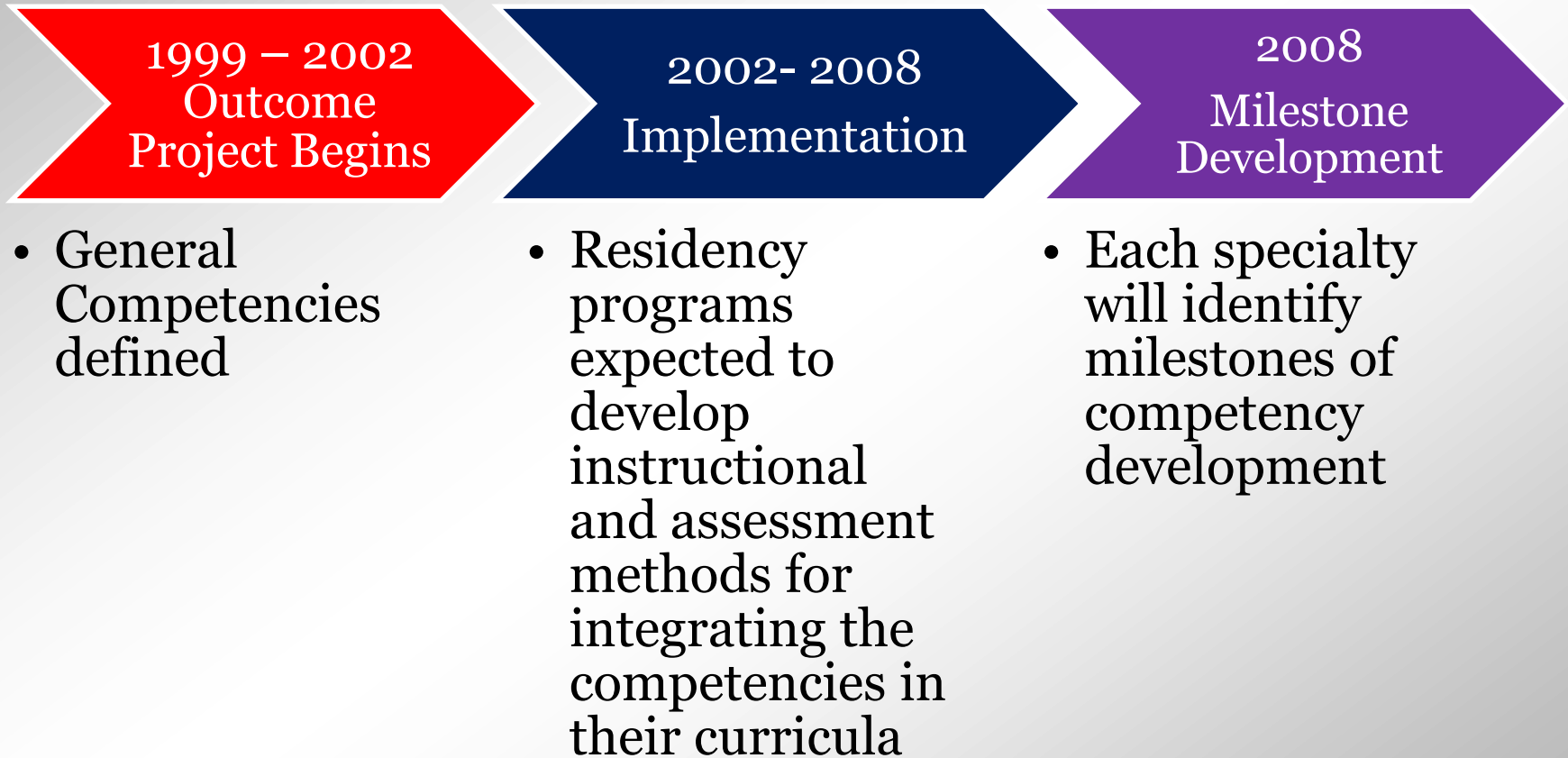# ACGME Expert Panel Milestone Development: Results and Lessons Learned

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CDC Milestones Project Meeting
Atlanta, GA
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ACGME

Outcome Project Timeline

1999 – 2002 Outcome Project Begins

- General Competencies defined

2002- 2008 Implementation

- Residency programs expected to develop instructional and assessment methods for integrating the competencies in their curricula

2008 Milestone Development

- Each specialty will identify milestones of competency development

General Competency

Sub-competency

Developmental Progression or Set of Milestones

Milestone

SBP3 Community Based Care					
Has not Achieved Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
	1.1/A Gives examples of community mental health systems of care 1.2/B Gives examples of self-help groups (AA, NA), other community resources (church, school) and social networks (e.g., family, friends and acquaintances)	2.1/A Coordinates care with community mental health agencies including collaboration with case managers 2.2/B Recognizes role and explains importance of self-help groups and community resource groups (disorder specific support and advocacy groups) 2.3/C Describes individual and population risk factors for mental illness	3.1/B Incorporates disorder specific support and advocacy groups in clinical care 3.2/C Describes prevention measures: universal, selective and indicated 3.3/D Describes rehabilitation programs (vocational, brain injury, etc.) and the recovery model	4.1/B Routinely uses self-help groups, community resources and social networks in treatment[3] 4.2/C Employs prevention and risk reduction strategies in clinical care 4.3/D Appropriately refers to rehabilitation and recovery programs 4.4/D Uses principles of evidence-based practice and patient centered care in management of chronically ill patients	5.1/A Participates in the administration of community based treatment programs 5.2/A Participates in creating new community based programs 5.3/D Practices effectively in a rehabilitation and/or recovery based program

Comments:

Milestone Development

Who
- Working Group PDs, Residents, Board, RRC, Specialty Organization, ACGME
- Advisory Group

When/How
- 3 – 4 meetings
- Interim work and regular communication
- Milestones developed by Dec. 2012 Phase 1 Dec. 2013 Phase 2

How
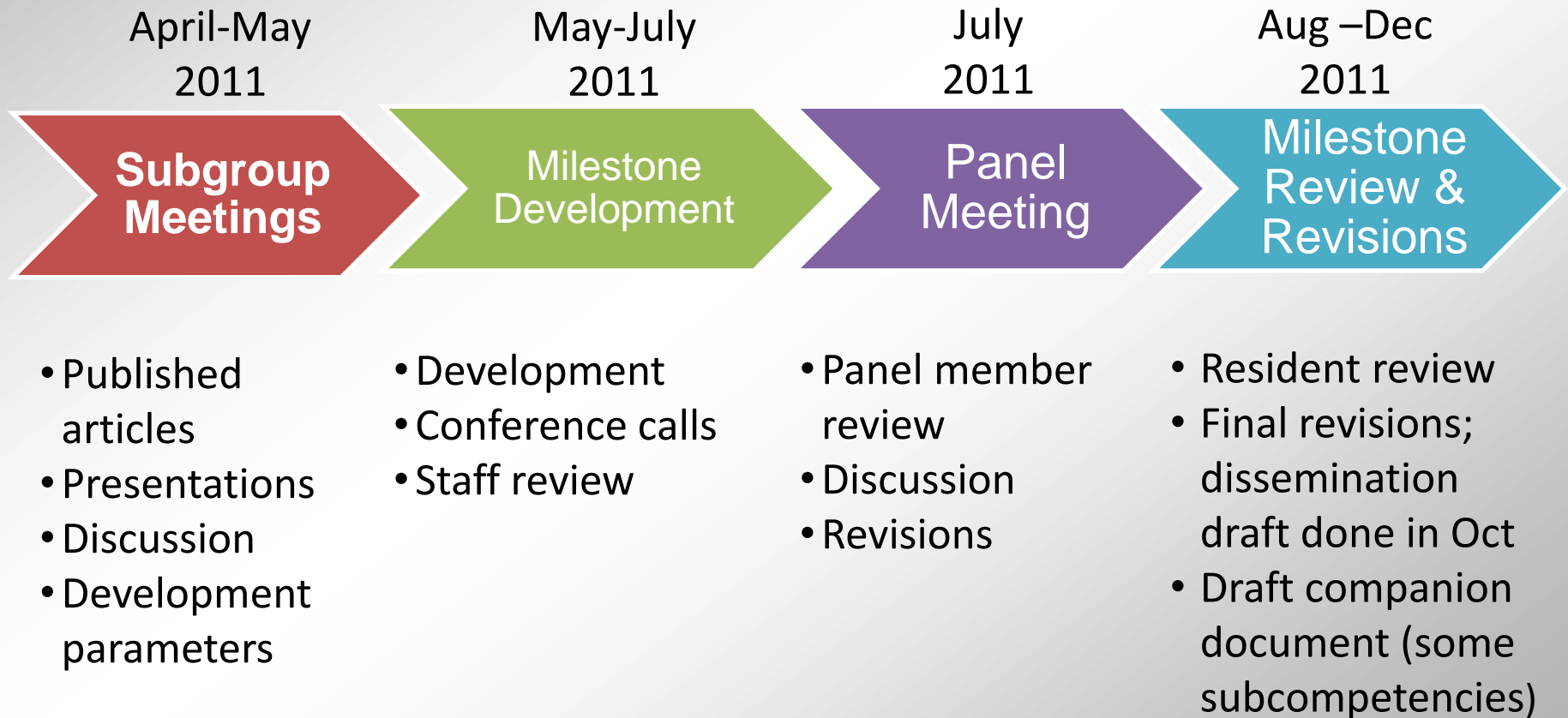- Pilot Tests
- PD Feedback

Role of Expert Panel

- Develop milestones in the 4 non-specialty specific general competency domains (ICS, Prof, PBLI, SBP)

- Specialty milestone groups could adopt or adapt, use in concept, or not use Expert Panel milestones

Expert Panel

- Participants selected based on expertise – 2 per general competency domain (+1)

- Across the 9 participants – surgical, medical, and hospital-based specialties represented

- 5 of 9 were residency faculty; all participated in residency or physician education

Expert Panel Milestone Development Process

April-May 2011	May-July 2011	July 2011	Aug –Dec 2011
Subgroup Meetings	Milestone Development	Panel Meeting	Milestone Review & Revisions

April-May 2011 — Subgroup Meetings
- Published articles
- Presentations
- Discussion
- Development parameters

May-July 2011 — Milestone Development
- Development
- Conference calls
- Staff review

July 2011 — Panel Meeting
- Panel member review
- Discussion
- Revisions

Aug –Dec 2011 — Milestone Review & Revisions
- Resident review
- Final revisions; dissemination draft done in Oct
- Draft companion document (some subcompetencies)

Milestone Development Status

OCT 2011 when Expert Panel Draft ready for dissemination

Haven't Started

- A&I
- ANES
- DERM
- FM
- NEURO
- NM
- OS
- OTO
- PATH
- PMR
- PM
- PSYCH
- RO
- TS

Started

- CRS
- EM
- PS
- NS
- MG

Complete Drafts

- IM
- PEDS
- SURG
- URO
- OBGYN
- OPH
- RAD
- TY

December 2013

- All specialties to have first draft of milestones

General Results of Expert Panel

- Subcompetencies for 3 of 4 4GCs were ACGME common program requirements
- Number of subcompetencies/milestone sets
  - SBP (4), PBLI (3), ICS (7), PROF (4)

Perspectives about Expert Panel

- Residency program educators with academic expertise in a Gen Comp were most effective

- Panel introduced skills and knowledge at the leading edge of the field

- Expert Panel as a group attentive to feasibility

Adoption of Expert Panel Milestones

- Specialties that had complete drafts did not include Expert Panel milestones

- A few specialties adopted some complete subcompetency milestone sets

- Some specialties adopted "threads"

- Many specialties selected milestones

- Many specialties aggregated and generalized across milestones

- Most specialties omitted technical terms and specific techniques

Expert Panel SBP Milestone Set

SBP-3: Understands the basics of patient safety and human factors engineering (HFE) to improve healthcare safety and reduce system vulnerabilities.[2]				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
1. Can describe systems theory and the characteristics of high reliability organizations. 2. Understands the epidemiology of medical errors and the differences between medical errors, near misses, and sentinel events. 3. Can define human factors engineering (HFE).	1. Reports problematic devices, architecture, and processes including errors and near misses to supervisor (or institution or program as is appropriate). 2. Illustrates with examples how *Human Factors Engineering* (HFE) promotes patient safety (e.g., Stroop effect, perceptual illusions, easily confused medications – see below)[4]	1. Analyzes the causes of adverse events through root cause analysis (RCA). 2. Demonstrates basic usability testing and critique design of devices, architecture, and processes based on HFE principles.	1. Compares and contrasts failure mode effects analysis (FMEA) to RCA as a patient safety tool in healthcare. 2. Develops content for and facilitates a patient safety M&M presentation or conference focusing on systems-based errors in patient care.	1. Recommends and justifies characteristics of high reliability organizations (reporting adverse events, RCA, FMEA) to organizational leadership to promote patient safety. 2. Develops and works with multi-disciplinary teams, (e.g., human factors engineers, reference librarians, cognitive and social scientists, etc.) to find solutions to patient safety problems.

Highlighted areas: Unacceptable to specialty milestone groups

Expert Panel ICS Milestone Set

ICS7: Vulnerable populations				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
	1. Identifies special communication needs of vulnerable populations (e.g. pediatric and elderly patients with complex biomedical, psychosocial conditions, persons with disabilities, immigrant and refugee populations, veterans, prisoners, etc.) 2. Identifies all members of both the healthcare team and external consultants necessary for effective coordination of care.	1. Effectively communicates with vulnerable populations, both patients at risk and their families, orally and in writing. 2. Identifies the social/governmental services necessary for vulnerable populations. (Including determination of eligibility for services and delivery of some aspects of care.)	1. Effectively coordinates care for vulnerable populations across health care and social/governmental systems using both oral and written communication.	1. Coaches others to work effectively with vulnerable populations. 2. Effectively coordinates care and advocates for vulnerable populations to improve care provided through healthcare, social/community and governmental systems.

Expert Panel QI Milestone Set

PBLI – 3: Implements a Quality Improvement Project*				
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
1. Can identify problems in health care delivery and see the quality gap in care. 2. Can give examples of unwarranted variation in healthcare.	1. Can write an Aim Statement for a quality improvement project. 2. Can perform basic steps of process mapping/analysis. 3. Can construct a basic cause and effect diagram (or Root Causes Analysis).	1. Can conduct stakeholder analysis. 2. Can define and construct process and outcome measures. 3. Able to display longitudinal data over time. 4. Knows basics of PDSA or Lean methodology.	1. Displays effective teamwork skills. 2. Understands basic steps for change management (including negotiation/influence).	1. Can lead complex projects. 2. Familiar with advanced methodologies such as six sigma. 3. Skilled in advanced quality measurement and display tools.

Specialty QI Milestone Set

PBLI2 Formal practice-based quality improvement based on established and accepted methodologies.					
Has not Achieved Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
	1.1/A Recognizes potential gaps in quality of care and system-level inefficiencies2 1.2/B Discusses with supervisors possible quality gaps and problems with psychiatric care delivery	2.1/A Narrows problems within own clinical service(s) to a specific and achievable aim for a quality improvement project 2.2/B Outlines factors and causal chains contributing to quality gaps within own institution and practice[3]	3.1/A Involves appropriate stakeholders in design of a QI project[4] 3.2/B Lists common responses of teams and individuals to changes in clinical operations and describes strategies for managing same	4.1/A Substantially contributes to a supervised project to address specific quality deficit within own clinical service(s) and measures relevant outcomes 4.2/B Describes basic methods for implementation and evaluation of clinical QI projects[5]	5.1/A Independently proposes and leads projects to enhance patient care 5.2/A Uses advanced quality measurement and "dashboard" tools 5.3/B Describes core concepts of advanced QI methodologies and business processes[6]
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments:					

Specialty SBP Milestone Set

SBP1 Patient Safety and the Healthcare Team					
Has not Achieved Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
	1.1/A Differentiates among medical errors, near misses and sentinel events 1.2/B Recognizes failure in teamwork and communication as leading cause of preventable patient harm 1.3/C Follows institutional safety policies, including reporting of problematic behaviors and processes, errors and near misses	2.1/A Describes the common system causes for errors 2.2/B Consistently uses structured communication tools to prevent adverse events (e.g., checklists, safe hand-off procedures and briefings) 2.3/C Actively participates in conferences focusing on systems-based errors in patient care	3.1/A Describes systems and procedures that promote patient safety	4.1/A Participates in formal analysis (e.g., root cause analysis, failure mode effects analysis) of medical error and sentinel events 4.2/C Develops content for and facilitates a patient safety presentation or conference focusing on systems-based errors in patient care (such as M&M conference)	5.1/A Leads multidisciplinary teams (e.g., human factors engineers[1], social scientists) to address patient safety issues 5.2/A, C Provides consultation to organizations to improve personal and patient safety
☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
Comments:					

Thank You!