

Introduction to Competency-based Education

Facilitator's Guide

ACGME

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Introduction to Competency-based Resident Education

This PowerPoint module provides an overview of basic principles of competency-based education, an overview of the Outcome Project, an overview of Common Program requirements, and the ACGME timeline for implementation of the competencies. The module is designed to be given as a PowerPoint lecture to faculty to familiarize them with these topics. The module is approximately one-half hour long in order to respect the time demands experienced by Program Directors and faculty.

There will be five PowerPoint modules:

Module 1 – An Introduction to Competency-based Residency Education

- An overview of Common Program Requirements, ACGME timelines for implementation of the competencies, and key points of competency-based education.

Module 2 – Implementation of the Competencies

- An overview of the six competencies, including examples of specific types of content found in each competency and ideas about teaching methods or strategies.

Module 3 – Writing Goals and Objectives; Curriculum Planning

- An overview of curriculum planning, with a focus on writing goals and objectives, as well as the integration of the competencies into a specialty-specific curriculum.

Module 4 – Developing an Assessment System

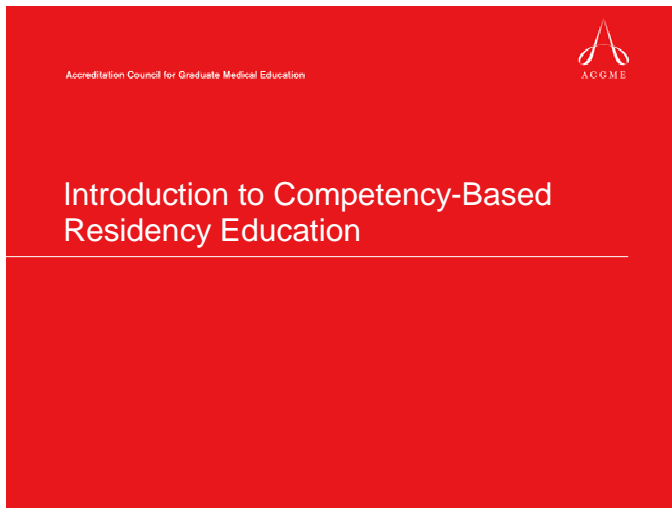
- An overview and example of an assessment system, with recommendations for types of assessment tools programs should be using.

Module 5 – Educational Quality Improvement

- An overview of educational quality improvement focused on using aggregate data to improve educational programming.

Note: The speaker notes contain a snapshot of the slide, as well as discussion questions, designed to stimulate conversation within your program about a particular topic. Guidelines will help you elicit key considerations.

Slide 1



Speaker Notes

This is the first in a series of PowerPoint presentations to help Program Directors and institutional leaders educate faculty about the ACGME Outcome Project and general competencies. The series of five modules, written at the foundational level, will provide Program Directors and faculty with information on the Outcome Project, implementation, and assessment of the general competencies, and ideas for educational quality improvement. Program Directors and faculty may choose to view these modules individually, or to complete them as a group, allowing for discussion and reflection on a program-specific implementation plan. Each module is approximately 30 minutes.

Module 1 – An Introduction to Competency-based Residency Education

- An overview of Common Program Requirements, ACGME timelines for implementation of the competencies, and key points of competency-based education.

Module 2 –Implementation of the Competencies

- An overview of the six competencies, including examples of specific types of content found in each competency and ideas about teaching methods or strategies.

Module 3 – Writing Goals and Objectives; Curriculum Planning

- An overview of curriculum planning, with a focus on writing goals and objectives as well as the integration of the competencies into a specialty-specific curriculum.

Module 4 – Developing an Assessment System

- An overview and example of an assessment system, with recommendations for types of assessment tools.

Module 5 – Educational Quality Improvement

- An overview of using aggregate data to improve education by discussing methods and opportunities for continuous improvement of educational programming.

Slide 2

Objectives

Upon completion of this module, Program Directors and faculty will be able to:

State foundational concepts of the Outcome Project

State the requirements related to the general competencies in the Common Program Requirements

Describe expectations of the Outcome Project timelines

Speaker Notes

This module addresses the objectives listed in Slide 2.

Please print the information from the following links and have copies for faculty. The Common Program Requirements and the timelines for implementation of the competencies are discussed in this module.

Common Program Requirements:

http://www.acgme.org/acWebsite/dutyHours/dh_dutyHoursCommonPR.pdf

Timeline:

http://www.acgme.org/outcome/project/timeline/TIMELINE_index_frame.htm

Slide 3



What is competency based education?

Competency based education focuses on learner performance (learning outcomes) in reaching specific objectives (goals and objectives of the curriculum).

Speaker Notes

The Outcome Project exemplifies competency-based education in medicine. Competency-based education focuses on learner performance, often called learning outcomes, in reaching specific objectives, which are often called goals and objectives. It shifts our focus away from process-oriented measures of education (i.e., how many procedures a resident completed) to outcome-oriented measures (how well the resident completed the procedure). In addition, competency-based education is built upon having a curriculum plan in place, identified goals, and objectives of the learning experience, using various types of teaching strategies, as well as using various method(s) for assessing whether the resident has achieved the objectives. Let's think of a simple example:

Simple Example

Suppose you want to educate a resident to suture correctly. You might decide to have a suturing workshop with pigs' feet where residents can learn the technique of appropriate suturing. The objectives would be the specific tasks the resident has to complete accurately:

1. Identify differing suturing techniques
2. Identify when to use different techniques
3. Demonstrate various suturing techniques

The learning outcome is complete when faculty observe that residents have met the three objectives as they complete the workshop. In this example, resident performance (learning outcome) and the learning experience (suturing workshop's goals and objectives) are linked.

Complex Example

Many of you are challenged with writing goals and objectives for rotations within your curriculum, and with determining a method to assess whether residents have performed competently on a specific rotation. You may feel frustrated as you try to integrate the competencies into the 20 or more existing objectives for this rotation. In these more complex examples, consider using an *assessment system* to capture a resident's performance in a variety of areas and from a variety of perspectives. It will provide you with the data needed to make a judgment about whether the resident has performed competently on a specific rotation. How to develop an assessment system will be more fully discussed in Module 4. We will cover information about how to add additional assessment tools into your program and to improve your end of rotation rating form.

Key Learning Points

- An assessment tool should be designed to measure the resident's performance of specific curriculum objectives (simple example).
- Consider using an assessment system to capture breadth and depth of resident performance on a rotation.

Discussion Question

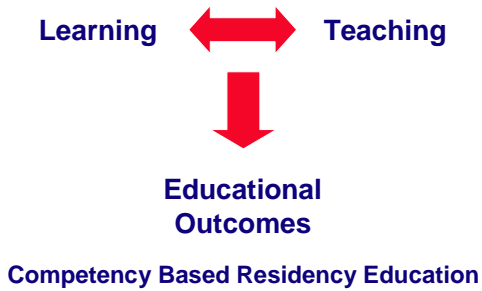
Do your assessment tools measure the objectives of rotations or other learning experiences?

Many faculty are comfortable with using global end-of-rotation evaluation tools because "it has been good enough so far." Use this conversation to determine how effective your faculty thinks the current assessment tools are, and which ones they would be interested in adding. We will cover this more in depth in Module 4.

Slide 4



Another way to look at this:



Speaker Notes

This is an example of competency-based residency education presented visually. Again, notice the focus on educational outcomes (resident performance), which is the result of the teaching and learning experiences (goals and objectives) occurring in the program.

Key Point

Competency-based residency education answers the critical question: Did the resident achieve the goals and objectives of the learning experience?

Slide 5

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What is the Outcome Project?

The Outcome Project is a long-term initiative by which the ACGME is increasing emphasis on **educational outcomes** in the accreditation of residency education programs.

The ACGME identified six general competencies for residency education. These competencies are:

- **Medical Knowledge**
- **Patient Care**
- **Interpersonal and Communication Skills**
- **Professionalism**
- **Practice and Learning and Improvement**
- **Systems Based Practice**

Speaker Notes

None

Slide 6



Goals of the Outcome Project



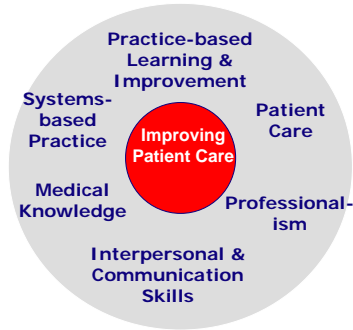
Speaker Notes

The overarching goal of the Outcome Project is to ensure that residents develop competence as physicians in order to complete their training and competently practice as independent practitioners. Competence as a physician, in this framework, is defined as achieving competence in the six domains of competency, which are often referred to as the ACGME Competencies. These six domains of competency are Medical Knowledge, Patient Care, Professionalism, Interpersonal and Communication Skills, Practice-Based Learning and Improvement, and System-Based Practice.

Slide 7



Goals of the Outcome Project



Speaker Notes

The second goal of the Outcome Project is to improve patient care via resident education. Most patients would agree that they want physicians who have strong medical knowledge, demonstrate good communication skills, are professional, know the literature of their disorder, are reflective about their own practice, and are able to act as their advocate with the health care system. Again, these characteristics reflect the six ACGME competencies.

Slide 8

The Six Competencies

Medical Knowledge

Patient Care

Practice Based Learning and Improvement

Systems Based Practice

Interpersonal and Communications Skills

Professionalism

Speaker Notes

These six competencies provide a framework for the education of residents. They may first sound abstract or academic, but let's look at how they apply to a case.

Case Study

A 62-year-old Hispanic woman with diabetes, HTN, and high cholesterol is seen in the clinic for follow-up on lab work that reflects her diabetes is not well controlled. Providing good patient care to this woman requires us to understand more factors related to this woman's care than the diagnosis or treatment plan.

Here are some of the factors that might affect her current presentation:

1. *What are the clinical guidelines for diabetic care? (PBLI, MK)*
2. *Why is patient failing to adhere to treatment program? (ICP)*
3. *Are there any cultural issues that affect patient's adherence to treatment or to an understanding of the disease? (ICP, PROF)*
4. *Are there psychosocial issues affecting this patient? Is she under unusual stress?*
5. *Are there family issues going on?*
6. *Has there been a death in the family recently?*
7. *Is she a caretaker for an aging parent?(ICP)*
8. *What are the access-to-care issues (SBP)*
9. *Are there issues with affordability of medications or insurance coverage? (SBP)*

When we look at these factors, we see the competencies are deeply embedded in the questions we might ask the resident during precepting, questions such as the impact family stress has on the patient's ability to adhere to diet, her ability to find transportation to the clinic, or what the current guidelines are for care. All these discussions focus on training in the competencies.

Discussion Question

Take a case from your own specialty and ask faculty to generate questions that reflect the competencies they might ask a resident when precepting. Use the example above as a guideline.

Slide 9

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

Residents are expected to:

- 1. Demonstrate an investigatory and analytic thinking approach to clinical situations**
- 2. Know and apply the basic and clinically supportive sciences which are appropriate to their discipline**

Speaker Notes

This will not be covered since this is a competency where most programs do well.

Slide 10



Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents are expected to:

1. communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. gather essential and accurate information about their patients
3. make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. develop and carry out patient management plans
5. counsel and educate patients and their families
6. use information technology to support patient care decisions and patient education
7. perform competently all medical and invasive procedures considered essential for the area of practice
8. provide health care services aimed at preventing health problems or maintaining health
9. work with health care professionals, including those from other disciplines, to provide patient-focused care

Speaker Notes

This will not be covered since this is a competency where most programs do well.

Slide 11



Practice Based Learning and Improvement

Residents must be able to **investigate** and **evaluate** their patient care practices, **appraise and assimilate** scientific evidence, and **improve** their patient care practices.

Residents are expected to:

1. **Analyze** practice experience and **perform** practice-based improvement activities using a systematic methodology.
- **Obtain and use** information about their own population of patients and the larger population from which their patients are drawn
- **Locate, appraise, and assimilate** evidence from scientific studies related to their patients' health problems
- **Apply knowledge** of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- **Use** information technology to **manage** information; **access** on-line medical information; and **support** their own education
- **Facilitate** the learning of students and other health care professionals

Speaker Notes

1. Residents should be able to analyze how well they are doing on standard clinical guidelines for their specialty. An example might be following diabetic care guidelines or chest pain protocol. In addition, residents should be able to reflect on their own care of patients and begin to use self-reflection to drive their own learning and improvement.
2. Residents should be involved in Quality Improvement and Patient Safety experiences or M & M Conferences as these demonstrate their ability to perform Practice-Based Learning and Improvement. In each of these experiences, residents reflect on their own practice and learn to improve their practice patterns. *For example: Have residents review ten of their charts for adherence to clinical guidelines related to a specific disease. Can residents discuss areas for improvement? Are there parts of the guideline they consistently miss? How they would improve their performance?*
3. Residents need to have a sense of how many of their patients are uninsured, what resources are available, information about health disparities that exist in this population, epidemiology of disease states, and how their population might differ from the norm.
4. Residents must develop skills in using information technology to support their practice. In addition to electronic medical records and PDAs, this includes conducting searches for information related to patient care and evaluating whether their study complies with standards of good research (i.e., Evidence-Based Medicine).
5. Residents also need to learn how to be effective teachers with multiple groups of learners.

Practical example

Think about rounds or precepting opportunities to address PBLI. For example, a resident presents a case to you and the diagnosis or treatment approach is unclear. Encourage the resident to perform a quick search in one of the EBM databases, such as Cochrane, and report the findings. Encourage the resident to critically evaluate the study they are presenting. Discuss with the resident not only the research findings, but also how those findings may affect the diagnosis and/or treatment planning for this patient.

Discussion Questions

- 1. Are your residents able to critically evaluate literature and research?*
- 2. Are they able to reflect on their own practice and improve their patient care (Quality Improvement)?*
- 3. Are your residents effective teachers?*

Use this discussion as an opportunity to obtain information from faculty about a resident's ability to evaluate research, to engage in quality improvement activities, and to teach. It may generate ideas about topics to include in or improve your program.

Slide 12

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Systems Based Practice

Residents must demonstrate an **awareness of** and **responsiveness to** the larger context and system of health care and the **ability to effectively call on** system resources to provide care that is of optimal value.

Residents are expected to:

1. **Know how** types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
2. **Practice** cost effective health care and resource allocation that do not compromise quality of care
3. **Advocate** for quality patient care and assist patients in dealing with system complexities
4. **Partner** with health care managers and health care providers to assess, coordinate

Speaker Notes

Systems-Based Practice encourages residents to realize they are part of a larger health care system, and that they must understand and be able to negotiate through this system as a patient advocate. These skills are critical to quality patient care.

1. Residents need to understand billing and coding issues, how different insurers operate, how to cost-effectively determine which ancillary imaging or lab studies should be done, and use cost-effective considerations when prescribing medication.
2. Residents need to learn skills necessary to help patients negotiate through an often complex and unwieldy system.
3. Residents must partner with other individuals within the system, such as RNs, LPNs, discharge planners, social workers, chaplains, and pharmacists, to provide quality care.
4. The Systems-Based Practice competency also includes Patient Safety. Residents need to understand how the system as a whole contributed to the medical error. Were there failures in communication? Were there issues related to hand-off? Were there other system issues that failed to prevent the error?

Discussion Questions:

1. *Who in your own program is also a part of the resident's "team" that provides care to the patients?*
2. *Additionally, how well do your residents understand what it means to practice cost-effective health care or to choose among different reimbursement systems?*
3. *Do residents understand how the system may cause or fail to prevent an error from occurring?*

Use this as an opportunity to further define this competency for your program. What topics do you think residents would like to learn? Encourage faculty to share ideas.

Slide13



Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities, **adherence to ethical principles, and sensitivity** to a diverse patient population.

Residents are expected to:

1. **Demonstrate** respect, compassion and integrity
2. **Demonstrate** a commitment to ethical principles
3. **Demonstrate** sensitivity and responsiveness to patients' culture, age, gender and disabilities

Speaker Notes

1. Professionalism is composed of three parts. We know those residents who consistently demonstrate professional behavior in our programs by 1) demonstrating respect and compassion to others; 2) managing conflict; and 3) behaving in a manner consistent with their values.
2. Professionalism includes the knowledge and ability to act in an ethical fashion.
3. Professionalism also includes the ability to be sensitive to those whose culture, age, or gender is different from our own.

Discussion Questions

In your program, do you discuss the parameters of professional behavior with residents? Do you feel that as a faculty member you are role-modeling good professional behavior? What do you do with residents who may not demonstrate professional behavior? Do you discuss ethical issues (pro and con) related to patients on your service? Do you encourage residents to respect others who are different from themselves?

Again, use this as an opportunity to see how your faculty defines Professionalism within your own program, and write down any ideas they may have regarding teaching or assessing this competency.

Slide 14

Interpersonal and Communication Skills

Residents must be able to **demonstrate** interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:

1. **create and sustain** a therapeutic and ethically sound relationship with patients
2. **use effective listening skills** and **elicit and provide** information using effective nonverbal, explanatory, questioning, and writing skills
3. **work effectively** with others as a member or leader of a health care team or other professional group

Speaker Notes

Interpersonal and communication skills go beyond medical interviewing and history taking. Effective communication skills are at the heart of quality patient care. The public increasingly insists that physicians clearly communicate with them, that they are provided with informed consent, and that bad news is delivered in an empathic and compassionate way. Communication skills are especially important where teams must communicate, particularly around hand-offs and when moving between different microsystems to reduce medical errors.

1. Residents need to establish relationships with their patients that promote the delivery of good patient care.
2. Resident need to listen to the “patient’s story,” extract important details from the history taking, and provide information to their patients in an understandable way.
3. Residents need strong team communication and leadership skills in order to work effectively within the complex health care system.

Discussion Question

Encourage faculty to discuss ways the program is teaching or assessing this competency; listen for ideas.

Slide 15

What does the ACGME expect?

Program should be able to document and demonstrate:

- **Learning opportunities** in each competency domain
- **Evidence of multiple assessment methods**
- **Use of aggregate data** to improve the educational program

Speaker Notes

Site reviewers are interested in knowing how you teach each competency domain.

1. What activities would you list as learning opportunities (teaching) in Medical Knowledge?

In all likelihood, your learning activities include a series of didactic lectures, journal club, morning report (or a similar variation), or specialty-specific conference (M & M or CPC).

2. What activities would you list as learning opportunities (teaching) in Professionalism?

Such activities might include role-modeling by faculty, discussion with mentors or program directors, ethic conferences or lectures, experiences and/or lectures in cultural competency and examples of teaching/learning opportunities. We can use several methods to assess how well residents are achieving the competency-set goals. Here are some examples of multiple assessment methods:

- *In- training exam or other objective cognitive exam*
- *360° or Multisource Professional Feedback*
- *Portfolios*
- *Case logs*
- *Focused direct observation experiences*
- *Simulations*

We will discuss more about this topic as it relates to the competencies in Module 2.

Site reviewers are also interested in how you use aggregate data to improve educational programming.

What is aggregated performance data?

Aggregated performance data refers to summary resident assessment results.

1. Percentage of residents passing the certification exam on the first attempt or the program's percentile rank on in-training exams by PGY level.
2. Percentage of residents who regularly consult the literature to address clinical questions.
3. Percentage of nurses who affirm that residents are responsive to their patient care concerns.

Aggregate data provides evidence of how residents within the PGY level are performing on selected aspects of each competency and, most importantly, to their specialty and program. It might show the extent to which residents are advancing in capabilities across the years of residency. The aggregate results should be specific areas of resident competence that programs are targeting for improvement through educational interventions.

All these topic areas will be covered in depth in the following modules.

Slide 16



Common Program Requirements

Common Program

- core accreditation requirements for all specialties

Specialty Program Requirements

- additional accreditation requirements specific to a specialty.

For more detailed information, please go to:

http://www.acgme.org/acWebsite/navPages/nav_PD_coord.asp

Speaker Notes

If you have copies of specialty specific program requirements, please share them with the staff. You will find them on our website at:

http://www.acgme.org/acWebsite/navPages/nav_comPR.asp

Slide 17



Educational Highlights of Common Program Requirements

Curriculum

- **Goals and objectives distributed to residents and faculty and reviewed with residents prior to rotations**
- **Well organized and effective curriculum plan that provides residents with increasing responsibility**
- **Residents are required to obtain competence in the six domains**

Assessment

- Assessment of a resident's competence is accurate and timely
- Regular and timely feedback to residents including semiannual written evaluations.
- Assessment results are used to improve residents' performance.
- A final evaluation at the end of residency which states residents are able to practice competently and independently without supervision

Speaker Notes:

Please review the above requirements.

Slide 18

Common Program Requirements (con't)

Program Evaluation

- Programs must evaluate their educational program annually
- Formal documented annual meeting of at least the program director, representative faculty and one resident to review program goals and objectives and the effectiveness with which they are achieved.
- An action plan to correct deficiencies should be prepared and approved by faculty and documented in the minutes.
- The program should use resident performance and outcome assessment (including scores on certification examinations.) in its evaluation of the educational effectiveness of the residency program.
- Faculty should be evaluated yearly by the residents

Speaker Notes

Please review the above slide.

Slide 19



Timelines Phase 2 7/02-06

Program Focus

- Provide learning opportunities in all six competency domains
- Improve evaluation processes as needed
- Provide aggregate resident performance data for Internal Review

Accreditation Focus

- Review evidence that programs are teaching and addressing the competencies
- Provide constructive citations early and more constructive citations later in phase
- Internal Review includes aggregate resident performance data

Speaker Notes

This is the ACGME timeline provided Program Directors and faculty with guidelines for implementation of the competencies into their program.

In Phase 2, each program is expected to:

1. provide learning opportunities in all competency domains;
2. improve the evaluation process to use multiple assessment tools;
3. provide aggregate resident data to GMEC Internal Review; and
4. show reviewers evidence of learning opportunities in the six competency domains and assessment tools. (Note: RRC reviewers may look for evidence that GMEC's internal review of the program reviewed aggregate resident performance data).

What kind of aggregate data should programs submit to their GMECs (end of Phase 2 of the Outcome Project timeline)? *Aggregated performance data refers to summary resident assessment results.*

- Percentage of residents passing the certification exam on the first attempt or the program's percentile rank on in-training exams by PGY level.
- Percentage of residents who regularly consult literature to address clinical questions.
- Percentage of nurses who affirm that residents are responsive to their patient care concerns.

Aggregate data provides evidence of how residents within the PGY level are performing on selected aspects of each competency and, most importantly, to their specialty and program. It might show the extent to which residents are advancing in capabilities across the years of residency. The aggregate results should be specific areas of resident competence that programs are targeting for improvement through educational interventions.

Slide 20

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Timelines
Phase 3
7/06-6/11

Program Focus

- Use resident performance data as basis for improvement
- Begin to use external measure (patient surveys, clinical quality measure) to verify resident and program performance

Accreditation Focus

- Evidence that programs are making data driven improvements
- Review the external program performance indicators and input from GMEC to make sure programs are achieving their educational objectives

Speaker Notes

During Phase 3 (2006-2011), programs are expected to:

1. Demonstrate full integration of the competencies and assessments tools with clinical care.
2. Use resident performance data to determine educational improvements in their program.
3. Use external measures, such as clinical quality indicators and external specialty specific benchmarks, as a method of evaluating their educational program.

Discussion Questions

What external measures does the ACGME expect programs to use? When will programs be held accountable for external measures of performance? (Phase 3 of the Outcome Project timeline)

By 2008, residency programs are expected to collect feedback on resident performance from at least one source external to the residency program, such as patients and their families, specialists with whom they have consulted, or employers.

The ACGME encourages programs and institutions to move forward with data collection that indicates resident performance of condition-specific, evidence-based patient care processes and, where appropriate, outcomes of providing care (e.g., surgical complication rate, scores on validated functional outcome questionnaires, percentage patients who stopped smoking or loss weight following counseling or other resident-initiated intervention).

Slide 21

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Summary

Competency based residency education focuses on a resident's performance (learning outcomes)

The major goals of the Outcome Project are:

- Develop competence as a physician
- Improve patient care

Review Common Program requirements

Review the ACGME Timelines for Implementation

Speaker Notes

As a medical institution, you are already following numerous rules and guidelines for many governing bodies whose main focus is on providing exceptional patient care. Your program probably covers the competencies in a variety of different ways. How can you consciously work the competencies into your program so that residents can develop all the skills they will need to practice medicine independently?