

Safety Profile Assessment

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with Peter Dunscombe, Ph.D. / AAPM



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RADIATION ONCOLOGY

*Joint IAEA-ICTP training on patient safety in radiotherapy
Trieste, Italy
24 – 28 November, 2014*



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What's the issue

- We're bombarded with recommendations on what we need to do to make radiotherapy safer and enhance quality.



Recommendations for safer radiotherapy: what's the message?

*Peter Dunscombe**





Recommendations for safer radiotherapy: what's the message?

*Peter Dunscombe**

Education/ Training (7)

Staffing/skills mix (6)

Documentation/SOP (5)

Incident Learning System (5)

Communication/questioning (4)

Checklists (4)

QC and PM (4)

Dosimetric Audit (4)

Accreditation (4)

Minimizing interruptions (3)

Prospective risk assessment (3)

Safety Culture (3)



About Safety Improvement

- How do we know if we've improved?
- Apply a scientific approach to safety
 - Data-based
 - Measure for safety improvement



About Measurements

- Measure for safety improvement

Safety in Numbers: The Development of Leapfrog's Composite Patient Safety Score for U.S. Hospitals

J. Matthew Austin, PhD, Guy D'Andrea, MBA,† John D. Birkmeyer, MD,‡ Lucian L. Leape, MD,§
Arnold Milstein, MD,|| Peter J. Pronovost, MD, PhD,¶ Patrick S. Romano, MD,**
Sara J. Singer, MBA, PhD,†† Timothy J. Vogus, PhD,‡‡ and Robert M. Wachter, MD§§*

J Patient Saf & Volume 10, Number 1, March 2014

26 Individual Measures

Process and Structural Measures

Outcomes Measures



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The Question

- Can we develop a simple collaborative tool that will highlight our strengths and weaknesses and help us move our clinic forward?



Safety Profile Assessment

SPA is a **Safety Profile** self **Assessment**

Tool developed by the AAPM's Work

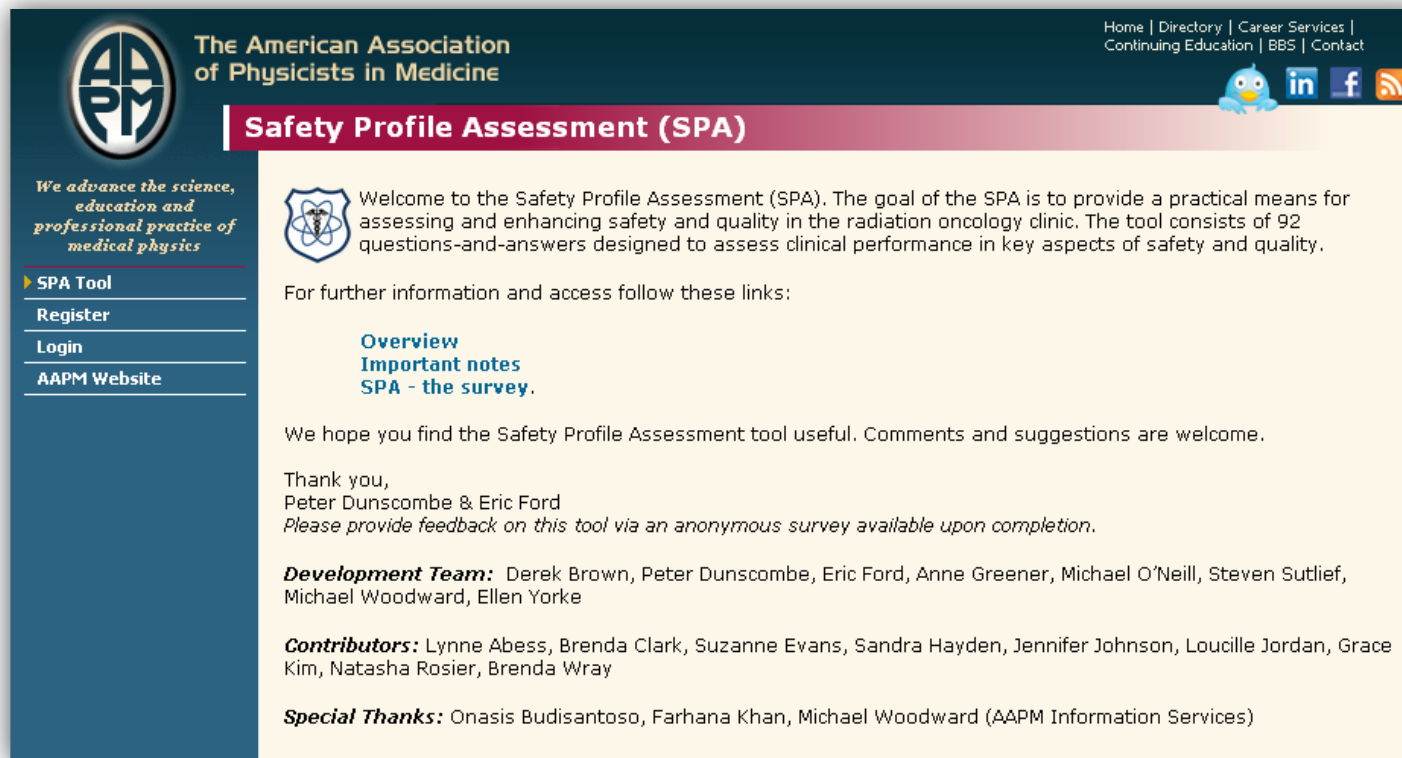
Group on the Prevention of Errors

(WGPE) in Radiation Oncology.



Safety Profile Assessment

spa.aapm.org



The screenshot shows the homepage for the Safety Profile Assessment (SPA) tool. At the top left is the AAPM logo and the text "The American Association of Physicists in Medicine". To the right are navigation links: "Home | Directory | Career Services | Continuing Education | BBS | Contact" and social media icons for Twitter, LinkedIn, Facebook, and RSS. Below the navigation is a dark blue sidebar with the AAPM logo and the tagline "We advance the science, education and professional practice of medical physics". The sidebar contains a menu with "SPA Tool" (highlighted), "Register", "Login", and "AAPM Website". The main content area has a pink header "Safety Profile Assessment (SPA)". Below this is a welcome message with a shield icon: "Welcome to the Safety Profile Assessment (SPA). The goal of the SPA is to provide a practical means for assessing and enhancing safety and quality in the radiation oncology clinic. The tool consists of 92 questions-and-answers designed to assess clinical performance in key aspects of safety and quality." This is followed by the text "For further information and access follow these links:" and a list of links: "Overview", "Important notes", and "SPA - the survey.". Below the links is a paragraph: "We hope you find the Safety Profile Assessment tool useful. Comments and suggestions are welcome." followed by a thank you note from Peter Dunscombe & Eric Ford, including a request for feedback via an anonymous survey. The page also lists the "Development Team" (Derek Brown, Peter Dunscombe, Eric Ford, Anne Greener, Michael O'Neill, Steven Sutlief, Michael Woodward, Ellen Yorke) and "Contributors" (Lynne Abess, Brenda Clark, Suzanne Evans, Sandra Hayden, Jennifer Johnson, Loucille Jordan, Grace Kim, Natasha Rosier, Brenda Wray). Finally, it includes "Special Thanks" to Onasis Budisantoso, Farhana Khan, and Michael Woodward (AAPM Information Services).



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Four Components of SPA

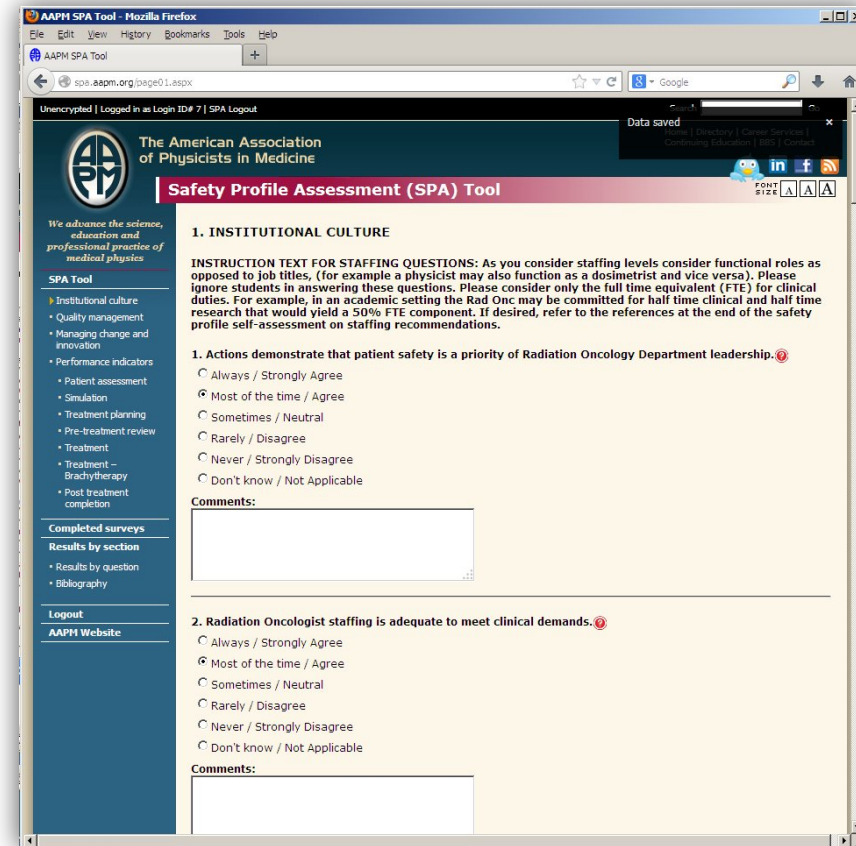
1. Self Assessment Tool
2. Self Assessment Results
3. Bibliography
4. Quality/Safety Improvement Log



Overview

- 92 questions
- 4 topic areas

1. Institutional culture
2. Quality management
3. Performance indicators
4. Managing change and innovation



Walk Through

23. New clinical staff receives appropriate training. ?

- Always / Strongly Agree
- Most of the time / Agree
- Sometimes / Neutral
- Rarely / Disagree
- Never / Strongly Disagree
- Don't know / Not Applicable

41. An end-to-end test is performed prior to implementation of new or upgraded clinical systems and processes. ?

- Always / Strongly Agree
- Most of the time / Agree
- Sometimes / Neutral
- Rarely / Disagree
- Never / Strongly Disagree
- Don't know / Not Applicable

Comments:




Pop-up Bubbles

Physicists in Medicine

Safety Profile Assessment (SPA) Tool

4.4 Performance Indicators Sub-section: PRE-TREATMENT R

63. An initial physics plan review is completed consistent with the appropriate guidelines. 

- Always / Strongly Agree
- Most of the time / Agree
- Sometimes / Neutral
- Rarely / Disagree
- Never / Strongly Disagree
- Don't know / Not Applicable

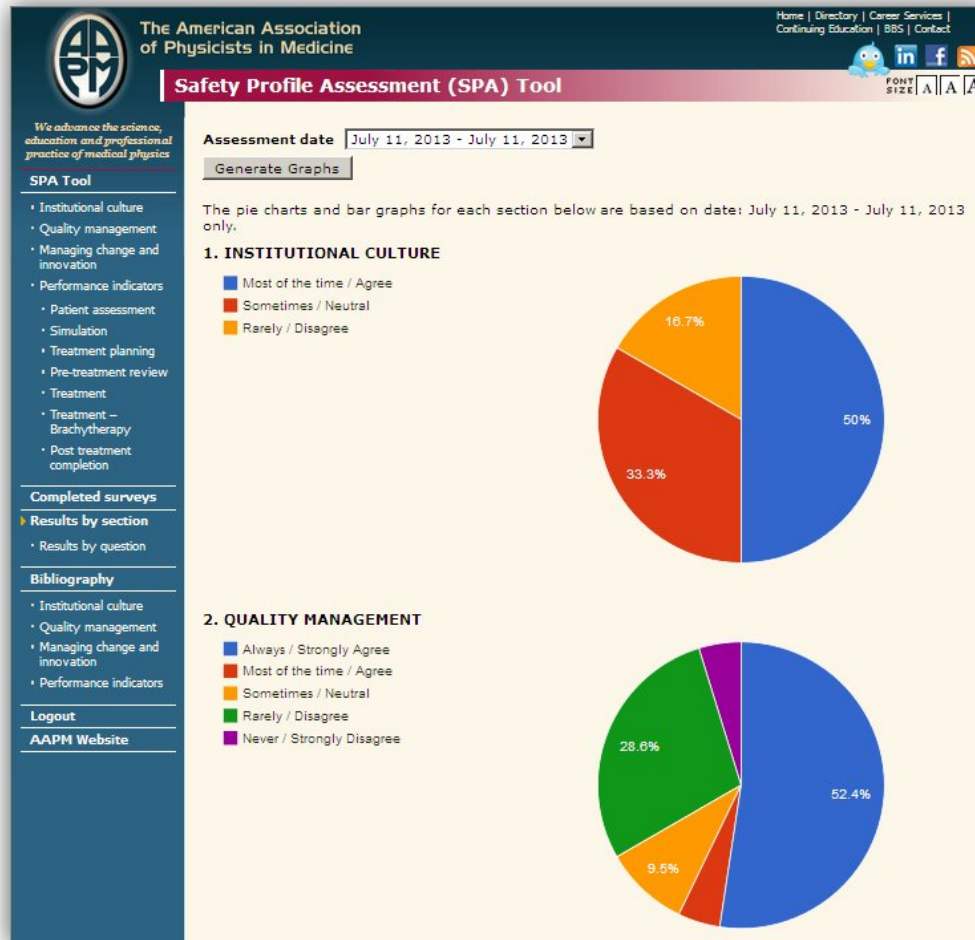
Our department has a formal policy for this

- Yes
- No

ACR guidelines indicate this should occur prior to treatment start if there are 5 or fewer fractions, or before the 3rd fraction in cases with greater than 5 fractions; this includes the MU calculation check.



View results by topic area



View results by question

The screenshot displays the SPA Tool interface. At the top, it identifies the user as 'The American Association of Physicists in Medicine' and shows the assessment date as 'July 11, 2013 - July 11, 2013'. A 'Generate Graphs' button is visible. The main content area is titled '1. INSTITUTIONAL CULTURE' and contains the question: '1. Actions demonstrate that patient safety is a priority of Radiation Oncology Department leadership. You answered **Most of the time / Agree** for a score of 4'. Below the question is a horizontal bar chart comparing the user's score to the average score. The x-axis ranges from 0 to 5. A blue bar represents the 'Avg: 3' and a red bar represents 'You: 7/11/2' (score of 4). Two arrows point from the text 'Compare to others' to these bars. A 'Bibliography for question 1' section is also present, listing two references: 'a. Marks LB, Rose CM, Hayman JA, Williams TR. The need for physician leadership in creating a culture of safety. International Journal of Radiation Oncology Biology Physics. 2011;79(5):1287-9.' and 'b. Hendee WR, Herman MG. Improving patient safety in radiation oncology. Medical physics. 2011;38(1):78-82.'

Compare to others



Annotated Bibliography

The American Association of Physicists in Medicine

Safety Profile Assessment (SPA) Tool

Assessment date: July 11, 2013 - July 11, 2013

1. INSTITUTIONAL CULTURE

1. Actions demonstrate that patient safety is a priority of Radiation Oncology Department leadership. You answered **Most of the time / Agree** for a score of 4

(longer lines are better)

Avg: 3
You: 7/11/2...

a. Marks LB, Rose CM, Hayman JA, Williams TR. The need for physician leadership in creating a culture of safety. International Journal of Radiation Oncology Biology Physics. 2011;79(5):1287-9.
This editorial discusses the issue and notes that "physician leaders must encourage a systematic effort to assess existing processes and must promote an open and just environment in which all team members are free, and responsible, to raise concerns about safety."

b. Hendee WR, Herman MG. Improving patient safety in radiation oncology. Medical physics. 2011;38(1):78-82.
Suggests that "Safety champions" should be present. Every radiation oncology facility should have one or more "safety champions". These would be senior members who are "empowered to emphasize patient safety as a facility priority."



Download Improvement Log

The screenshot shows the AAPH SPA Tool web interface. The page title is "Safety Profile Assessment (SPA) Tool". The main content area displays a table of completed surveys. A red arrow points to the "Download Excel Improvement log" link in the table.

You have completed the following surveys

	COUNTRY	START	END	FINISH IN DAYS	
details	UNITED STATES	July 11, 2013	July 11, 2013	0	Download Excel Improvement log

* indicating the current unfinished survey

If you would like to begin a new survey, please [click here](#)



Safety Improvement Log

ImprovementLog.xls [Read-Only] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Conditional Formatting Styles Cell Styles Cells Sort & Find & Filter Select Editing

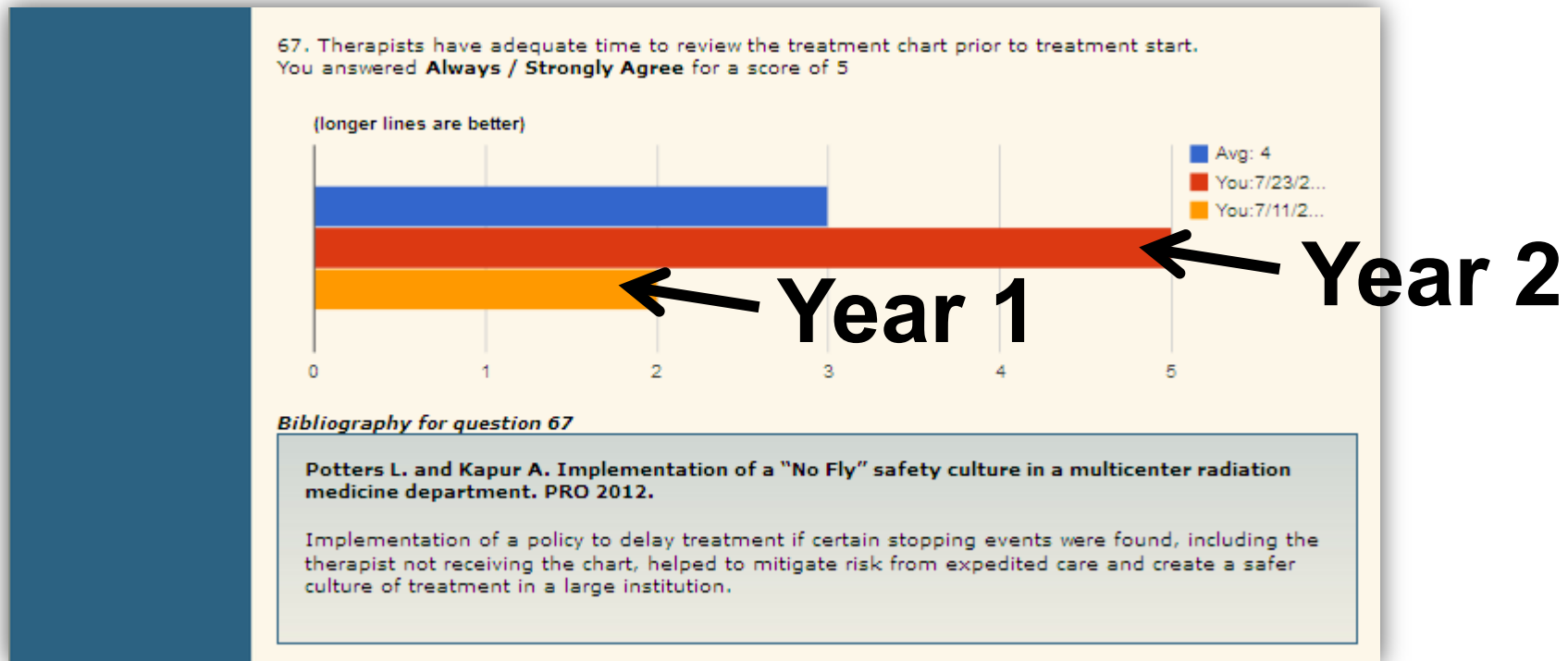
A177 23. New clinical staff receives appropriate training.

	A	B	C	D	E	F	G	H	I	J
176										
177		23. New clinical staff receives appropriate training.			Rarely / Disagree					
178		Comments:								
179	#	Improvement Strategy	Responsible	Timeline	✓					
180	1									
181										
182										
183										
184										
185		24. Clinical staff competencies are reviewed regularly.			Rarely / Disagree					
186		Comments:								
187	#	Improvement Strategy	Responsible	Timeline	✓					
188	1									
189										
190										
191										
192										
193		25. Quality control tests , tolerances , and frequencies are compliant with published guidelines.			Always / Strongly Agree					
194		Comments:								
195	#	Improvement Strategy	Responsible	Timeline	✓					
196	1									
197										
198										
199										
200										
201		26. Pre-clinical validations are performed for: a. Treatment delivery systems			Always / Strongly Agree					
202		Comments:								
203	#	Improvement Strategy	Responsible	Timeline	✓					
204	1									

Ready



Tracking improvement over time



SPA Pilot Test

- Overall, how easy was it to complete the SPA?

Very difficult	Somewhat difficult	Neutral	Easy	Very easy
<input type="checkbox"/>	<input type="checkbox"/>	2/10	8/10	<input type="checkbox"/>

- If your clinic was offered access to the SPA in one year's time, how likely would you be to complete it again?

Definitely not	Probably not	Possibly	Very probably	Definitely
<input type="checkbox"/>	<input type="checkbox"/>	3/9	3/9	3/9

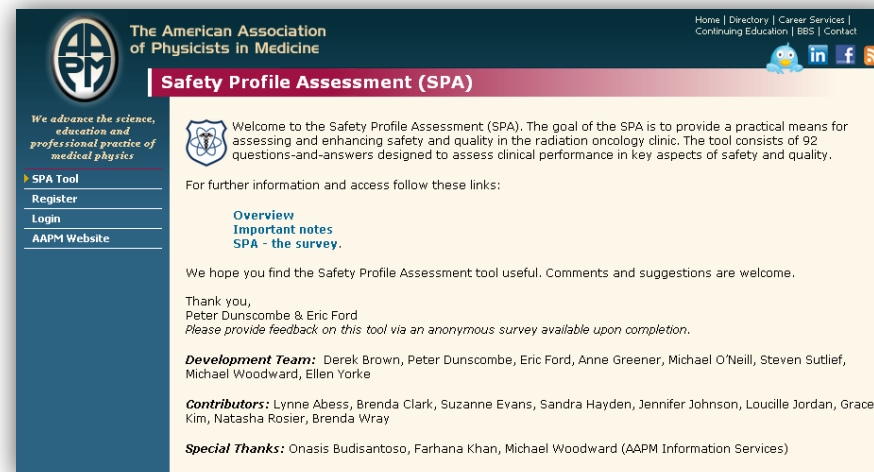
- In your opinion, will the SPA exercise improve safety in your clinic?

Definitely not	Probably not	Possibly	Very probably	Definitely
<input type="checkbox"/>	<input type="checkbox"/>	9/10	1/10	<input type="checkbox"/>



SPA Early Results

- As of December 2013
 - 143 individuals have registered for SPA and there are 47 completed surveys.



The American Association of Physicists in Medicine

Home | Directory | Career Services | Continuing Education | EBS | Contact

Safety Profile Assessment (SPA)

We advance the science, education and professional practice of medical physics

- ▶ SPA Tool
- Register
- Login
- AAPM Website

Welcome to the Safety Profile Assessment (SPA). The goal of the SPA is to provide a practical means for assessing and enhancing safety and quality in the radiation oncology clinic. The tool consists of 92 questions-and-answers designed to assess clinical performance in key aspects of safety and quality.

For further information and access follow these links:

- [Overview](#)
- [Important notes](#)
- [SPA - the survey.](#)

We hope you find the Safety Profile Assessment tool useful. Comments and suggestions are welcome.

Thank you,
Peter Dunscombe & Eric Ford
Please provide feedback on this tool via an anonymous survey available upon completion.

Development Team: Derek Brown, Peter Dunscombe, Eric Ford, Anne Greener, Michael O'Neill, Steven Sutlief, Michael Woodward, Ellen Yorke

Contributors: Lynne Abess, Brenda Clark, Suzanne Evans, Sandra Hayden, Jennifer Johnson, Loucille Jordan, Grace Kim, Natasha Rosier, Brenda Wray

Special Thanks: Onasis Budisantoso, Farhana Khan, Michael Woodward (AAPM Information Services)

SPA Development Team

- Peter Dunscombe , Ph.D.
- Derek Brown, Ph.D.
- Anne Greener, PhD.
- Mick O'Neill, M.D.
- Steven Sutlief , Ph.D.
- Michael Woodward (AAPM)
- Ellen Yorke , Ph.D.
- Eric Ford , Ph.D.



Summary

- SPA is a freely available, collaborative tool to help us benchmark and improve quality and safety.
- Practical safety/quality improvement tool
- Openly available through AAPM
 - spa.aapm.org

