



PORI

Perhimpunan Dokter Spesialis Onkologi Radiasi Indonesia



Education, Training, and Certification of Radiation Oncologists in Indonesia

with acknowledgement to Prof HM Djakaria
(Indonesian College of Radiation Oncology)

Outline

- Historical Context
- Current Status
- Future Directions

CURRENT STATUS OF RADIATION EQUIPMENT IN INDONESIA

2015

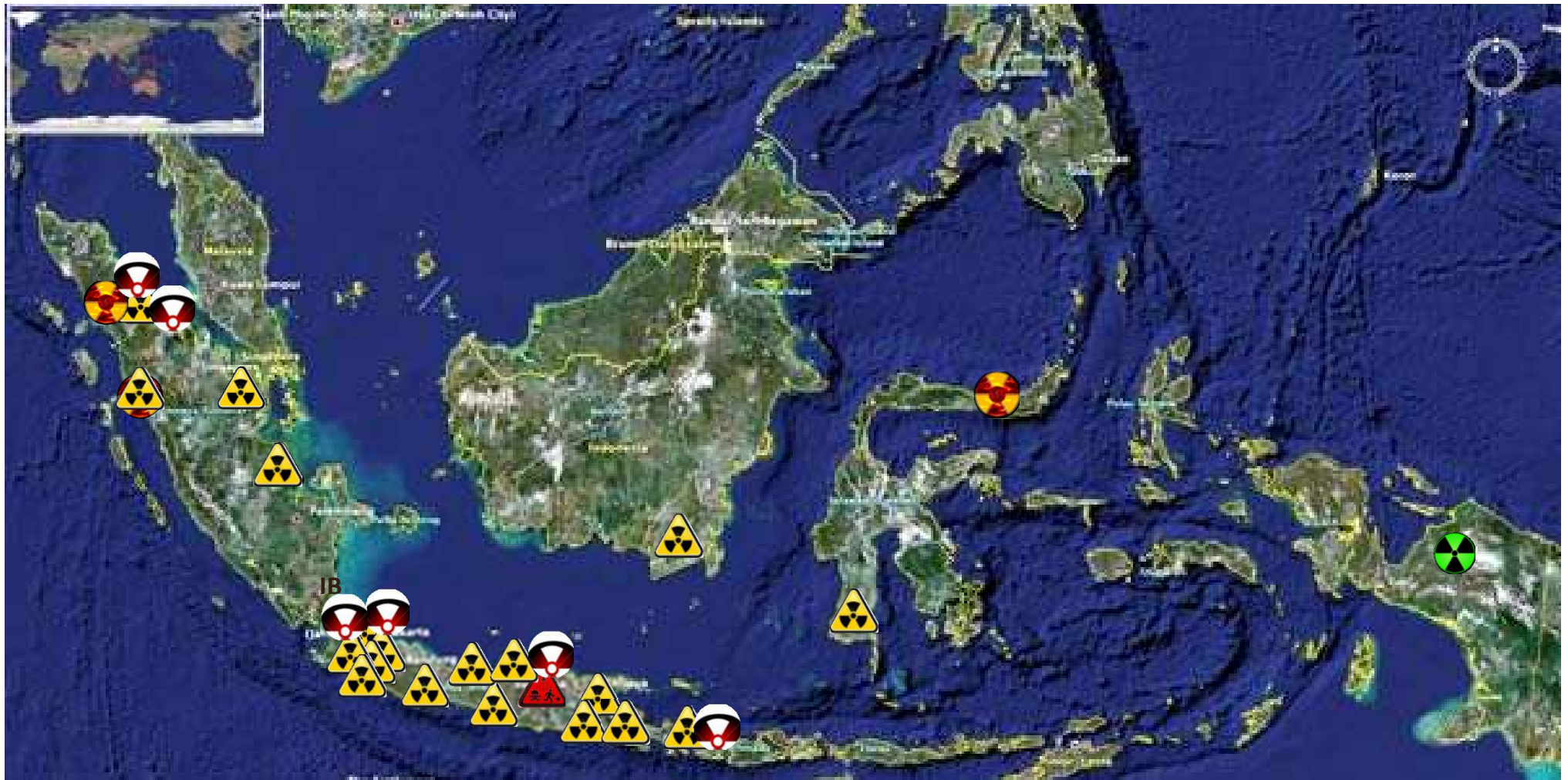
31 active centers

TOTAL

25 linacs and 19 Cobalt
21 conventional simulator

15 CT Simulator

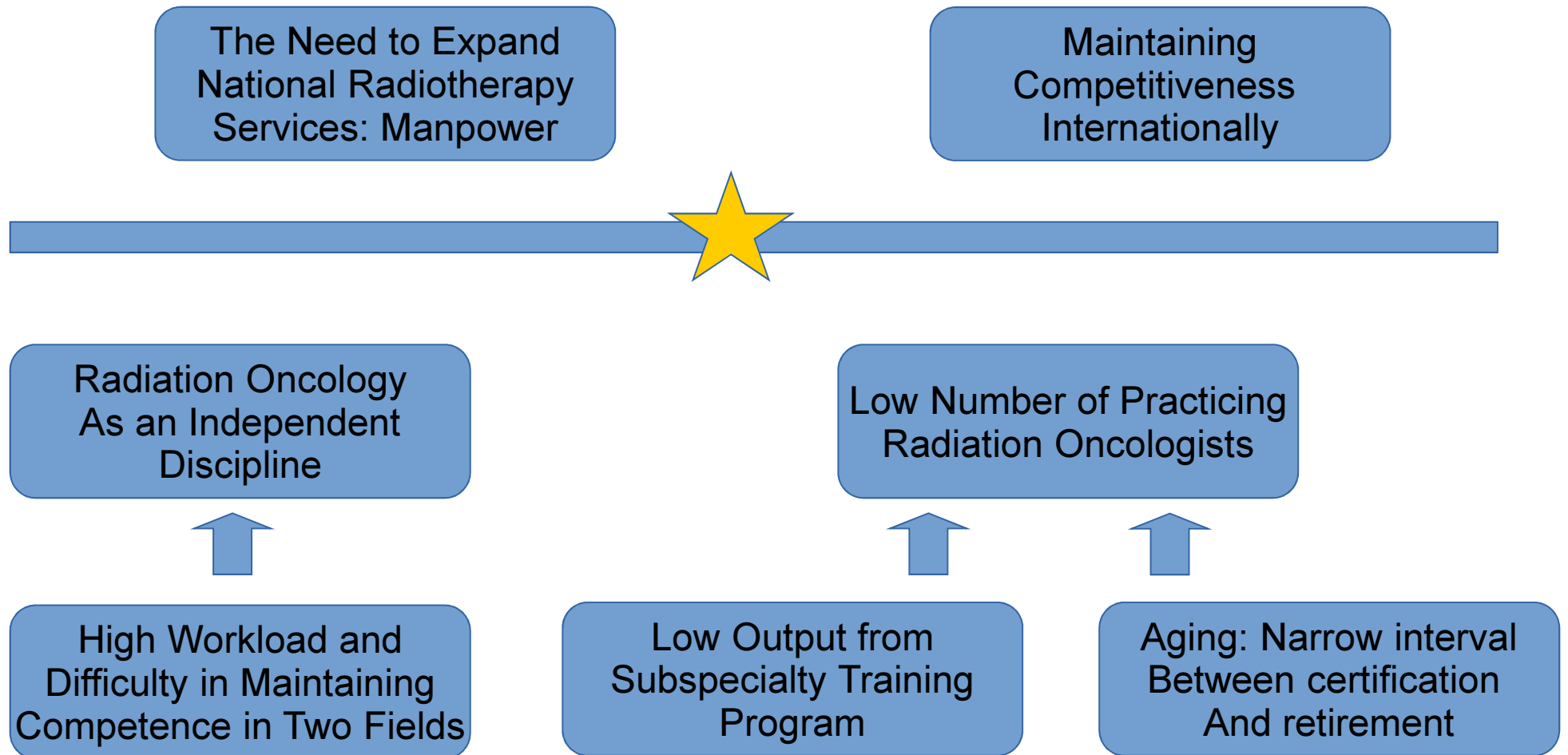
Brachytherapy in 15 centers



Evolution of Radiation Oncology Education in Indonesia

1960s - 1980s	1980s - 1990s	1990s - 2010	2008 - present
Establish radiotherapy service and national pool of expertise	Training for radiologists from hospitals projected to open radiotherapy services	Consultant's Programme (Subspecialty training after Radiology certification)	Residency Programme (Medical Specialist Degree) Entry after 1 year of internship and work experience is needed
Some radiologists receive radiation oncology abroad (Netherlands) and possess qualification both as radiologist and radiation oncologist	Radiation oncology training included in Radiology Residency curriculum	Additional structured training programme required for radiation oncology practice	Radiation Oncology as an independent discipline

Why Transition to a Residency Program?



The Transition Process

- Preparations for the new residency program was started in 2006, spearheaded by the leaders in Indonesian Radiation Oncology Society:
 - Prof. Soehartati Gondhowiardjo
 - Prof. H.M. Djakaria
 - Prof. R. Susworo
- Indonesian College of Radiation Oncology was established by the Indonesian Academy of Medicine (MKKI) in 2008

The Transition Process

- Milestones achieved by the core founding team:
 - Standard of Competency for Indonesian Radiation Oncologists (2007)
 - Standard of Radiation Oncology Training (2007)
 - Training modules for common cancers in Indonesia (2008)
 - Initiation of Residency Training Program in Cipto Mangunkusumo Hospital (2008)
 - Acknowledgement by the Indonesian Medical Association and endorsement by University of Indonesia Faculty of Medicine (2010)

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Standards of Competence

Follows the Indonesian Medical Council Framework:



Induction / Foundational Phase (Smt 1 & 2)	General Foundational Lectures (Professional Ethics, Research Methods, Statistics, Quality & Safety, Molecular Biology, Clinical Pharmacology, EBM)				
	Radiation Oncology Foundational Lectures (Basic Oncology, Physics, Radiation Protection, Radiobiology, Basic Radiation Oncology)			Induction to clinics (Orientation, Treatment Machines, Treatment Planning, Radiology, Pathology, Oncologic Imaging)	
Apprenticeship / Supervision Phase (Smt 3, 4, 5)	Gynecologic, Urogenital, Gastrointestinal Malignancies 1			Head and Neck, CNS, Lymphomas 1	
	Breast, Lung, Sarcoma and Pediatric Malignancies 1			Brachytherapy 1	
	External Rotation: Gynecology	External Rotation: ENT/Head/Neck Surgery	External Rotation: Surgical Oncology	External Rotation: Medical Oncology	Induction to Independent Practice Phase
Pre-registration / Independent Practice Phase (Smt 6, 7)	Gyne, Uro, GI 2	HN, CNS, Lymphoma 2	Breast, Lung, Sarcoma, Pediatric 2	Brachytherapy 2	Independent Practice
	Independent Practice & Elective Posting				

Notes
 Additional Mandatory Activities: Case Reports, Journal Reading, Research Proposal, Research Thesis
 Annual ESTRO Courses through SEAROG

Teaching Staffs

- Main Teaching Hospital: Cipto Mangunkusumo Hospital (9 teaching staffs)
- Affiliated teaching hospitals:
 - Soetomo General Hospital, Surabaya (5 teaching staffs)
 - Sardjito General Hospital, Jogjakarta (in process)

Assessment of Competence: National Board Examination

- Mandatory for registration as radiation oncologist
- Organized by the Indonesian College of Radiation Oncology
 - Annually (Every August)
 - Candidates recommended by Program Director
 - Pool of national examiners
 - External examiners invited from other Asian Countries as QA and Validation

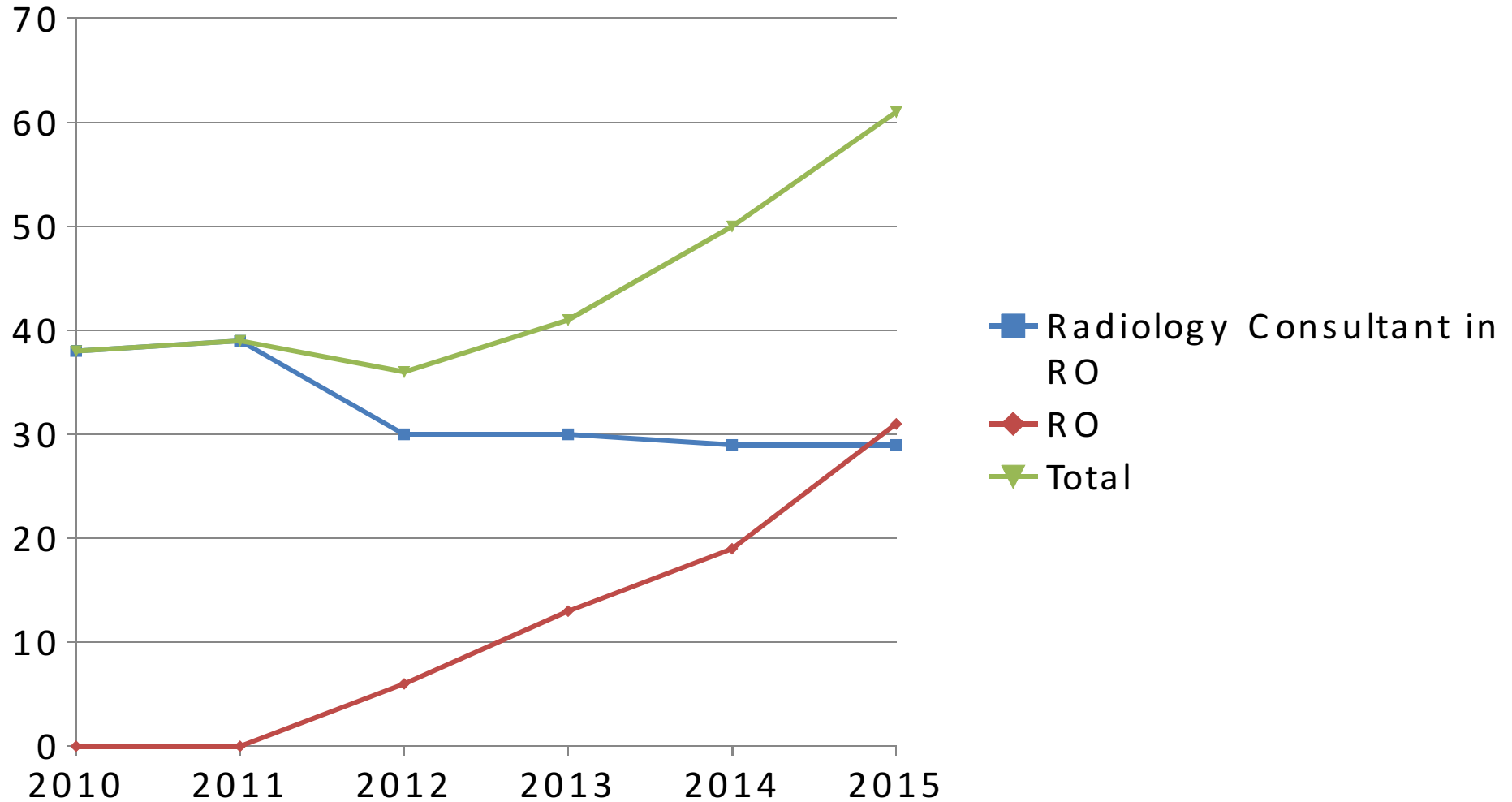
Assessment of Competence: National Board Examination

- Examination structure:
 - Written Examination (100 MCQ items)
 - Case Discussion and oncologic imaging in structured long case format
 - External (international) examiner brings own case
 - Planning Station (Target Delineation and Plan Evaluation) in OSCE format
- Standard setting for MCQ with modified Angoff
- OSCE and long case with borderline method

Quality Assurance of the Training Programme

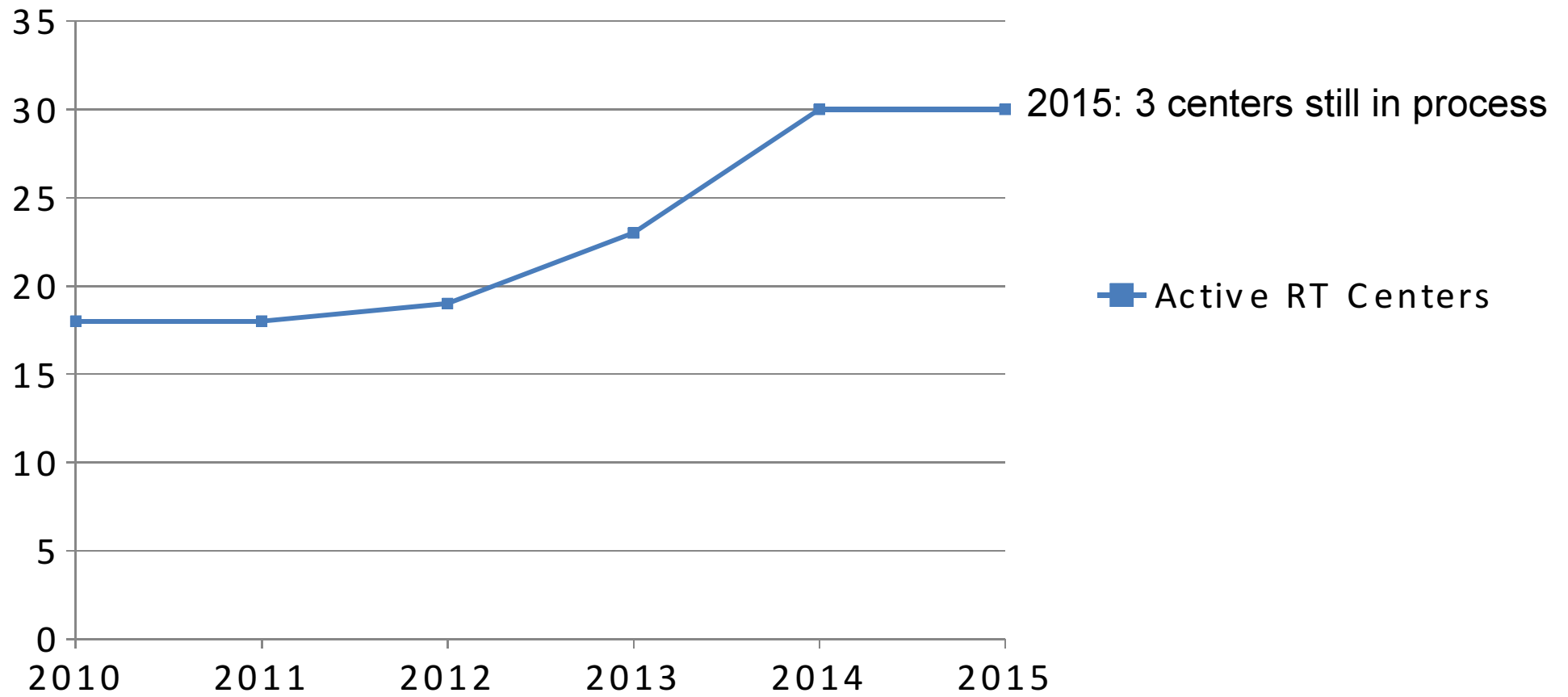
- Programme Accreditation is conducted by Independent Body for Accreditation of Higher Education in Healthcare (LAM-PTKES)
- Areas considered in the accreditation process:
 - Vision, mission and strategic planning
 - Organization, structure, and management of the program
 - Residents and Graduates
 - Teaching staffs
 - Curriculum and learning environment
 - Facilities and resources
 - Research and public outreach activities

Output and Impact: Number of Practising Radiation Oncologists



Output and Impact: RT Centers

Active RT Centers



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Current Issue: Where are we now, exactly?

Component	Current Program	Benchmarks (ACGME, CANMEDS)
Aims	Competency-based	Competency-based
Content	IAEA TCS-36 Syllabus	Own syllabi
Learning Methods	Emphasis on formal approaches (lectures, discussions, tutorials)	Emphasis on Workplace-Based / Experiential Learning
Organization of Contents	Subject-matter, and progression from Acquisition – Competence - Proficiency	Milestones of competencies
Assessment	Conventional methods, with emphasis on summative aspects	Workplace Based Assessment, emphasis on formative, feedback, reflection

Where to Go Next

Aims, Content

IAEA TCS-36 will remain major reference for content syllabus
Competency-based approaches will need to be improved

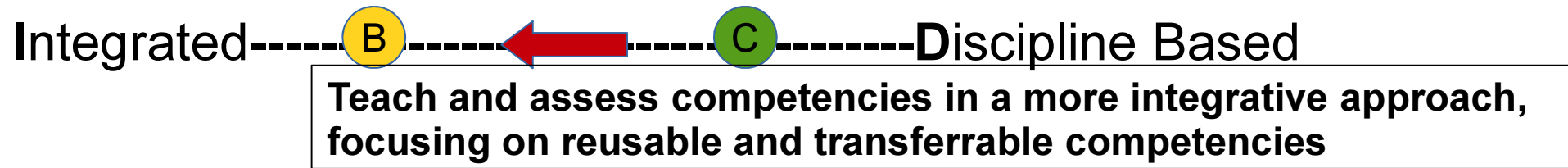
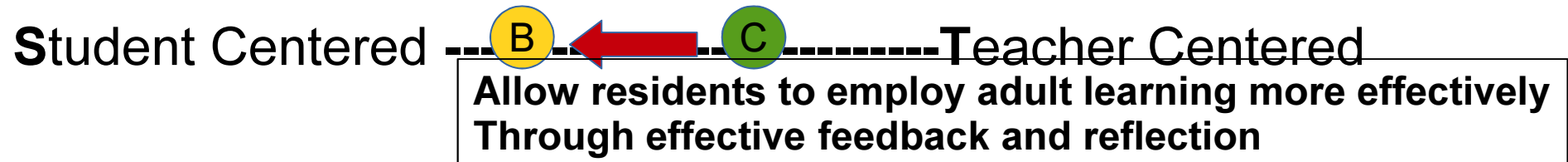
Organization of Content

Maintain current strength in
Acquisition-Competence-Proficiency approach
Develop milestones of competency achievement
for more effective supervision

LEARNING, ASSESSMENT

Move towards Workplace-based Assessment Methods, with
more opportunities for Feedback and Reflection

What to Do? Strategies



 Benchmarks

 Current Program

What next? Milestones of Competencies

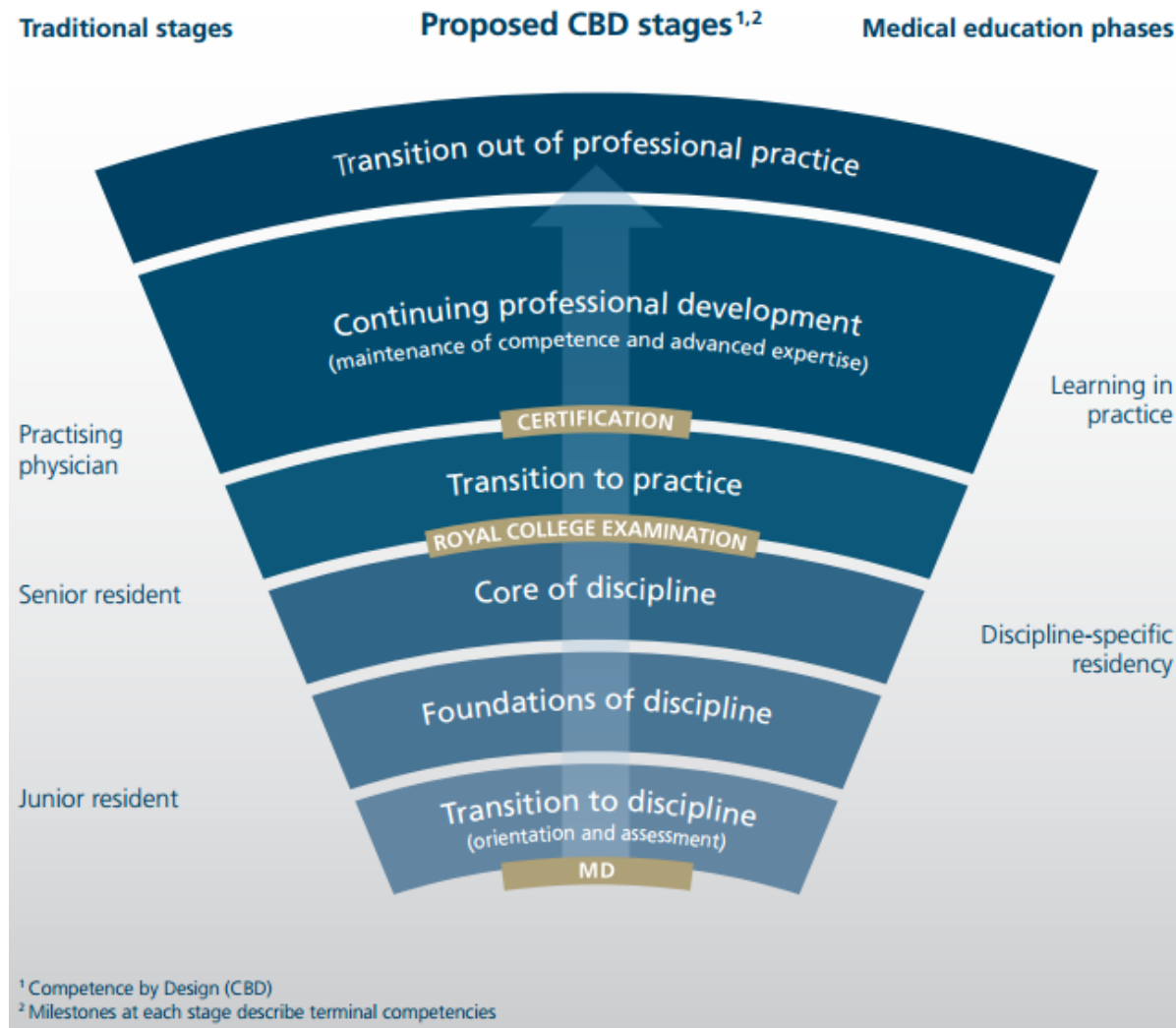
A roadmap of milestones provides a transparent path to achieve the competencies (Frank et al 2010)

(Competency-based medical education) ... de-emphasizes fixed time periods and promotes the progression of competence from milestone to milestone in all of the essential aspects of practice (Iobst et al 2010)

(Milestones) are behavioral descriptions of the developmental progression of the knowledge, skills and attitudes that define each of the subcompetencies within the broader competency domain. (Carraccio & Burke 2010)

Going Even Further: Competence by Design (CanMeds)

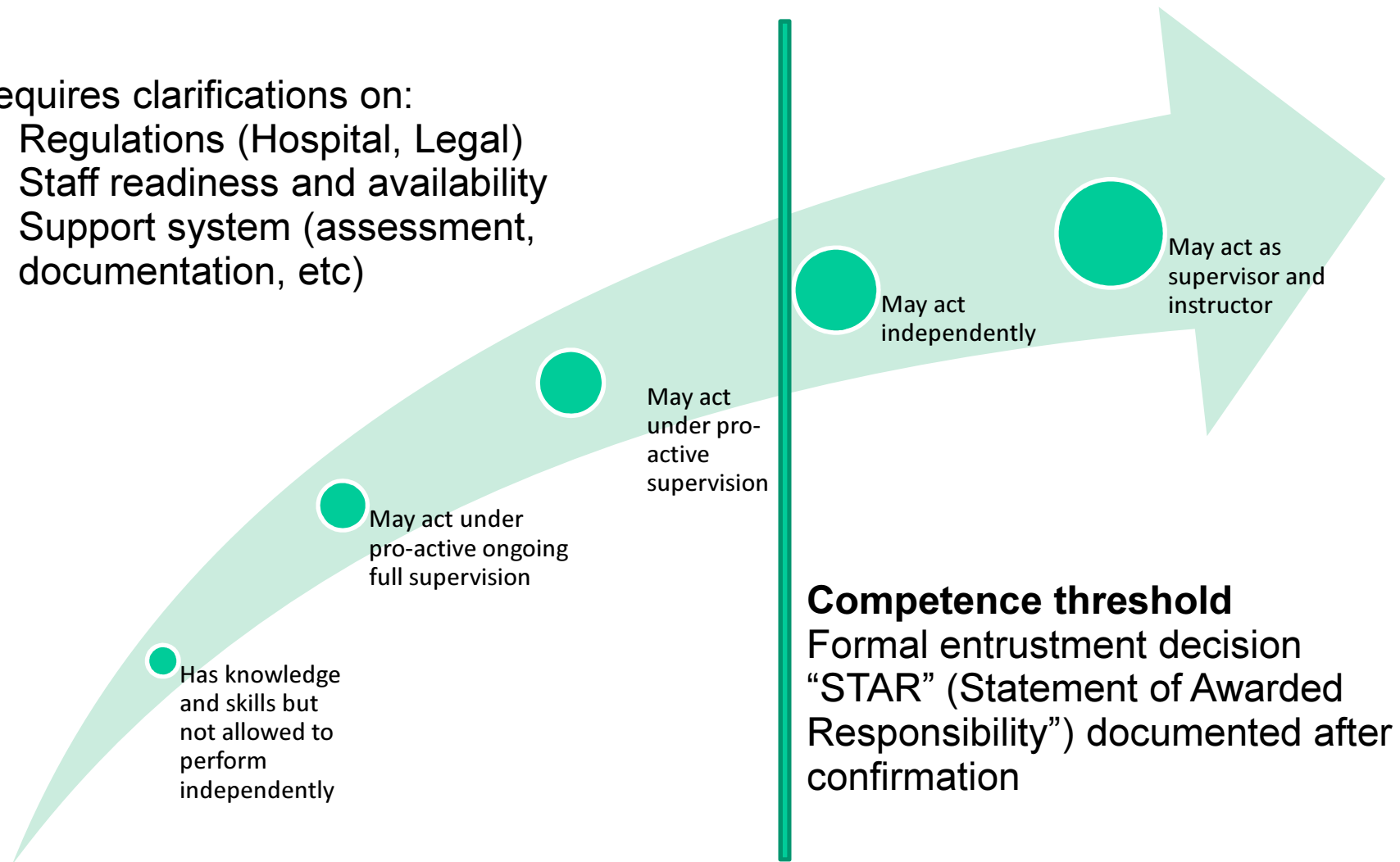
The Competence Continuum



What next? Translating Competence to Supervision through EPA

Requires clarifications on:

- Regulations (Hospital, Legal)
- Staff readiness and availability
- Support system (assessment, documentation, etc)



What next? Introducing Workplace-based Assessment Tools

Case based Discussion (CbD)

Digunakan untuk Laporan Kasus Pagi, Ronde Besar, dan Kasus Pulang
Tanggal Diskusi

Nama PPDS / /

Nama DPJP

Tahapan PPDS: Observasi Magang Mandiri Senior

Tingkat kesulitan Mudah Sedang Sulit

Topik pembahasan Perencanaan (Kasus Pagi) Treatment Plan (Ronde Besar) Resume (Pulang) Lain-lai

Resume singkat kasus
(sebutkan pula area kompetensi yang tercakup)

	<i>Jauh di bawah harapan untuk tingkatannya</i>	<i>Di bawah harapan untuk tingkatannya</i>	<i>Borderline untuk tingkatannya</i>	<i>Sesuai harapan untuk tingkatannya</i>	<i>Di atas harapan untuk tingkatannya</i>	<i>Jauh di atas harapan untuk tingkatannya</i>	<i>Tidak dapat dinilai pada saat ini*</i>
1. Kelengkapan Rekam Medik	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Pemeriksaan klinik	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Pemeriksaan penunjang dan rujukan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Rencana tatalaksana secara garis besar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Follow up dan rencana selanjutnya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Kemampuan penilaian klinis secara keseluruhan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Tidak dapat dinilai pada saat ini: Tandai bila aspek tersebut tidak relevan pada saat diskusi

Mini Clinical Evaluation Exercise (Mini-CEX)

Nama PPDS / /

Nama DPJP

Tahapan PPDS: Observasi Magang Mandiri Senior

Resume singkat kasus

Setting

Tingkat kesulitan Mudah Sedang Sulit

Tema informasi apa yang disampaikan pada pasien? Kabar baik Kabar buruk Bukan keduanya

	<i>Jauh di bawah harapan untuk tingkatannya</i>	<i>Di bawah harapan untuk tingkatannya</i>	<i>Borderline untuk tingkatannya</i>	<i>Sesuai harapan untuk tingkatannya</i>	<i>Di atas harapan untuk tingkatannya</i>	<i>Jauh di atas harapan untuk tingkatannya</i>	<i>Tidak dapat dinilai pada saat ini*</i>
1. Anamnesis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Pemeriksaan Fisik	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Profesionalisme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Clinical Judgement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Kemampuan komunikasi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Keteraturan / Efisiensi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Evaluasi keseluruhan atas kualitas pelayanan klinis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Tidak dapat dinilai pada saat ini: Tandai bila aspek tersebut tidak relevan pada saat diskusi

Evaluation can be done in just one or two focus areas.

Emphasis on formative feedback

“frequent sampling” of performance in routine clinic encounters

What next? Encouraging Reflection

- Multi-source Feedback (360-degree evaluation)
- Reflection as part of evaluation process

Thank You

