Research Professors should demonstrate excellence in research by meeting a number of these criteria. Associate Research Professors will have met fewer of these criteria or in less depth. The promotion process is meant to describe and reward continued professional growth and achievement.

- Record of authorship or co-authorship of papers in peer-reviewed journals that demonstrate the ability to initiate and design scientific investigations; candidate played the major role in analyzing the data and writing up the results.
- Co-investigator on grants or recipient of a career-development award.
- Leader or principal manager of an externally funded research program.
- Coordinator of research programs at a school-wide, regional or national level;
- Patents or other research discoveries.

- Invited to present research seminars at this and other institutions.
- Demonstrated evidence of originality as an investigator; has contributed to generation of new observations, new concepts, new techniques or new interpretations; has designed and directed research in an area of focus.
- A consistent level of peer-reviewed research funding over a period of time.
- An ongoing, peer-reviewed publication record with senior or first-author publications.
- Multiple publications in an area of expertise, representing a recognizable body of work.
- Authorship of monographs or review articles that assess and integrate knowledge; creative syntheses and analyses that demonstrate connections across disciplines or bring new insights to bear on original research (scholarship of integration).
- A national or international reputation, as evidenced by external letters of reference, invitations to present at national/international meetings, visiting professorships, service on study sections, organizing national meetings, serving as a national consultant, membership on editorial boards of journals, etc.
- Principal investigator status on peer-reviewed grants.