

Incorporating Competencies Focused on the
Older Population
into the
Fellowship Curriculum

An ASP How-To Guide



Association of Specialty Professors

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In an effort to promote the development of geriatric special interest groups within the specialty societies of internal medicine and to foster geriatric education initiatives, ASP developed a curriculum overview. The overview was inspired by recommendations from the Strategic Communications and Planning report entitled “Findings and Draft Communications Plan for Supporting Special Interest Groups,” which was funded by the John A. Hartford Foundation through the Integrating Geriatrics into the Specialties of Internal Medicine project. The report suggests creating small grants for curriculum development or other activities which have the potential to support the discrete activity, add value for the participating society, and result in ongoing capacity building for the participating interest groups. To build on this recommendation, ASP has assembled a “How-To Guide” that provides methods for incorporating competencies pertaining to the elderly into the fellowship curricula.

The “How-To Guide” outlines and describes the steps needed to formulate an integrated curriculum. While a curriculum can be a simple list of domains, competencies and objectives, ASP encourages individuals to develop curricula that not only provides an outline, but provides methods for introducing and teaching the outlined material. Once a curriculum’s objectives and methodologies are outlined, they can inform future projects to improve fellowship education. The steps outlined in the guide can be completed simultaneously or out of the suggested order, as well as adapted to fit the needs of the team or group. ASP has identified the following seven steps to aid in the curriculum development process:

1. Conduct a General Needs Assessment.
2. Recruit an inclusive team.
3. Review the pertinent literature.
4. Secure funding.

5. Identify and write the domains and competencies.
6. Develop methods for integration and dissemination.
7. Evaluation.

The examples provided in the guide represent a sample of many successful curricula development processes. To illustrate the different approaches institutions and interested groups have taken to develop effective curricula which incorporate geriatric material, the following programs have been selected as examples:

- The University of Rochester School of Medicine and Dentistry’s Integrated Geriatric Curriculum.
- The Minimum Geriatrics Competencies for Internal Medicine and Family Medicine Residents Project.
- University of Pittsburgh School of Medicine Residency Curriculum Supplement in Geriatrics.
- Association of American Medical Colleges (AAMC) Medical Student Competencies in Geriatric Medicine.

To demonstrate how invested groups working together have incorporated competencies targeted at the older population into internal medicine specialties’ fellowship training, the following examples were selected:

- The American Society of Nephrology’s (ASN) “Online Curriculum for Nephrology Fellows on Aging and the Kidney.”
- The American College of Cardiology’s (ACC) “Essentials of Cardiovascular Care in Older Adults (ECCOA).”
- The American Society of Clinical Oncology (ASCO) “Geriatric Curriculum: Cancer Care in the Older Populations.”

Step 1: Conduct a General Needs Assessment (GNA)

Conducting a GNA allows the leader to determine the target audience's needs as well as identify the strengths and weaknesses in existing curricular documents and the existing training programs. "The goal of [a good GNA] is to focus the curriculum by defining the deficits in knowledge, attitude, or skills that currently exist in practitioners and the ideal approach to teaching and learning these objectives"(1). A GNA should have a two pronged focus of identifying content areas and defining the methods for content delivery. In addition to pinpointing knowledge areas, a GNA should help the authors define a line of inquiry that will guide the curriculum development.

When beginning your GNA, use the Accreditation Council for Graduate Medical Education's (ACGME) six general competencies as a roadmap for developing a fellowship curriculum. They are:

1. Medical Knowledge.
2. Patient Care.
3. Professionalism.
4. Interpersonal and Communication Skills.
5. Systems-Based Practice.
6. Practice-Based Learning and Improvement.

The ACGME's six general competencies act as organizing principles for the curricula of all core specialty programs and are endorsed by the American Board of Medical Specialties for use by certifying boards in the certification and recertification of physicians.

Additional areas to consider when conducting a GNA are: public health; health care systems; utilization and resources; emerging knowledge of disease; patient support groups; and educational theory and practice (1). A high quality GNA can be conducted in a variety of ways and should reveal effective ways of introducing a geriatrics curriculum into training programs.

When conducting a GNA for a fellowship curriculum, consider the broad existing knowledge

and medical experience fellows should have in internal medicine and their specialty. The results of the GNA for a curriculum aimed at incorporating aspects of care for the aging patient should focus on the differences between treatment of the adult patient and of the aging adult patient.

ASN Online Curriculum for Nephrology Fellows on Aging and the Kidney

- Jocelyn Wiggins, BCh, BM, and Dimitrios Oreopolous, MD, developed the ASN fellowship curriculum based on existing materials they created and their experiences in geriatrics and nephrology over the course of 10 years. Dr. Wiggins' and Dr. Oreopolous' GNA consisted of a review of existing materials they developed together and a discussion regarding the realities of fellowship training, which resulted in a framework question "What specifically is different between a non-aged and an aged kidney?" that then guided their curriculum development process. Due to the time constraints during fellowship training, Dr. Wiggins and Dr. Oreopolous determined a curriculum would be most effective at the fellowship level if each competency was articulated through materials (e.g., article, review questions, case study) that could be used in 30 minutes or less.

ACC Curriculum Project ECCOA

- ACC and the Society of Geriatric Cardiology's (SGC) curriculum project led by Susan J. Zieman, MD, Karen Alexander, MD, and Andrew Miller, MD, began their GNA with a

A GNA should help the authors define a line of inquiry that will guide the curriculum development.

brainstorming session. During this session they identified the question, "What do cardiology fellows need to know about the aging heart?" This question helped them to define the goals of their curriculum regarding incorporation of core geriatric competencies. At this same discussion

session, the group determined that a web-based platform would be the best way to distribute the material.

ASCO Geriatric Curriculum: Cancer Care in the Older Population

- Working under an ASCO initiative, Hyman Muss, MD, used the material he had developed for prior workshops regarding geriatrics and oncology to develop a geriatric oncology curriculum manual. The GNA determined authors, selected by Dr. Muss and the leadership group, should collaborate to pick the “big diseases” affecting the elderly and then focus each chapter on the disease, advances, data available, and approaches to treating the elderly with the disease.

Points to Remember:

- Identify the target audience’s needs.
- Identify the existing curriculum’s strengths and weaknesses.
- Identify a framework question to guide the curriculum development process.
- Identify the potential vehicles for the potential implementation of the curriculum.

Step 2: Recruit an inclusive team and build bridges

It is important to recruit individuals who are focused and motivated to create an effective curriculum. While it is necessary to include academicians, researchers, and clinicians from the field of geriatrics and the specialty being targeted, it is equally important to involve individuals from other areas of the medical education process, such as program directors, clerkship directors, and training directors, as well as past and current Williams Scholars and their mentors. Several curriculum development

initiatives found it beneficial to include a fellow, who can provide a learner’s perspective, in the process as well.

In order to maintain project momentum and to keep participants on task, the team should develop a timeline that outlines deadlines for materials, conference call dates, and other important deadlines. Below are examples of how curriculum groups formed teams and organized the curriculum development responsibilities among team members.

University of Rochester Medical Center School of Medicine and Dentistry

- The University of Rochester included associate deans and the dean of the medical school in its geriatric curriculum development process. The university found it helpful to designate individuals on the team to be theme directors and to be the leader of an interdisciplinary design team. A good “theme director [should have] initiative, creativity, enthusiasm, and time” (2). An interdisciplinary design team ideally provides links to multiple elements such as the medical school, accrediting body, or specialty society (2).

ASN Online Curriculum for Nephrology Fellows on Aging and the Kidney

- Dr. Wiggins and Dr. Oreopolous recruited a team of individuals with publishing credits in the desired content areas as well as ASN staff and individuals with web experience. Dr. Wiggins and Dr. Oreopolous served as theme directors and led the team in the development of educational materials, the revision process, and the collaboration with ASN staff and web experts on developing a web-based product to deliver the materials to fellows.

Using one’s existing relationships with other experts in the field or in key positions at societal level increases the likelihood the developed curriculum will be accepted for integration.

After conducting the literature review, a team can catalog the available resources and make final decisions regarding major issues in content, structure, and instructional methods.

ASCO Geriatric Curriculum: Cancer Care in the Older Population

- ASCO’s geriatric curriculum was conceptually developed by Dr. Muss and two colleagues who previously developed and presented workshops on cancer and the elderly. Together these three formed the leadership of the project. While the group easily outlined a curriculum agenda, they did not invite additional experts, such as geriatricians, to contribute or review it. Dr. Muss encourages individuals developing a curriculum to solicit the input of outside experts.
- Through a series of conference calls, the leadership group chose authors based on their previous written work regarding the identified curriculum item. The group did not meet in person and did not meet frequently via conference call. As a result, Dr. Muss remarked, it was difficult to organize the curriculum development responsibilities.

ACC Curriculum Project ECCOA

- Like ASCO, the ACC team began with a leadership group of three. The group worked with an ACC grants administrator to write a grant proposal. Once funding was procured, the leadership group expanded to include content experts. The leaders met to discuss the curriculum and the roles and responsibilities regarding how the group would move forward. Originally the group planned to split duties equally among each other. The leaders quickly decided that rather than splitting duties equally, it would be better to assign specific roles, such as content editor, to one individual.

In addition to recruiting an inclusive team, it is important to build relationships with key individuals at specialty societies and medical institutions. Using one’s existing relationships with other experts in the field or in key positions at the societal level increases the likelihood the developed curriculum will

be accepted for integration. Regular personal contact between a curriculum development team’s leaders and fellowship directors, and other contacts at the specialty society, allows for continual review of current geriatric curricular content and the exchange of ideas for further aging theme initiatives.

Points to Remember:

- Recruit an inclusive team that includes individuals with contemporary experience in medical education as well as geriatrics.
- Recruit one or more fellows to add the learner’s perspective to the process.
- Schedule regular communication with the team in order to stay on task.
- Delegate responsibilities to team members.

Step 3: Review the Pertinent Literature

A literature review should be completed to evaluate emerging knowledge, recommendations and guidelines from major organizations, existing curricula, and related education literature. After conducting the literature review, a team can catalog the available resources and make final decisions regarding major issues in content, structure, and instructional methods (3).

In addition to reviewing existing literature, Rosanne M. Leipzig, MD, and her team from Mount Sinai School of Medicine recommend in their article “Improving Geriatrics Training in Internal Medicine Residency Programs: Best Practices and Sustainable Solutions,” to conduct interviews with others who have had success in the field. In their assessment of best practices, Dr. Leipzig and her colleagues

conducted “one-hour interviews with leaders of 15 nationally recognized geriatrics programs (all John A. Hartford Foundation Centers of Excellence) and 11 programs that had indentified themselves as focusing on geriatrics training for internal medicine residents, for a total of 26 interviews”(2). These interviews helped the team identify the best practices from those who had already successfully formulated and integrated programs.

Points to Remember:

- Review emerging knowledge, recommendations and guidelines from major organizations, existing curricula, and related educational literature.
- Identify content points, curriculum structure, and process for implementation.

Step 4: Secure Funding

Securing funding is a crucial step, as it serves a twofold purpose. First, it provides salary support to protect team members’ time and defrays operational costs (e.g., meetings and administrative costs). Second, securing funding demonstrates to specialty societies and fellowship directors that the curriculum initiative has widespread support.

Securing funding demonstrates to specialty societies and fellowship directors that the curriculum initiative has wide spread support.

Relationships developed at the specialty society and institutional levels can be key in securing the necessary funding needed for a curriculum project. Securing funding can be conducted at any point during the process and probably should be an ongoing task to ensure the project is not interrupted due to a lack of funds.

ACC Curriculum Project ECCOA

- This curriculum initiative successfully pursued and obtained funding from the John A. Hartford

Foundation, ASP, and ACC, organizations the team had prior relationships with. For example, as a former T. Franklin Williams Scholars recipient, Dr. Zieman had an existing relationship with ASP, while Dr. Alexander was involved at the societal level with ACC. Pursuing existing relationships resulted in monetary support from ASP and in-kind technical and development support from ACC. The procured funding covered the following expenses:

- Administration.
- Web technology.
- Content meeting.
- Rollout meeting.
- Salary support for Dr. Zieman, Dr. Alexander, and Dr. Miller.
- Honorarium for content meeting attendees.

ASN Online Curriculum for Nephrology Fellows on Aging and the Kidney

- Dr. Wiggins and Dr. Oreopolus obtained a \$15,000 grant from ASP to cover initial curriculum development costs. Dr. Wiggins and Dr. Oreopolous did not provide honoraria to authors, but instead directed the money to cover ASN administrative time, a proofreader to edit the chapters, and web experts to produce the material electronically.

Dr. Wiggins and Dr. Oreopolous plan to pursue additional funding for the next five years to continue the project and keep material updated. Ideally Dr. Wiggins and Dr. Oreopolous would like to use the additional funding they procure to adapt their current PDF-based curriculum into an interactive product capable of tracking the progress of fellows using the curriculum.

Points to Remember:

- Approach the specialty society for information on potential funding opportunities.
- Use existing relationships when beginning the funding search.

Step 5: Identify and write the domain; and competency.

Based on GNA and the literature review, the next step is to identify domains critical to answering or completing the central question developed from the GNA. The bulk of the curriculum writing process is completed when developing a curriculum's domains and competencies. The writing process should include feedback from outside sources and undergo several revisions to ensure the curriculum's domains and competencies are being articulated well. Once potential domains are identified, it is helpful to obtain feedback from outside that will assist in focusing the domains further. After narrowing the curriculum domains, a team should develop competencies and learning objectives for each domain.

When writing competencies and objectives for the identified domains, it is important to remember a few points:

- A single-minded focus on objectives can distract planners from the learners' actual experience. Curriculum authors should aim to write objectives in full sentences describing exactly what the learners will do in order to communicate more than a list of topics(4).
- Learning objectives must be achievable in actual clinical practice. Fellows must be able to see first hand that the body of knowledge and skills make a difference in the care of their patients. If this does not happen, it is unlikely that the knowledge and skills will become part of the fellow's clinical arsenal (2).

The following are examples of comprehensive domains and competencies:

- **Minimum Geriatric; Competencies for Internal Medicine and Family Medicine Resident; Project**
 - o Domain: Patient Care
 - Competency: Evaluate and manage common medical problems in relation to

functional outcomes, quality of life, and conflicting priorities in patients with comorbid illnesses and age-related physiologic changes that alter response to treatment.

- **AAMC Medical Student Competencies in Geriatric Medicine**
 - o Domain: Medication Management
 - Competency: Explain impact of age-related changes on drug selection and dose based on knowledge of age-related changes in renal and hepatic function, body composition, and Central Nervous System sensitivity.

A single minded focus on objectives can distract planners from the learners' actual experience.

Minimum Geriatric; Competencies for Internal Medicine and Family Medicine Resident; Project

- After identifying 15 domains for the geriatric internal medicine and family medicine resident curriculum initiative, Brent Williams, MD, and his colleagues sought outside feedback. An expert consensus meeting was held to narrow the number of domains, with the end result being seven domains.
- To create comprehensive competencies for each domain, Dr. Williams and his colleagues held a workshop with 100 content specialists. These specialists broke into small groups and identified three to six competencies for each domain, resulting in 46 competencies. Dr. Williams' team narrowed the competencies to a core group of 26 through a review process by residency program directors, general internal medicine specialists, geriatricians, and family medicine specialists.

AAMC Medical Student Competencies in Geriatric Medicine

- Dr. Leipzig and her colleagues identified seven domains and five to eight potential competencies for each domain. Dr. Leipzig then narrowed the competencies through an electronic survey completed by internists, program directors, medical

school deans, and geriatricians. The survey results yielded 26 competencies that a medical school student should master before graduation.

ASN Online Curriculum for Nephrology Fellows on Aging and the Kidney

- Dr. Wiggins and Dr. Oreopolous did not develop new nephrology domains and competencies that were geriatric specific. Instead, they decided it would be best to take existing domains and competencies that nephrology fellows were already familiar with and discuss them in the geriatric context. “The Coming Pandemic of CKD/ASKD and the Aging Population” and “Rate of Decline in eGFR and Clinical Evaluation of the Elderly With a Low eGFR” are examples of chapters written with a geriatric emphasis.

ACC Curriculum Project ECCOA

- In order to identify content for the curriculum, the core group brought together 30 to 40 content experts to discuss which modules to include in the curriculum and what content should be included in each selected module.

Points to Remember:

- Identify domains crucial to the goals of the curriculum.
- Obtain external feedback regarding identified domains.
- Write objectives in full sentences that describe exactly what the learners will do to learn and master the competency.
- Structure competencies and objectives in a way that illustrates the importance of the skills and knowledge being taught.

Step 6: Develop methods for integration and dissemination

Once domains and competencies are identified, the curriculum team must select the method and the vehicle through which they will introduce their curriculum. The dissemination strategy chosen should be developed to reflect best practices for curricular references in the specialty.

University of Rochester School of Medicine and Dentistry

- The University of Rochester found the double helix model particularly effective for an integrated geriatrics curriculum versus other curriculum models because it weaves basic science and clinical medicine throughout the four-year curriculum.

University of Pittsburgh School of Medicine

- The University of Pittsburgh implemented a geriatric curriculum for the residency program through an intensive three-day course as a way to supplement the knowledge and basic skills that are missed during the clerkship years (4).

ASN Online Curriculum for Nephrology Fellows on Aging and the Kidney

- Based on the results of their GNA, ASN’s Nephrology Curriculum was launched through the web. Dr. Wiggins and Dr. Oreopolous felt strongly that fellows were more likely to log on to a website than to skim through a textbook. To increase the curriculum’s usability, the group decided to make the curriculum open to the public. The curriculum currently is available on ASN’s website in PDF format. Users can click on a chapter heading in the table of contents and read a chapter, review a key points summary, and answer three to five evaluation questions in a 30-minute period. Each PDF chapter has a corresponding PowerPoint presentation that illustrates the chapter’s key points.

With a dissemination strategy outlined, selecting the tools of implementation is an important task. Asking questions critical of the tool being considered can help accomplish this task. For example, will a few slides in a lecture sufficiently illustrate a learning objective or should a case study be used? How can other possible formats or platforms for integration, such as didactic lectures, journal clubs, interactive question-and-answer sessions, standardized patient encounters, oralboard cases, or intranet resources, be used as methods of integration? (2).

ACC Curriculum Project ECCOA

- At the project's inception, ECCOA's leadership team determined the curriculum should be implemented through an interactive web-based tool. The resulting product was a series of 14 modules revolving around topic heads. A fellow is able to complete one topic head which covers case-based questions, content presentations on important points, and a key concepts section in 45 minutes. Once the fellow has completed the module, he or she receives a breakdown of how many pre-test, learning modules, and post-test questions he or she had correct. ECCOA's finished curriculum goes beyond the typical curriculum development duties, and produced a product that effectively communicated the curriculum and tracked user's progress.

Points to Remember:

- Develop a dissemination strategy to reflect best practices for curricular reform in the specialty.

Step 7: Evaluation

To ensure curriculum implementation results in the desired change for the targeted audience, designing and implementing an evaluation system is important. Some piloted curricula have relied on surveys in order to gauge the effectiveness of the curriculum's methods. Other developers have used a qualitative approach through the use of journaling, where students journal twice a month on a preselected topic. The journal entries are collected and evaluated to assess how comfortable and competent students feel with the subject matter and to assess their attitudes towards geriatric patients.

Points to Remember:

- Design and implement an effective evaluation of the curriculum's content and dissemination.

Closing Points

These suggested curriculum steps should be used as a guide for special interest groups as they attempt to develop a geriatric fellowship curriculum. It is important to remember an effective curriculum requires a strong and dynamic team, extensive research into existing background and emerging materials in the area of focus, and feedback from both specialty societies and the institutions where the curriculum will be used. These steps can also guide the content development process for workshops, continuing medical education materials, and lectures. Throughout the process, carefully consider what method of implementation and dissemination best fits your target audience. Regardless of whether your curriculum is articulated through textbook chapters or an interactive product, the most important aspect is the targeted audiences' absorption of the material.

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