

A New Home Page for REMM

Usability testing with clinicians, planners and responders

25 October 2010

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National Library of Medicine/NIH

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ICF Contract GS-35F-4121D

Order HHSN276200900281U

Sub-contract 10ED00054

A report on interviews with 9 physicians and supporting clinicians and 9 emergency planners, first responders. Sessions conducted by Whitney Quesenbery and Rachel Goddard at the NCI OMRE Lab, 20-24 September, 2010.

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About this project

Background and Goals

REMM – the web site for Radiation Emergency Medical Management, at the National Library of Medicine – has been a successful and award-winning site. The team is concerned that the home page makes the site complicated to use and is working on a redesign of the home page to improve that navigation and ability of users to find information on the site.

The goal of this test was to determine whether the new home page design and navigation is more effective for users than the current one. This includes the overall appeal of the new design as well as participants' ability to understand and use the new information architecture.

This test included participants who are not part of the *primary* audience for REMM, but are part of secondary audiences. This was an opportunity to learn how well the home page and IA direct them to information appropriate to them and how they reacted to the new multimedia library.

The findings from this test will be used to improve the design before moving to production as well as providing insights to support writing and information design of the content pages.

Method

This usability test was conducted as individual sessions lasting approximately one hour. There were 5 in-person sessions. The others were remote, using the phone and GoToMeeting. All sessions were recorded using Morae usability software; in-person sessions were also recorded using the Tobii eye-tracker. Members of the REMM team observed via GoToMeeting.

The sessions included a brief interview about the participant's experience with emergency and radiation response, self-directed tasks, completion of prepared tasks, and comparisons of alternative designs for the home page and clinical algorithms. The moderator selected tasks relevant to the participant's role and performance with the site. Participants were encouraged to talk out loud to narrate their experience.

The site was revised between two groups of participants: P1-9, clinicians and P11-19, a mix of planners, first responders and some clinical experience. The analysis in this report includes a consideration of the difference in success based on this change.

Participants

The 18 participants and 2 pilot participants all had some experience with emergency response, and at least some training or expertise in radiation emergency response.

Primary role	Clinical specialties	Experience with REMM
5 physicians 3 other clinicians 4 planners 3 first responders 3 Federal government	Surgeon Respiratory Therapist Neonatal/Pediatric Acute Care, Emergency Medicine Medical Management Nursing: CNA, RN, BSN, MSN Manager of Clinical Operations Veterinarian	3 know the site well and use it regularly (all Federal gov't) 1 planner used it recently 16 no prior knowledge

Results and Recommendations - Summary

Overview

Overall reactions to the site were very positive. They found the content valuable, including:

- The depth of the information
- Having all information about radiation medical management gathered in one site
- The useful tools, including the algorithms, dose estimators, and detailed procedures

Participants said that they would use the site again, and that they would recommend it to others. They were interested staying informed about the site:

- They wanted to know about significant updates.
- They were interested in being able to download the site, and the mobile version.

In navigating through the site, they wanted and appreciated:

- Clinical tools gathered in one place
- Clear distinctions between information useful on the scene and in the hospital
- Easily printable documents formatted quick reference
- Checklists and “if-then” tables for decision-making
- Quick overviews that provide basic information with links to detailed procedures or tables
- Good cross-references and links to related pages
- Links that clearly signaled the target page

Most liked the new visual design, calling it modern and easy to read.

They did not, however, recognize the abbreviation “REMM” as the name of the site. This may be because the logo is somewhat difficult to read, but may also be that the site is not an everyday tool for most people.

Home page design

One of the primary goals was to evaluate the new home page design to determine if it works better than the current home page. We wanted to know if the new fly-out menu helped users understand the scope of the site and do find information easily. We observed whether participants could make an effective “first click” from the home page for key tasks .

Summary of results

Most (15 of 20) participants preferred the new home page design.

The overall layout of the new home page design is an improvement as a design that encourages exploration of the site, especially for visual learners. They understood generally how the fly-outs work, but some struggled with the detailed interaction.

- The new fly-out menu is improved, but there are still changes needed, documented in the recommendations

Although some focused on the fly-outs, in aggregate, participants used all parts of the home page.

- The multimedia library got attention, but was not always the first place participants looked for information.
- They noticed the right column features, but the titles of the boxes were not informative enough
- Participants found the boxes at the bottom of the page, but only after exploring other areas.
- Only a few used the “doormat” links. They are the same people who used the Site Map. Almost all wanted to use search to find very specific information, or information they did not see immediately.

Participants used the illustration in the center of the page, and the text of immediately visible links to gain an impression of the purpose and scope of the site

- They read the name of the site and used the tagline to correctly identify the topic of the site, but relied on the links and other text more than the name of the site. They did not identify “REMM” as a brand.
- Many used the photograph showing two 1st Responders to conclude (incorrectly) that it is primarily about field response.

Summary recommendations



In the fly-out

1. Text changes to links in the fly-out menu and the organization of links within the flyouts
2. Change to feature image to focus on medical/clinical response

New layout and titles for right side and bottom boxes:

3. *Clinical Tools* moved higher on page, giving it more focus for easy access
4. *Information for..* (REMM for You) moved higher on the page, making it more easily visible for secondary audiences, and adding New Users to this set of links.
5. *In-Depth References*, *Radiation Resources*, and *Download this Site* grouped on the bottom for expert users
6. All bottom boxes set to the same height for a tidier look

In the Multimedia Library

7. New button text for first button
8. More dynamic selection items for the carousel

And

9. New *Get Mobile REMM* button
10. Suggested top menu item: Radiation Emergency Contacts
11. A shortened version of the doormat navigation (omitted for space from this illustration)

Multimedia Library

The Multimedia Library is an enhanced feature of the site. Its aim is to bring interactive material that is currently deep in the site to a top location where it is easily browsed. The home page includes a sampling of entries with buttons to link to the more detailed listings.

Summary of results

Most of the participants noticed the Multimedia Library feature on the home page. It was not usually their first area to explore, but eye-tracking shows that they saw it.

In general, participants from secondary audiences such as first responders reported that they liked learning from multimedia more than the clinical participants. However, for all participants, The more informational the tool, the more the participants liked it. Simple animations did not impress, but diagrams, flow charts, and training did.

When multimedia entries were edited to include links into other content the site they were the most effective.

Summary recommendations



On the home page

1. Select entries for display on the home page that show the range of assets, and which have the highest intrinsic informational value. Use these entries as an alternative way to make it easy to see what kind of valuable, unique content is on the site. (The selections in the image above are for illustration only.)

On the multimedia library pages

2. Make titles explanatory, adding words to distinguish similar or related items, instead of simply numbering them. For example: Exposure – Whole Body, instead of Exposure I.
3. Consider adding a secondary navigation option to these pages to link to any of the sections of the library.
4. Add text on each library page explaining that the material in the multimedia library is included in other pages, but gathered for convenience.

On the entries

5. Be sure that each entry is connected to the main content pages that provide more detailed information and procedures.
6. Add text on the bottom of each asset page with information explaining how to download the item, and any conditions for its use.

Clinical Algorithms

The clinical algorithms are a key part of the site's content, providing an overview of medical management of radiation emergencies. We tested a new version and asked users to compare it to the current versions, and express their preference.

Summary of results

In general, participants liked the algorithms. Both clinicians and first responders expect to read information in this format, and use it to quickly skim to the detailed procedures they need.

First responders valued the algorithms because it let them get an overview, while hiding detail not relevant to their role. They also wanted to go directly to the procedures or information they need to use, while skipping clinical details they would not use.

Of the 18 people asked to compare the single page and interactive versions of the exposure algorithm:

- 13 preferred a single page
- 4 preferred the interactive version
- 1 had no preference

Participants found the information about sub-syndromes of ARS more easily on the single page. This was partly because the box is labeled better on that version, but also because they could scan the page more quickly.

Summary recommendations

1. Keep the current algorithm style. As the algorithms are updated for large and small events, focus on:
 - Making it easy to see which part of the algorithm is currently “open” and hiding alternative branches not chosen.
 - Writing clear titles for each box
 - Including links to related algorithms and procedures
2. Consider using small algorithms to introduce any collection of information that requires navigating a decision tree. Links within the algorithm flow can direct users to specific information.

REMM For You

The pages grouped under *REMM for You* provide direct links to information on the site for secondary audiences. This feature was not a focus of the usability test.

Summary of results

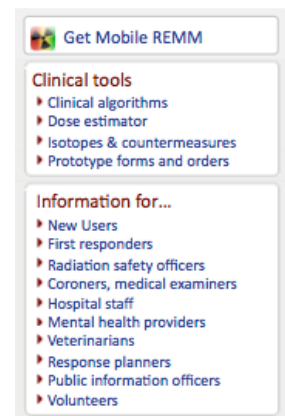
Participants noticed and used these links without prompting. The links helped identify audiences the site at least partially serves. Participants with specialty roles (such as a veterinarian) noticed their own link, and used it to see what information was available for them.

Some participants were disappointed, and wanted a clearer statement of what information the site does (and does not have) available.

In particular, they wanted links to information that helped them understand how they needed to adapt their procedures to deal with a radiation emergency. One theme that emerged was wanting not just the facts but help understanding “the implications for me.”

Summary recommendations

1. Move these links to a location higher on the page, so that it will be easier for secondary audiences to find. This will let them quickly find out what the site offers *them*, perhaps even before they start exploring the main content in the fly-out menu.
2. Rename the group “*Information for...*” because first-time visitors have not yet learned *REMM* as an acronym.
3. Make the target pages a roadmap to the site, in the same way that the link for new users offers a collection of basic education links.
4. Be clear about what the site is *not* – using links to key resources for that audience.
5. Include a link to the orientation for new users in this group of links.



Information Architecture and the Fly-out Menu

The information architecture does not stop at the home page. A primary goal of this project was to test the organization and presentation of links in the home page menu – the fly-out pages. We also looked at what happened after users left the home page, especially on tasks that had more than one possible path to the information. Can users follow the “scent of information” to find answers for different types of information?

Summary of results

We asked participants to find specific information, with the task presented in a brief scenario. These tasks were realistic, but each also had some inherent complexity or ambiguity, making them difficult. Although the pressure of working in the usability test environment can sometimes confound results, this site is intended to be used in situations where time is critical.

The results were mixed, in part because the tasks were not appropriate for all of the participants. However, success rates improved after the fly-out menu was updated, based on issues found during the first two days of testing.

In the current site, each link from the home page goes to a page in the site that is either a discrete “chunk” of information or a multi-section page on a single topic. Because of the restructuring to fit into the new IA, some links from the fly-out menu direct users to the middle of a long page. These pages will need restructuring.

Summary recommendations

1. With some minor modifications, the fly-out menus work as a way to provide an overview of the site, while reducing the amount of text to read on the home page.
2. Some pages from the current site need to be restructured or edited to make them work as intended in the new IA.

Detailed recommendations for fly-out menu text, and links on each page are in an annex of this report. These recommendations include an analysis of the target pages, and work needed to adjust the content to the new IA structure.

Content Pages and Information Design

Participants had, in general, few problems reading the content on the site. However, there is always room for improvement, so these findings are all opportunities to improve the information design of the content pages.

These recommendations are not urgent: they can be implemented as pages are updated or reviewed. They can also be used for any pages that are restructured or rearranged as part of the updates to the new site.

Summary of results

Participants wanted to be able to easily get an overview of the content at all levels of the site. Just as they wanted to be able to learn the scope of the site from the home page, they wanted to be able to understand the scope of a long page or single procedure.

They wanted to use algorithms, diagrams and illustrations as an overview of the page. This includes:

- Showing alternatives (for example, when there are competing systems as with the zones of response)
- Showing choices in a logical decision or process (for example, choosing the correct procedure)
- Identifying the scope or type of the information (for example, with photos of PPE)

They wanted to be able to find related information easily. This included linking from an overview or definition into more detailed content.

They wanted links to be clear about where they lead, especially when the target was a definition or other general information. Or, when a link lead to more substantive content.

Summary recommendations

1. Structure pages so that there is a short, clear overview of the content, ensuring that “on this page” links show the structure of the information clearly.
2. When appropriate, consider using a diagram like an algorithm to show choices to be made in selecting content on a page.
3. Clearly identify links to related information. As a rule of thumb, keep them at the top of the page, not at the end of the content.
4. Make sure that link text accurately reflects the target of the link.
5. Consider whether a procedure, tool, or table should be broken into a separate page so that it can be easily used as a checklist or quick reference.

Details: Home page design

Which home page design did participants prefer?

Current home page



New home page design



Most (15 of 20) participants preferred the new home page design.

The overall layout of the new home page design is an improvement as a design that encourages exploration of the site, especially for visual learners.

No matter which version they preferred, they considered how quickly and easily they could get to different links or find specific content.

Participants who preferred the new design:

- Found it visually appealing and “modern”
- Liked the less-cluttered page

Participants who preferred the current page design

- Liked seeing all of the links at once
- Liked the simpler interaction

How we gathered preference data

For a direct comparison of the two home page designs, participants looked at them as graphical images. They were able to scroll, but not click off the page or use the fly-outs.

- For P1-9, this task came at the end of the session. Participants were shown the new design first, confirming that it was the one they had been working with.
- For P11-19, this task was at the beginning of the session. The first design shown was alternated, to counterbalance any order effects.

There was no difference in responses based on how they were shown the two designs.

Current users of the site would get used to the new page quickly, and some preferred it.

We were particularly interested in the reactions of the 3 participants who were familiar with the current version of REMM. One preferred the new version; the others thought they would need time to get used to the new version.

- It's easier to navigate and see that the home page really shows you. The old site has more information up front, but the new one is more readable. (P18)

- Although he prefers the current site, he found the new design “very inviting. It makes him want to explore the site more. (Pilot 1)
- The new site is not “super easy to use” but would be better if she had time to familiarize herself with it. (P11)

They found the more graphical look appealing and “modern”

Participants found the more graphical look of the new version appealing, frequently mentioning this as a factor in their choice of designs. This applied to both the central featured image and the overall look of the page. Even people who preferred the current home page mentioned the visual design of the new site favorably.

- The graphics make the site seem more accessible (P6)
- Firefighters [like her] don’t have much patience and like a more visual site. (P12)
- The [current design] doesn’t have much visual flow (P16)
- I like the [current design] because everything is up front and you don’t have to navigate, but the [new design] is more graphically appealing.

They liked that the new design has less text to read on first glance.

Most focused on comparing the amount of textual information on the page preferring a page with less text to read.

- The older site seems more of an outline, so you’d have to go through more to find information (P1)
- There is less to read on [the new] version (P3)
- My brain shuts down at the amount of information [on the current design]. I don’t know why. I read the NY Times online and that has a lot of information, but that doesn’t shut my brain down like [this page] does. (P6)
- The [new design] looks more appealing – you can just read what you need to. (P19)
- She would dig through all of the headlines and text [on the current site], but is not sure that a younger person would. (P5)
- The [new design] puts all the information at your fingertips, even though all the links are on one page in the [current design]. (P8)

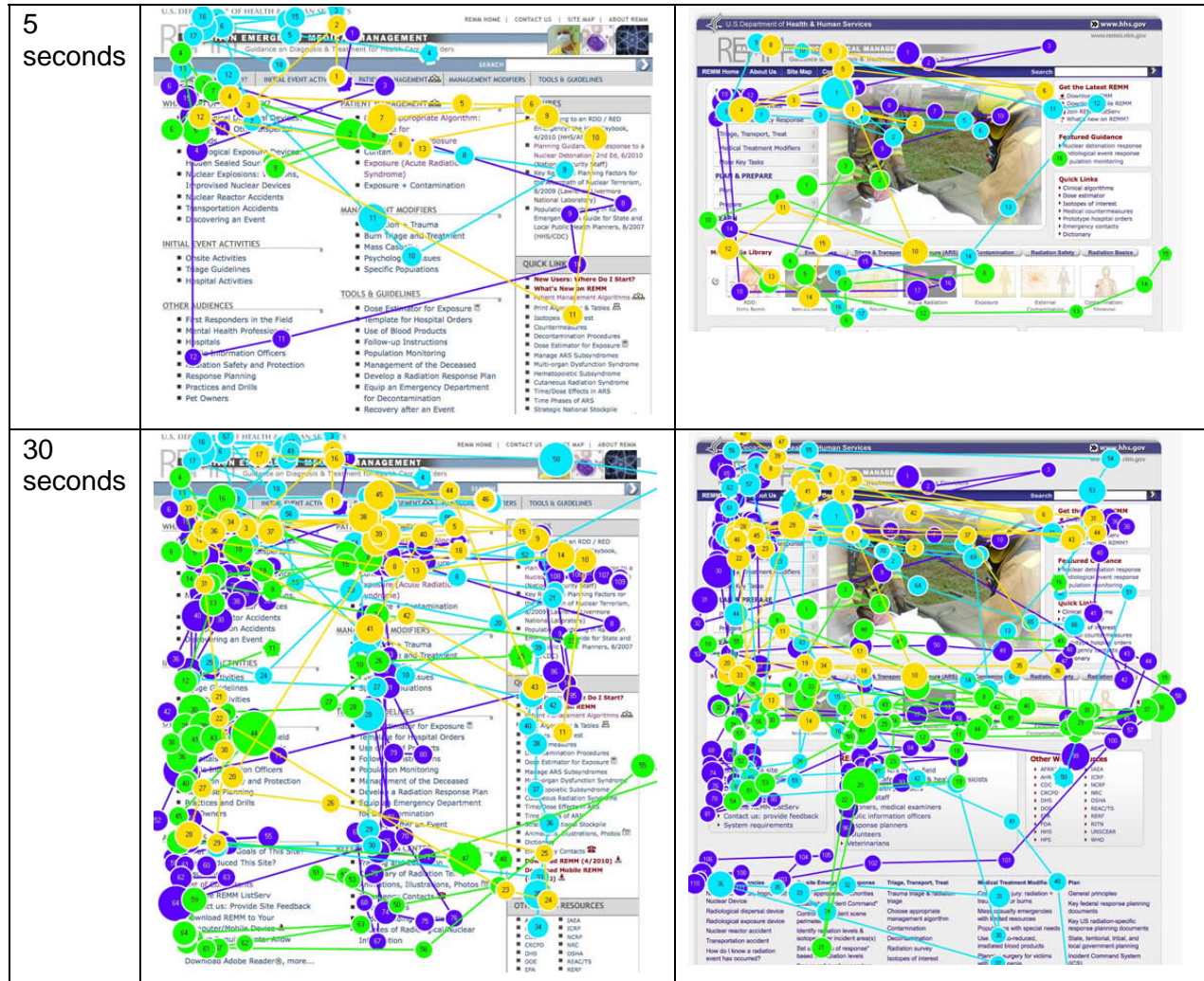
Eyetracking shows that participants scanned the new design more quickly.

As they looked at images for the two different home pages, participants all scanned most of both pages. However, they were able to see *more* of the different elements on the new design in the first few crucial seconds, giving them a better overview of the site even before they started to actually read the page.

The eyetrack also shows that:

- Participants look at the featured image in their initial scan of the page, so it forms part of their first impression of the page.
- The images in the multimedia library also attract attention in their first scan.

Eyetrack gaze plot for 5 and 30 seconds on page (n=4)



Caution: Eyetracking data includes only a few participants, all planners or responders, so it may not generalize to the entire audience for REMM.

Recommendation

Keep the new home page design and layout, but with a few changes to address specific issues found during these usability sessions (discussed below)

Is the fly-out menu intuitive to understand and use?



They understood generally how the fly-outs work, but some struggled with the detailed interaction.

- The fly-outs themselves were difficult for a few participants, who wanted to be able to “latch” them by clicking on the menu link.

Across all of the tasks, we wanted to learn how effectively participants could interact with the fly-out menu, and how well they understood and used the information architecture of the links.

They understood and liked the new navigation method

Participants generally understood that the fly-out tabs were like a menu, each revealing a subset of related links. Only 2 participants did not immediately understand that the fly-out pages were a group of links, and had to be prompted to use them.

- ☞ The ‘drop downs’ are more appealing than the block of text (P8)
- ☞ The [site with the new design] is intuitive and easy to navigate. (P7)

Some found the mechanics of the interaction itself difficult

The fly-out pages do not *latch* – that is, they expose their page only on roll-over. Participants wanted to be able to click on them and have them stay open. Although some recognized that this style of navigation is common (for example, on fda.gov), they would still prefer a less tricky interaction. At first, it was not clear if this problem was caused by the remote control software, but in-person participants also had trouble, often taking time to demonstrate the problem.

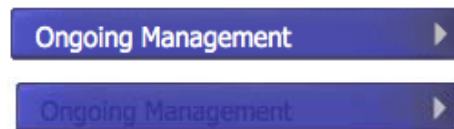
- ☞ The roll-overs switch too fast. (Demonstrates how the fly-out page can change if the mouse accidentally moves diagonally over the next menu link.) (P15)
- ☞ Thought the menu links should be clickable to go to a new page or latch the fly-out page. (P6)

The roll-over color on the menu makes text disappear

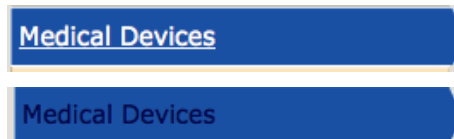
Depending on the mouse position, the color of the text in the fly-out menu can change and make the text appear to disappear.

This also happens on fda.gov, another site that uses a similar technical implementation, but which uses a combination of colors that remains visible.)

REMM



FDA



Recommendation

Consider if it is possible to, change the interaction so that clicking on one of the fly-out menu link latches the page of links in place.

See if it is possible to choose a color combination that works around this technical issue

Does the fly-out menu help users make a good “first click”?

Version 1 (P1-P9)	Version 2 (P11-P19)	The new fly-out menu is improved, but there are still changes needed.
RESPOND	RESPOND	<ul style="list-style-type: none">▪ <i>Ask These Questions First</i> and <i>Learn About Radiation</i> both misled participants
Types of Emergencies	Ask These Questions First	
On-site Emergency Response	On-site Emergency Response	Both the top-level links and links within the fly-out pages were changed in the middle of the test, allowing us to see (to some extent) whether the changes made the structure more intuitive.
Triage, Transport, Treat	Triage and Transport	
Medical Treatment Modifiers	Treat	
More Key Tasks	Ongoing Management	
PLAN & PREPARE	PLAN & PREPARE	
Plan	Create Your Planning Document	
Prepare	Prepare Your Team	
LEARN	Learn About Radiation	

The revised fly-out menu improved navigation success, but needs more work.

The improvement was not dramatic or complete, but the revision solved several navigation problems. Successes include:

- The new label of *Ongoing Management* and grouping of links on that page
- The elaboration of the labels to *Create Your Planning Document* and *Prepare Your Team*
- Placing the Learn topic under *Plan and Prepare*

Recommendations

Three of the fly-out menu labels still caused confusion and need to be changed.

Current Label: Ask These Questions First

Recommended Label: Types of Emergencies

This fly-out was often selected only as the first link, not because participants understood what was grouped there. The planners and responders were often interested in understanding the types of emergencies first, but need a more informative label,

Current Label: Learn About Radiation

Recommended Label: Training and Reference

This fly-out was assumed to be radiation basics, not the collection of reference and training information. Many of the participants were interested in training, but did not find it easily.

Current Label: Prepare Your Planning Documents

Recommended Label: Create Planning Documents

This is a small change, but one that will help differentiate this link from the one below it.

Does the rest of the home page work as additional options ?



Although some focused on the fly-outs, in aggregate, participants used all parts of the home page.

- The multimedia library got attention, but was not always the first place participants looked for information.
- The right column features were noticed, but the titles of the boxes were not informative enough.
- Participants found the boxes at the bottom of the page, but only after exploring other areas.
- Only a few used the “doormat” links. They are the same people who used the Site Map.
- Almost all wanted to use search to find very specific information, or information they did not see immediately.

The fly-out menu is not the only navigation on the home page. Participants often became fixated on one possible solution or area of the page, ignoring other possibilities clearly visible on the screen. This is partly an effect of the testing situation, but is also caused by (and causes) frustration.

Some participants noticed the multimedia library.

Only a few participants used the multimedia library as their first choice for finding information. This is actually appropriate, as it is a feature, not the primary navigation.

However, it is important that it is noticed as a way to find valuable asset on this site.

Recommendations

Be sure that the materials placed on the home page carousel are:

Varied. Show the range of topics and types of multimedia, rather than focusing on one area.

Compelling. Focus on useful charts and graphs with strong informational content, rather than simpler animations.

Useful. Put tools that are needed in the field on the home page.

Participants had difficulty recognizing the *Download REMM* links.

Almost all of the participants were interested in the option to download the site, especially to a mobile device, which almost all carried. One participant (P17) even downloaded Mobile REMM on the spot to see what it looked like.

There were several problems with this highly desirable feature which made it more difficult than necessary for them to find and use it:

- They did not recognize “REMM” as the acronym for the site, so “Download REMM” and “Download Mobile REMM” was not instantly recognized.
- The download links are clustered with other links, making it harder to find the simple, key action.

They also wanted to know more about what they would get in the download (see detailed discussion of this later in this document)

Recommendations

Make a single link for the download features, located in the top right corner. This link goes to a landing page with links to all of the download topics.

Put the full list of links at the bottom of the page (see sketch for revised site).

Participants did not understand *Featured Guidance* and often looked there for inappropriate information.

These links lead to a group of important source documents. They are important for expert users, who both want to use REMM as a way to quickly access those document, and want to see them visible on the site.

Most responders, and some planners (P15, 16, 17), felt that these links were too prominent and “wasted space” because they are not of interest to people learning how to respond.

They also suggested that the label is misleading because it can be interpreted several ways. When asked, they suggested that a revised label include words such as: “source” “in-depth” “documents” and “references”

Recommendations

Move this group of links to the bottom of the page, taking advantage of the typically larger screens of expert users. Place it next to the links to other agencies.

Change the label to “In-Depth References”

Most participants identified the list of agency links accurately.

These links were not particularly useful for the tasks in the usability test, but some participants looked at them. One or two tried them to see where they went.

- They hoped that the links would lead to a specific section of the site about radiation, not just the home page, and were pleased to find they did.
- A few participants scanned the list, looking for acronyms they recognized. One (a 1st Responder/Planner) suggested that if OSHA is on the list, that NIOSH, IOSH, ATSDR and other response-related organizations should be included.

Recommendations

Change the label to “Radiation Resources on Other Sites”

A few used the “doormat” or *Site Map* to search for detailed information

The doormat does not seem to cause problems for most participants, and was actively used by a few

The participants who said they often used the site map also used the doormat links, though others ignored these links almost entirely.

- 💬 “These links are very important” One liked having a site map with all pages listed, so he could use ^F (search on page) to look for the word. (P12).
- 💬 The others simply scanned the list (P2, P14)
- 💬 The links at the bottom of the page “really jump out at you.” (P2)

It is a very large display and may contribute to the impression that the site is overly complex.

- With 9-10 links on each of the fly-out pages, the doormat will contain almost 80 links.
- Even this large list is not a complete site map.



Recommendation

The “doormat” seems to have little negative impact on usability, and have positive value for some.

If you keep the doormat

Make sure it matches the links on the fly-out menu

Include a link to the full site map, so that users looking for this feature do not miss it.

Participants tried to use search for specific information.

When looking for information, especially very specific details (such as “Cesium 137”) participants quite reasonably indicated that they would:

- Use the site search
- Return to Google and search there

Recommendation

Site search is already a feature planned for the site. This is simply a reminder that it is important for some users, and as an alternative way to find detailed, specific information.

Does the new design help users understand the scope of the site?

New home page design



Participants read the name of the site and used the tagline to correctly identify the topic of the site.

Many used the photograph showing two 1st Responders to conclude that it is primarily about field response.

- First responders (firefighters and EMTs) were most likely to draw this conclusion and then be confused by the actual material on the site.

The central image on the new design is critical in forming an impression of who the site is for.

Many of the participants said that they thought the site was primarily for first responders, based on the photograph of the people in field protective equipment.

Recommendation

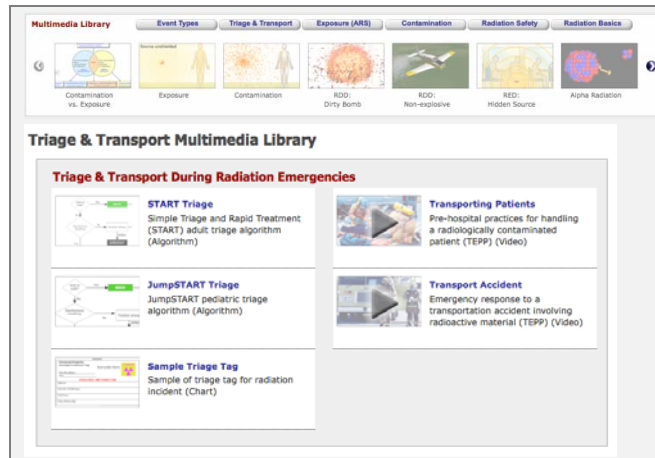
Change the image in the center of the site to reflect all of the audiences for the site: physicians, other clinicians, planners, first responders and other radiation specialists. Be sure the image communicates medical response rather than generic emergency or disaster response.

Details: Site Features

This section provides additional detail on the use of three features of the site:

- The Multimedia Library
- The clinical algorithms
- The REMM for You pages

Multimedia Library



Reaction to the multimedia library depended on whether the participant liked learning from “video” or could use the materials in their own work.

- The more informational the tool, the more the participants liked it. Simple animations did not impress, but diagrams, flow charts, training and instruction did.

The Multimedia Library is a new feature. In addition to the carousel of featured items on the home page, a set of buttons provides access to all of the multimedia resources matching the topics. Most participants liked multimedia, but a few were not as enthusiastic.

- 💬 Really liked the multimedia library. She likes “seeing how things work” (P1)
- 💬 Likes videos for learning, especially for those with reading difficulties. Audio helps. (P16 – has a mild reading disability)
- 💬 Likes using videos to learn (P14)

Some people, who do not read text well, can be engaged by multimedia

In general, the less clinical participants liked learning from multimedia more. This suggests that the Multimedia Library can be used as an effective way to direct some kinds of people to basic information, and tools useful for non-clinical responders.

- 💬 They are good for EMTs and firefighters aren't big readers (P14)
- 💬 I'm not a huge multimedia fan – the first time you sit it, it's great, but later... You have to be careful with too many graphics because it becomes edutainment (P12)
- 💬 These kinds of videos and animations take longer to view and require more patience than text. (P7)
- 💬 In the past, has not found multimedia helpful, so less likely to try them (P8)
- 💬 Multimedia is better for long-term learning than in an emergency (P9)

The multimedia library, and should connect to other material on the site

When the multimedia library is used as an entry point, it needs to connect into the main content. Just as charts and diagrams are links from the text material to the multimedia, each item should also connect back to the text.

- ☞ The usefulness of the multimedia library depends on whether you are just glancing through it or looking for specific information. (P6)
- ☞ Multimedia library should connect to other educational materials. (P15)

Multimedia is also valuable for people giving their own training or presentations.

Participants wanted to know if they could use the material freely.

- ☞ Wants links to be able to download assets, so he can include them in his presentation materials. Material he can download when he needs it is better than CDs that sit around and get outdated.

The titles confused some participants.

They did not understand the significance of roman numerals in the titles.



As an example: these titles could be changed, still keeping the goal of short titles that fit on one line.

- Exposure: Whole Body
- Blood Cells & Dose (part 1)



Recommendations

Provide links to related content, both on the page for each multimedia asset, and at the library page (when possible).

Add text on each library page explaining that the material in the multimedia library is included in other pages, but gathered for convenience.

Add text on the bottom of each asset page with information explaining how to download the item, and any conditions for its use.

Make titles explanatory, adding words to distinguish similar or related items, instead of simply numbering them. For example: *Exposure – Whole Body*, instead of *Exposure I*.

Clinical Algorithms

Current version

New version

Of the 18 people asked to compare the single page and interactive versions of the exposure algorithm:

- 13 preferred a single page
- 4 preferred the interactive version
- 1 had no preference

Participants found the information about subsyndromes of ARS more easily on the single page. This was partly because the box is labeled better on that version, but also because they could scan the page more quickly.

In general, participants liked the algorithms. Both clinicians and first responders expect to read information in this format, and use it to quickly skim to the detailed procedures they need.

They wanted any page with an implicit decision tree to be presented as an algorithm, so they could use it as a rapid way to find the correct procedure or other detailed information.

- Thought burns and trauma pages would be algorithms, too (P19)
- Activities related to transport should be included in the algorithm. (P4)

First responders valued the algorithms because it let them get an overview, while hiding detail not relevant to their role. They also wanted to go directly to the procedures or information they need to use, while skipping clinical details they would not use.

- A physician in a hospital needs definitive care; a responder in the field doesn't. (P19)
- The step-by-step nature of a flow-chart is very firefighter friendly (P16)
- Firefighters want very specific information, like what color cap should be used for blood products drawn on the scene, to make sure they are accurate and the sample isn't lost. (P16)

Participants were asked to find specific information – details about the subsyndromes of ARS -- in two versions of the Exposure Algorithm. Afterwards they were asked which style they preferred. Most (13 of 18) preferred the current version.

Those who liked the single-page version said that it looked like what they expect – simple, clearly labeled boxes with links to detailed procedures.

- 💬 It's more directive, leads to more places in the site. (P11)
- 💬 Algorithms should be simple, with links to detailed procedures (P19)
- 💬 Likes the color coding of different tables within the algorithms (P7)

They did not like the new, interactive version because it had too much information shown at once, without clear headings.

- 💬 There is too much text in each box. The title should tell you what the box is about, and let you decide if you need to read inside. (P13)
- 💬 Too much text is revealed in each box. He would like to see each line expand separately (P15)
- 💬 He could not easily predict what would happen when he clicked on *Show All* (P6)

However, some liked the interactive version as being better for training. They also liked the simplicity of the early decisions. They thought it would hide unneeded information from the early boxes.

- 💬 There are fewer things to read in the early decisions (P5)
- 💬 It minimizes the information you have to read at any point (P19)

Recommendations

Keep the current algorithm style. As the algorithms are updated for large and small events, focus on:

- Making it easy to see which part of the algorithm is currently “open” – hiding alternative branches not chosen.
- Writing clear titles for each box
- Including links to related algorithms and procedures

REMM for You

REMM for You

- ▶ First responders in the field
- ▶ Radiation safety officers & health physicists
- ▶ Mental health providers
- ▶ Hospital staff
- ▶ [Coroners, medical examiners](#)
- ▶ Public information officers
- ▶ Response planners
- ▶ Volunteers
- ▶ Veterinarians

Participants noticed and used the REMM for You section, especially when they fell into a small secondary audience.

- They wanted the pages to be a guide to the information on the site most appropriate for them.

The pages grouped under *REMM for You* are designed to provide information for secondary audiences and audiences for whom a very specific subset of the information on the site will be useful in their role.

Participants in these audiences:

- Noticed that much of the material on the site is aimed at a clinical hospital setting and wanted this clarified (P11, P14, P17 and others).
- Noticed the pages with information for them, picking their role name out quickly and easily. This was especially true of a veterinarian and another person who had experience in dealing with animals in an emergency.

When they looked at the pages, however, they were disappointed, saying that the links were information they already knew, when what they wanted was anything specifically about radiation emergencies that they should be aware of.

These pages are an opportunity to provide links to specific information, or a roadmap for a specific role. The theme of “what are the implications for me” came up in many different comments. For example, they wanted to know not just the definition of contamination and exposure, but what the implication for action is for their role.

- 💬 In the bomb scenarios, it’s not clear... what would I be doing [in my role] (P16)
- 💬 What are the health complications that occur in radiation incidents. Wanted examples from actual incidents in the past. (P15)
- 💬 What are the things we need to consider about how to set up the patient flow? How is this different from other emergencies? (P19)
- 💬 What are the basics that we need to know about radiation (P11)
- 💬 There should be some sort of “top 10 isotopes” to be found in dirty bombs, or some indication of which isotopes we are most likely to encounter. (P5)

First responders especially wanted information presented in a clear, visual way:

- 💬 Pre-hospital people need information that is simpler, more graphical. They tend to be mechanically oriented, and want to know how things work. (P15)

- A lot of the information on the site is very dry. Most firefighters wouldn't read it, (P16)

They recognized and responded to the role identification, rather than to the title. As in the comment about downloading REMM, they simply did not identify this acronym on first use.

All of the participants who looked at one of the *REMM for you* pages commented that it was *not* what they expected. These pages need to be edited to provide an introduction the site from the perspective of the role and to be clear about which links are unique response information for that role. However, with an appropriate introduction, these links could be valuable higher on the page where they direct visitors in roles with limited information directly to those resources.

Recommendations

Keep this feature, and make it more prominent on the page so that people in secondary audiences can immediately see what the site has (and doesn't have) for them. This will let them quickly find out what the site offers *them*, perhaps even before they start exploring the main content in the fly-out menu.

Rename the group "*Information for...*" because first-time visitors have not yet learned *REMM* as an acronym.

Make the target pages a roadmap to the site, in the same way that the link for new users offers a collection of basic education links.

Be clear about what the site is *not* – using links to key resources for that audience.

Details: Information Architecture

Do links on the fly-out pages help users find specific information?

Fly-out pages contain groups of links, like this:

What Kind of Radiation Emergency?

- › Has a radiation incident occurred?
- › Is it a nuclear or radiological incident?

What Type of Incident?

- › Nuclear detonation or improvised nuclear device (IND)
- › Radiological dispersal device (RDD): explosive
- › Radiological dispersal device (RDD): non-explosive
- › Radiological exposure device (RED)
- › Nuclear reactor incident
- › Transportation incident

How Could This Radiation Incident Affect Patients?

- › Is it exposure or contamination or both?

The new grouping of links on the fly-out pages is improved.

- In both versions, participants generally understood the structure of the information.
- The extra red headings added for the second versions helped chunk these links more effectively.

There are still improvements needed.

- Treatment in the field and at the hospital needs be clarified.
- Information about at risk populations is not in the right place.
- Decontamination still needs resolution
- PPE and other links also need to be included in *Prepare Your Team*

Some understood the information architecture, but others struggled to gain a mental model of the how the information on the site is organized.

Participants were aware of the size of the site – both the breadth and depth of the information. Part of the appeal of the new site is that it reduces the choices on the first page.

- 💬 This is complicated information that is hard to simplify, but sometimes the site also seems overly complicated with so many links that it's easy to get lost. (P9)

Some appeared to quickly learn how the information is organized, making more precise choices as they used the site longer. Others, however continued to hunt through the fly-outs, reading through all of the links to find information, until the end of the session.

Successes include:

- The heading *How Could This Radiation Incident Affect Patients* helped participants find the information about contamination and exposure more readily.
- Including of *Factors Affecting Triage and Treatment* on the *Triage and Transport* page worked, making these links more visible.
- The new grouping of links on the *Treatment* page worked better, including making the links to dose and isotope/countermeasures more visible.

Task Details: How to transport radiation victims correctly.

Task: What is the right procedure for moving people who have only been exposed to radiation to a medical facility?

Flyout Page Version 1

Triage

- ▶ Trauma triage & radiation triage

Transport

- ▶ Transport victims to the appropriate venue(s)

Treat

- ▶ Choose appropriate medical algorithm
- ▶ Contamination medical algorithm
 - ▶ More on Contamination ...
- ▶ Exposure/Acute Radiation Syndrome (ARS) med
 - ▶ More on Exposure/Acute Radiation Syndrome (ARS)
- ▶ Contamination + Exposure medical algorithm

Version 2

Triage

- ▶ Perform life-saving tasks before managing radiation problems
- ▶ Trauma triage
- ▶ Radiation triage

Factors Affecting Triage and Treatment

- ▶ Size of the mass casualty
- ▶ Radiation + trauma (combined injury)
- ▶ Radiation + burns (combined injury)
- ▶ Special needs and at risk populations

Decontamination

- ▶ Decontamination procedures

Transport

- ▶ Transport victims appropriately

Although most participants found the page, they often missed the correct information within the page.

- Most were able to mentally translate “moving a patient” to *Transport* and find the only link on the page
- Some focused on the need for decontamination, and had trouble finding the answer as a result.
- Those who looked on the algorithms often picked the wrong one, but also found that there is no link to transport on the algorithms.

This task tested several related navigation and comprehension issues:

- Did participants recognize that the task asked for information relating to *transport*?
- Could they find the unique page on the site with this information?
- Did they understand the significance of the difference between *exposure* and *contamination* for this task?
- Could they find the correct information on the page?

Starting from *transport* information made this task easy

Those who did find the information easily.

If they did not start from *transport*, they had difficulty with this task

Participants who looked for decontamination or in the clinical algorithms either had to hunt in several places (for example, returning to the home page and starting over), or gave up.

Success or failure finding the correct page for transport information

(n=15)	Total	Physicians	Clinicians	Responders	Planners
Success	9	■ ■	■ ■ ■	■	■ ■ ■
Success w/hunting (partial)	4	■ ■			■ ■
Failed/Gave Up	2	■		■	

Pages visited or links selected

Participants also looked for this information in many different parts of the site, often starting from different cues in the task.

- Transport page from Triage & Transport fly-out
- Decontamination page
- Choose Appropriate Medical Algorithm

Most were not fully aware of the importance of the distinction between exposure and contamination.

By the time they reached this task, all of the participants had learned that there is a difference between exposure and contamination. Few, however, had clear and accurate knowledge to help them understand the significance for transporting patients and the risk of contaminating the vehicle.

Once on the page, they often missed the significant information about exposure.

As they read the page, they often did not read all the way to the bottom to see the specific information required to complete the task.

Participants scrolled easily and willingly, but often had had trouble separating different points on a page or within a section of the page.

As they read the page:

<ul style="list-style-type: none">▪ They read and liked the first bullet about priorities for managing victims▪ They saw the links to exposure and contamination, and were sometimes distracted by them.▪ But they then focused on the next bullet point that applies only to <i>contamination</i>.▪ Many did not read all the way to the bottom of the page to see the final bullet about <i>exposure</i>	<p>Transport Victims of Radiation Emergencies to Appropriate Venue(s)</p> <p>Key points:</p> <ul style="list-style-type: none">• Perform life-saving tasks before managing radiation problems or assessing contamination and decontamination status.• Victims of exposure and contamination should be transported to medical facilities with the expertise to manage these problems.<ul style="list-style-type: none">◦ The Radiation Injury Treatment Network has many locations around the country.• Transporting victims with contamination<ul style="list-style-type: none">◦ Place 2 sheets/blankets on the litter before placing the contaminated patient on the litter .◦ Remove the victim's contaminated outer clothing before loading him/her onto the litter.◦ Fold the edges of the 2 layers of sheets over the patient while maintaining access to the airway and adequate visual surveillance.◦ Place at least one layer of covering on the gurney before loading the litter onto the gurney.◦ Close all open compartments within the transport vehicle prior to the transport◦ Use disposable equipment when possible.◦ Attempt to reduce contamination inside the vehicle after the transport is completed.◦ See two demonstrations videos about transporting contaminated persons (DOE/TEPP)◦ NCRP guidance recommendations about transporting contaminated victims²:<ul style="list-style-type: none">■ Minor contamination a vehicle's interior should not prevent or delay its use to respond to emergencies.■ Perfect contamination control will likely not be possible during the early phase of an incident .■ Establish and practice in advance how these procedures will be implemented.• Transporting victims with exposure but no contamination<ul style="list-style-type: none">◦ These victims do not require radiation protection for the vehicle or its personnel.
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Recommendations

Use headings and spacing to make it easier to scan the page.

Use *On This Page* links to show the scope of information on a page and reinforce any choices that must be made.

Use headings or tables to make it easier to both identify the different choices, and scan from one to another quickly.

Sample reformatting of a single-topic page to improve clarity of the information and make it easier to scan for specific information.

- On this page links make it clear that there are two procedures.
- Points to consider before transport are separated from procedures.
- Extra spacing makes it easier to scan the different points on the page, especially separating additional guidance and training from the procedure

Transport Victims of Radiation Emergencies to Appropriate Venues

On this page:

[Key points](#)

[Procedures](#)

[Transporting victims with exposure](#)

[Transporting victims with contamination](#)

Key points:

- [Perform life-saving tasks before managing radiation problems or assessing contamination and decontamination status.](#)
- Victims of exposure and contamination should be transported to medical facilities with the expertise to manage these problems.
 - The [Radiation Injury Treatment Network](#) has many locations around the country.

Procedures:

Transportation procedures depend on whether the victim is exposed, contaminated.

- (See [Exposure vs. Contamination](#) for more information)

Transporting victims with exposure only

These victims do not require radiation protection for the vehicle or its personnel

Transporting victims with contamination

- Place 2 sheets/blankets on the litter before placing the contaminated patient on the litter .
- Remove the victim's contaminated outer clothing before loading him/her onto the litter.
- Fold the edges of the 2 layers of sheets over the patient while maintaining access to the airway and adequate visual surveillance.
- (continues)
- See two [demonstration videos about transporting contaminated persons](#) (DOE/TEPP)

NCRP guidance recommendations about transporting contaminated victims²

- Minor contamination a vehicle's interior should not prevent or delay its use to respond to emergencies.
- Perfect contamination control will likely not be possible during the early phase of an incident .
- Establish and practice in advance how these procedures will be implemented.

Task Details: Find decontamination procedures

You know that people who have been contaminated with radiation need to be decontaminated. Can you find information about that on this site?

Fly-out link in Version 2

▸ Special needs and at risk populations

Decontamination

▸ Decontamination procedures

Transport

▸ Transport victims appropriately

Decontamination fits into the activities of responders and clinicians differently, making it a difficult link to place.

- Clinicians found this link within the clinical algorithms, but often only after hunting.
- For first responders, easily finding a link validated their expectations that decontamination is one of their first activities.

In the first version, the decontamination is not listed in any of the fly-out. In the second version, a decontamination link was included with *Triage and Transport*. This location was selected as a temporary solution to placing this link in a more visible location.

- Clinicians (P1-9 – 1st version), who used the algorithms found it, but complained that they had to hunt for it.
- Participants who used this version (P11-19 – 2nd version) often found the link in their own exploration of the site, so it was only presented as a task to 4 of them. All found the link, though two tried looking on *Initial Onsite Activities* first.

💬 Decontamination links just need to be more obvious. (P19 – found link in doormat)

Success or failure finding the correct page for decontamination information

(n=12)	Total	Physicians	Clinicians	Responders	Planners
Success	7	■ ■	■ ■ ■	■	■
Success w/hunting	3	■ ■		■	■
Failed	2	■			

Pages visited or links selected

The correct page for this information linked from Triage and Transport). It could also be accessed from:

- Multimedia Library, Contamination Animation → decontamination procedures
- Contamination algorithms

Participants also looked for this information in many different parts of the site, often starting from different cues in the task.

- Triage, Transport, Treat → Choose Appropriate Medical Algorithm → multiple treatment related pages, eventually finding decontamination info
- Prepare Your Team
- Initial Onsite Activities
- Links in the doormat

Participants need acknowledgement of their priorities

This task raises a critical issue about the placement of links, even if the information is not part of the core content of the site: responders see setting up decontamination areas and decontamination as an important part of their initial work on site. It is important to them to see this activity represented. This is similar to the way participants with more expertise looked for programs or acronyms that they know well, or experts look for the key guidance documents.

💬 “Where’s the image of the two [fire] trucks pouring water at each other?” (P12)

PPE is an important part of how responders think about emergencies

Several participants (especially responders) made comments that indicated that several concepts are linked for them:

- Understanding the type of emergency
- Personal protection and PPE
- Decontamination

They wanted to see images of the different types of PPE as a way of understanding the nature of the emergency response.

Participants in the first group thought it was too hard to find information about PPE (P6, P7, P8), while those in the second group found it easily responder safety was highlighted on the flyout for on-site emergency response.

Misplaced priorities can be a *teachable moment*

In the case of this specific decontamination task, the expectations represent an opportunity to teach the broader point about contamination vs. exposure and how it affects medical (and response) management. A page about decontamination can (as in the example of the transportation procedures task) provide an opportunity to *ask the first question* or provide a link to. This information could even be represented as a flow diagram, showing each of the decisions that are made about the condition of the victim, the resources available, and the size of the incident.

Recommendations

Find a place on the fly-out menus that is appropriate both medically and in terms of the flow of activity in an incident where a link to a decontamination landing page can be placed.

Write a landing page that explains the decision process, including exposure vs. contamination, and decontamination procedures in different setting (field vs. hospital and large vs. small events).

Include a link to this information in the *Information for.. First Responders* page.

Use photographs of different decontamination sites as an additional cue about the setting and personnel for which the procedures are relevant.

Task Details: Find treatment details in a complex scenario

Your team has been told that a “dirty bomb” has been identified at a bus station in your area.

The HAZMAT team has reported that the dirty bomb contained Cesium-137. Find information about Cesium-137 and how to respond to the an event like this. Is this information helpful to you?

Version 2



This was a difficult task for almost all participants. They were more successful with the revised menus, with the link to the isotopes tables included in the Treatment flyout.

- The task itself is complex, including several different cues (dirty bomb, Cesium-137, treatment..) which could be a starting point.
- Finding the correct information requires knowing the word *isotope*. This was difficult to recognize, even for people who knew the word.

In Version 1, the link to treatment for Cesium-137 was in the Quick Links list or in the contamination algorithm under *Internal Contamination*. Successfully completing this task required: knowing the word *isotope*, identifying the event as relating to contamination. Another path to the information is via the page on RDDs.

In Version 2, a link to *Identify radiation types and isotopes* was placed in the *On-site Emergency Response* tab.

This question was skipped for most of the Responders as not something they would need to look up.

Success or failure finding the correct page for treatment

(n=13)	Total	Physicians	Clinicians	Responders	Planners
Success	2		■		■
Success w/hunting or hint	3				■ ■ ■
Failed	7	■ ■ ■	■ ■	■	
Gave up on correct page	1	■			■

Pages visited or links selected

The correct page for this information is the table of *Isotopes of Interest*, which can be reached from:

- Quick links
- Treatment tab (revised navigation)
- Dirty Bomb animation or Types of Emergencies → RDD incidents
- Clinical algorithms – look up which one

Participants also looked for this information in many different parts of the site, often starting from different cues in the task.

- Prepare Your Team
- Featured Guidance → Radiological Events

- Contamination or Exposure explanations in the diagnose and manage section
- Started with Types of Emergencies → RDD but gave up before finding the information
- Search for Cesium-137. Search was disabled, and almost all had to ask how to spell it.
- Looked through fly-outs, but never made a selection

They wanted to know what radiation issues they are most likely to encounter.

A few participants noted that there is no ranking of isotopes on a scale of which were most likely or least likely to be used in certain kinds of radiation incident. They thought a scale like this would be helpful in order to give the ma sense of which isotopes they would be most likely to come into contact with in an emergency.

They did not see the short table on the RDD page which would have given them (for this task) the sort of overview they wanted.

RDD Isotope Fact Sheets

Isotope	Treatment & Countermeasures	More Information: Fact Sheets			
		HHS/CDC *	HHS/ATSDR **	EPA ***	Argonne Natl. Lab
Americium-241	View	View	View	View	View
Californium-252	View				View
Cesium-137	View	View	View	View	View
Cobalt-60	View	View	View	View	View
Iridium-192	View	View			View
Plutonium-238	View	View	View	View	View
Polonium-210	View	View			View
Radium-226	View		View	View	View
Strontium-90 (Sr-90/Y-90)	View	View	View	View	View

Task Details: Information about special and at-risk populations

Like with any condition or disease, radiation affects different people differently, and this could result in the need to customize treatment. Can you find anything about this on this site?

Summary

For the most part, participants did not experience much difficulty with this task. However, most agreed that Populations with Special Needs would be even easier to find if located within Triage and Transport rather than Key Clinical Considerations.

This link was moved to several locations on the site.

- **In version 1** it was on *Key Considerations* → *Populations with Special Needs*
- **In version 2**, it was included in Factors Affecting Triage and Treatment, as a temporary location.

Most participants found it, often having noticed it during earlier investigations. Although participants found it by hunting through the fly-out pages, none of the locations were very satisfying. It belongs more accurately with Treatment. It was more easily found in the clinical algorithms.

Success or failure finding the correct page for special populations

(n=11)	Total	Physicians	Clinicians	Responders	Planners
Success	8	■	■■	■■	■■■
Success w/hunting	3	■■	■		
Failed/Gave Up					
Got to page, missed detail					

Pages visited or links selected

Participants also looked for this information in many different parts of the site, often starting from different cues in the task.

- Triage, Transport, Treat first (prior to this info. Being moved to Triage and Treat), then back to Key Clinical Considerations → Populations with Special Needs
- Onsite Emergency Response → Triage, Transport, Treat first (prior to this info. Being moved to Triage and Treat), then back to Key Clinical Considerations → Populations with Special Needs
- Scrolled through reading various headings before clicking on Key Clinical Considerations → Populations with Special Needs

Task Details: Find information about PPE

You are trying to train your team to protect themselves from radiation. Is there any information on the site that you could include in a presentation?

Screen shot

Summary

This was difficult for participants to locate, because most expected to find it listed under *Prepare Your Team* or parts of the site dealing with the initial response to a radiation incident.

Success or failure finding the correct page for transport information

(n=10)	Total	Physicians	Clinicians	Responders	Planners
Success	4	■	■ ■		■
Success w/hunting	2	■			■
Failed/Gave Up	4	■ ■	■		■
Got to page, missed detail					

Pages visited or links selected

After being moved about the site several times, the correct page for this information was

- Onsite Emergency response

Participants also looked for this information in many different parts of the site, often starting from different cues in the task.

- Prepare your team
- Multimedia links
- LEARN and reviewed educational competencies for healthcare professionals
- One participant who was not asked about PPE commented that he did not see it on the site
→ was too buried

Details: Understanding the Content

The information on this site is complex and detailed. There were many positive comments about the content. Some participants valued that so much information was collected in one place.

Some participants checked specific details that were important to them and found that the content of the site matched their expectations.

- ☞ Checks to see how the site uses the term *first responder*. The definition of “first responder” has changed after 9/11. It used to be more specific, but now covers “everyone” – they are working on certifications to help clarify this situation. (P19)
- ☞ Likes that the site makes the point that not all radiation events are obvious in real time. (He is in a county with a nuclear power plant where there is a lot of monitoring, but describes other types of accidents, such as a leak at a medical facility, or an environmental incident.) (P18)
- ☞ Wonders if there should be a whole separate section for mass casualty incidents. (P6)

Participants found the content more helpful for preparing than for use during an emergency

Some participants questioned whether the site was really useful in an actual emergency response, or was more valuable for preparation and training. First responders worried about the number of screens, and the amount of information on the each page. One, however, downloaded the iPhone version of REMM during the session, and felt that this was just the sort of stripped-down information he would find valuable.

It is important to note that some issues with orientation with the content were caused by the ad-hoc matching of the current pages to the new information architecture: links sometimes jumped deep into pages, rather than going to the beginning of a page with an introduction to the topic.

References to well-known documents add credibility.

People use the match between their own knowledge and information on the site as a way to evaluate the credibility of the information. Several participants, for example, looked for HSEEP as a basis for guidance on conducting drills.

Suggestions from participants about document references included:

- Add a link to the full bibliography in the box with links to important guidance documents
- Provide a short list of the top (10-20) documents in the field
- In references, include the common name of the document, such as “NRCP-65,” not just the formal title.

- For responders, add cross links to firstresponders.gov and USFA.gov (US Fire Administration)
- Be careful about using too many acronyms.

Participants wanted an overview at all levels of the site.

There were many comments about wanting an overview. For example:

- 💬 Wants an overview about levels of exposure by type of radiation and how to meter it (P15)
- 💬 Wants an overview to the site (P16)

In many cases, this information is available on the site, but is not set as the introduction to a topic. Based on comments from participants:

- Organize information from basic choices to advanced (or from least to most serious)
- Place important links at the top of the page, not the bottom.
- When choices have to be made, or when there are alternatives based on radiation or medical condition, show them at the top of the page or section, so they can be seen in context.
- Consider whether procedures should be on their own page, so they can be easily printed for reference.

Some links were not clear.

In some cases, participants had trouble understanding where a link would lead. This was especially true for some valuable information.

- The words “exposure” and “contamination” were often linked to the basic definitions, even when this was secondary to the content where these words appeared. Participants followed those links looking for procedures, not understanding that they were just definitions. It would be clearer to make a link that was specifically identified as a definition

- Victims of [exposure](#) and [contamination](#) should be transported to medical facilities with the expertise to manage these problems.
 - The [Radiation Injury Treatment Network](#) has many locations around the country.
- Transporting victims with [contamination](#)
 - Place 2 sheets/blankets on the litter before placing the contaminated patient on the litter .

In these links, users need to know how to distinguish between exposure and contamination, not the definition. Instead, they thought that the links would each lead to a procedure.

- Links in the tables often led to detailed information, but were assumed to be definitions.

	Chelation with DTPA[†]
ation	Ion exchange with Prussian blue[†]

In these links, users thought that Prussian blue was a link to a definition, rather than a way to find the detailed treatment information

- Some links to overview information or diagrams were hidden “in plain sight.”

	Inner Cordoned Area	---
IAEA[†] (See diagram)	Inner Cordoned Area ("Hot zone")	Safety Perimet
	Outer Cordoned Area	Security Perimeter

In this table of different radiation control zones, participants missed the links to the diagram because it is hidden in the first column of a complicated and noisy table

Participants used images and diagrams as an overview

Several of the first responders and planners commented that pictures are an important part of information for responders. This was particularly true for PPE: responders identify the type and severity of an emergency by the type of PPE needed.

Participants wanted training.

Several participants asked about different types of training:

- First responders especially wanted an overview “Where do I go first” (P11) or a workshop on how to use the site in emergency response (P16)
- Planners and those who created or delivered training wanted actual training and presentation materials available on the site, saying that they would use them as the basis for their own training needs.

Participants noted that there are two stages of treatment

Two of the participants (both planners) pointed out that there are really two stages of treatment: triage and treatment in the field (by first responders) and treatment (possibly with a second round of triage) in the hospital (by first receivers).

- There is triage and treat (pre-hospital), transport, and then treat (in the hospital) (P15)

- In the field, there is Triage, Transport, Treat. Then in the hospital, there is another round of Triage and Treat. (P19)
- Likes that Triage and Transport is separated from Treat (which is primarily treatment in a clinical setting on this site) (P11)

Details: Design and Interaction

The REMM logo is difficult to read.

Participants had no problem reading the title of the site, but did not immediately recognize the acronym, REMM. This may be because the letters are obscured in the logo. This may, however, not be a problem as experienced users may adopt the acronym as they get to know the site.

Because *REMM* is not well known, the HHS logo at the top of the page is important for the credibility of the site. All but one participant quickly and easily identified HHS as the agency responsible for REMM.

Opening new windows caused hesitation.

All of these participants understood how to interact with multiple browser windows, but they all hesitated as they figured out whether the Back button would work, or whether they needed to close the window.

If the site opens pages in new windows, they should be more clearly designed as a popup, and include a Close link within the page. The cancer.gov dictionary windows are a good model to follow.

Comments on the visual design

Most of the participants liked the visual design, and had no problems scrolling. Two, however, suggested packing the screens more tightly:

- “I am not a scroller. I don’t want things tucked away at the bottom of the page” (P11)
- “Don’t waste white space around the edges of the screen. Fill the whole space to minimize scrolling. (P15)

Other comments

- The 3-D shadows around the boxes on the flow charts are distracting and add to the clutter (P6)
- Flow charts and clear tables are good. Use diagrams to introduce the text (P19)
- Likes charts that could be used locally as diagnostic or treatment decision tools (P11)

Participants wanted to know about updates to the site

Many of the participants said that they wanted to know when the site was updated.

- They wanted to be sure they were reading the most up-to-date information, especially if they had a downloaded version.
- Participants did not recognize the links to the ListServ as means for notification, thinking it was a discussion among radiation experts instead.
- One asked for RSS notifications.

Downloading REMM is a popular feature – once they understood it.

Even beyond finding the download links, participants were confused by what they would get when they downloaded the site. This was especially true because they had already gotten a strong impression of the breadth and depth of the site.

One participant downloaded the iPhone application during the session and commented that “It’s clearer on the phone – better than on the site” (P16)

- They wanted a better explanation of what they would get, for example with screen shots.
- Mobile devices are more important than desktop for responders, but hospital staff wanted the full site on a stand-alone computer.
- Several asked about a version for EVO or Android. One was pleased to see WindowsMobile as an option. Public health and emergency response groups seem to adopt a platform, so they all have compatible systems.
- They wanted the mobile version to have all of the algorithms, charts and useful tools, but not the detailed or background information.
- They wanted to know how large the mobile version is, and did not want animations or multimedia that did not add informational value.
- They suggested using the icons for each download platform to make they easier to spot on the page. This is especially important for mobile versions, but would also work for Windows, OSX or even Browser versions. (One participant specifically asked if it would work on a Mozilla browser)

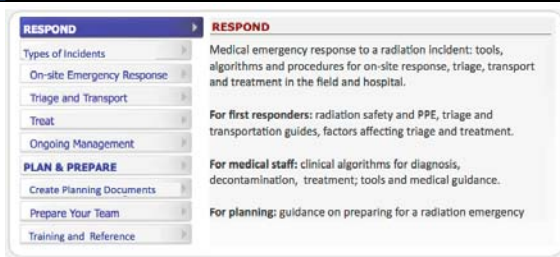


Annex: Recommendations for Fly-out Menus

This annex contains recommendations for the text of the links in the fly-out menus, including headers. Each table has:

- The text of the tab, heading or link
- The target page and URL
- Notes on the work needed to adjust the page to the new IA
- A status summary, assessing the amount of work needed to make the target page work in the new IA

RESPOND



What's changed:

- New text

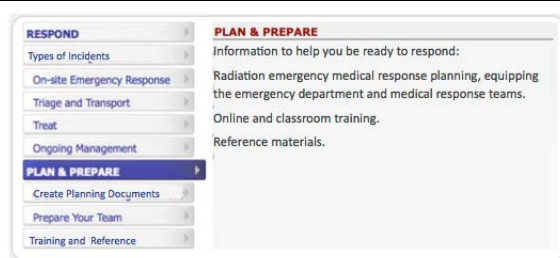
Medical emergency response to a radiation incident: tools, algorithms and procedures for on-site response, triage, transport and treatment in the field and hospital.

For first responders: radiation safety and PPE, triage and transportation guides, factors affecting triage and treatment.

For medical staff: clinical algorithms for diagnosis, decontamination, treatment; tools and medical guidance.

For planning: guidance on preparing for a radiation emergency

PLAN AND PREPARE



What's changed:

- New text to match changes in IA

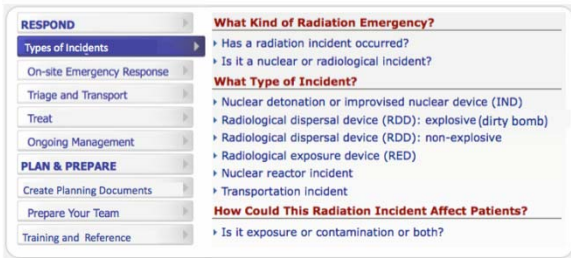
Information to help you be ready to respond:

Radiation emergency medical response planning, equipping the emergency department and medical response teams.

Online and classroom training.

Reference materials.

RESPOND: Types of Incidents



What's changed:

- Tab link changed
- Added "dirty bomb"

Fly-out, heading, link text	Target page title and URL	Notes on work	Status summary
What Kind of Radiation Emergency?			
Has a radiation Incident occurred?	Radiological/Nuclear Event algorithm newtype.htm	Match title Link incident types	Light edits
Is it a nuclear or radiological incident?	Differences between radiological and nuclear events diff_nuclear_rad.htm	Match title Brief intro and minor edits	Light edits
What Type of Incident?			
Nuclear detonation or improvised nuclear device (IND)	Nuclear Explosions: Weapons, Improvised Nuclear Devices nuclearexplosion.htm	Match title (detonation)	OK – Match title
Radiological dispersal device (RDD): explosive (dirty bomb)	Radiological Dispersal Devices rdd.htm	Add headings to split explosive and non-explosive RDD information	Minor restructuring
Radiological dispersal device (RDD): non-explosive	Radiological Dispersal Devices rdd.htm	Add headings to split explosive and non-explosive RDD information	Minor restructuring
Radiological exposure device (RED)	Radiological Exposure Devices (RED) red.htm		OK
Nuclear reactor incident	Nuclear reactor accidents nuclearaccident.htm	Match title (Incident)	OK – Match title
Transportation incident	Transportation accidents involving radiation transport.htm	Match title (Incident)	OK – Match title
How Could This Radiation Incident Affect Patients?			
Is it exposure or contamination or both?	Differences between contamination and exposure diff_contam_exp.htm	Match title Need intro text and link in diagram	Light edits

RESPOND: On-site Emergency Response



What's changed:

- Simplified links in Set Up Incident...
- Clarified link to *Hospital* Incident Command (HICS)

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Set Up the Incident Scene			
Notify appropriate authorities	Emergency contacts remm_RefDataCtr.htm	This table does not explain who to contact for what kind of emergency	Missing intro content
Establish "zones of response"	Initial Onsite activities onsite.htm#3	Split into separate page. Create intro to show options (and diagrams)	Restructure page
Establish patient handling flows	Establish patient handling flows patientfowarea.htm	Needs intro to algorithm/diagram and links	Missing intro content
Establish Hospital Incident Command (HICS)	Hospital Incident System (HICS) hics.htm		OK
Identify and Measure Radiation			
Identify radiation types and isotopes	Managing Internal Contamination int_contamination.htm#isotopestable	Is this the right page for this link?	
Measure type and level of radiation continuously		New Page. ?Radiation detection devices here?	Create or restructure page
Ensure Responder Safety			
Wear personal protective equipment (PPE)	Personal Protective Equipment (PPE) in a Radiation Emergency radiation_ppe.htm	Current page OK, but pull together all pages on PPE into new section	Consolidate pages
Use personal dosimeters	Radiation Detection Devices civilian.htm#personal	Part of a multi-section page. ?Split into separate page?	Restructure page or include in "Measure"
Follow protective action guides (PAGs)	Initial On-site Activities onsite.htm#pag	Split into own page	Restructure page

RESPOND: Triage and Transport

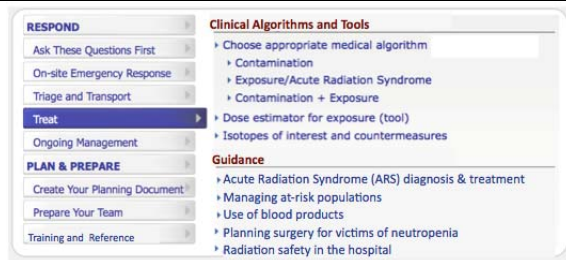


What's changed:

- Removed link to special populations
- Clarify transport links to be clear, and reinforce exposure vs. contamination

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Triage			
Perform life-saving tasks before managing radiation problems	Perform life-saving tasks before managing radiation problems lifesavingtasks_2.htm	Make headings and links	Light edit
Trauma triage	START Adult Treatment Algorithm		OK
Radiation triage	Triage Guidelines radtriage.htm		OK
Factors Affecting Triage and Treatment			
Size of Mass Casualty	Mass Casualty masscasulty.htm		OK
Radiation + trauma (combined injury)	Radiation + trauma (combined injury) radtrauma.htm		OK
Radiation + burns (combined injury)	Burn Triage and Treatment: Thermal Injuries burns.htm		OK
Decontamination			
Decontamination procedures	Decontamination procedures ext_contamination.htm	Check for other material on decontamination, gather into one section.	Check
Transport			
Transport for exposed or contaminated victims	Transport victims of Radiation Emergencies to Appropriate Venue(s) victimtransport.htm	Make headings	Light edit

RESPOND: Treat



What's changed:

- Combined algorithms and tools to save space
- Moved at-risk populations to this page
- Added radiation safety in the hospital

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Clinical Algorithms and Tools			
Choose appropriate medical algorithm (algorithm)	Choose Appropriate Algorithm: Evaluate for Contamination and/or Exposure newptinterct.htm#skip	Algorithm	OK
Contamination	Contamination: Diagnose/Manage contamonly.htm#skip	Algorithm	OK
Exposure/Acute Radiation Syndrome	New Exposure Algorithm - Exposure: Diagnose/Manage Acute Radiation Syndrome exposureonly.htm#skip	Algorithm	OK
Contamination + Exposure	Exposure and Contamination exposurecontam.htm#skip	Algorithm. Match title	OK
Dose estimator for exposure (tool)	Dose estimator for Exposure: 3 Biodosimetry Tools ars_wbd.htm		OK
Isotopes of interest and countermeasures	Managing Internal Contamination int_contamination.htm#isotopestable	Match title on own page	Restructure page
Guidance			
Acute Radiation Syndrome (ARS) diagnosis & treatment	Radiation Exposure and Acute Radiation Syndrome Topics exposure_more.htm	(Note – this page is a menu/landing page with no content)	OK
Managing at risk populations	Populations with Special Needs specialpops.htm		OK
Use of blood products	Use of blood products bloodtransfusion.htm		Ok
Planning surgery for victims of neutropenia	Management Modifiers for Exposure Algorithm exposure_modifiers.htm#surgery	This is a small section. Should it even be a main link	?
Radiation safety in the hospital	Hospital Activities hospitalprep.htm	Create safety page from this page	Restructure page

RESPOND: Ongoing Management

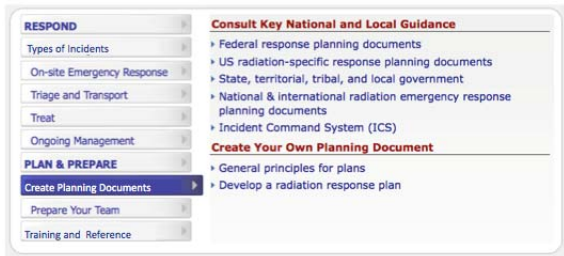


What's changed:

- Changed order of page, to put medical management on top
- Added "Arrange appropriate followup " on this page

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Ongoing Medical Management			
Arrange appropriate follow-up	Follow-Up Instructions for Individuals Involved in a Radiological/Nuclear Event followup.htm	Match title Add intro Note: These are model instructions to give to patients, not general information	OK
Manage recovery activities	Recovery after an Event recovery.htm		OK
Manage fatalities	Managing Fatalities: Information for Coroners and Medical Examiners deceased.htm		OK
Ongoing Medical Management			
Communicate with other responders regularly	underconstruction.htm	No current page	Write page
Communicate with the public regularly	underconstruction.htm	No current page ?? Go to info for public information officers??	Write page
Ongoing Medical Management			
Conduct population monitoring during/after event	Population Monitoring surveillance.htm		OK
Create registry for victims and responders	surveillance.htm	No current page	Write page

PLAN & PREPARE: Create Planning Documents

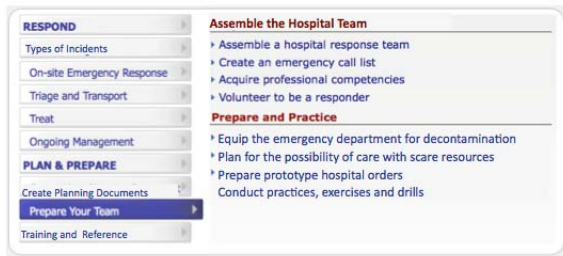


What's changed:

- New tab label
- No changes on flyout page

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Consult Key National and Local Guidance			
Federal response planning documents	Response Planning remm_Preplanning.htm#fedkeydocs	All of these links go to sections of a single page? Leave as is or break them up	OK or break page?
US radiation-specific response planning documents	Response Planning remm_Preplanning.htm#radkeydocs	Ditto	OK or break page?
State, territorial, tribal and local government	Response Planning remm_Preplanning.htm#stateslocal	Ditto	OK or break page?
National & international radiation emergency response planning documents	Response Planning remm_Preplanning.htm#international	Ditto	OK or break page?
Incident Command System (ICS)	Response Planning remm_Preplanning.htm#ics	Ditto	OK or break page?
Create Your Own Planning Document			
General principles for plans	Response Planning remm_Preplanning.htm#intro	Make into own page?	Create new page
Develop a radiation response plan	Develop a radiation response plan responseplan.htm	Multi-section page	OK

PLAN & PREPARE: Prepare Your Team



What's changed:

- Changed headings
- Added prototype orders

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Assemble the Hospital Team			
Assemble a hospital response team	Hospital Activities hospitalprep.htm#team	Link to a section on the page ? Make own page ?	Restructure page
Create an emergency call list	Emergency Contacts remm_RefDataCtr.htm		OK
Acquire professional competencies	Training and Education training.htm#edcompetency	Break out section into own page Here or under training?	Restructure page
Volunteer to be a responder	How to Volunteer volunteer.htm		Ok
Prepare and Practice			
Plan for hospital contamination and safety	(Contamination, safety, security) Hospitalprep.htm	Sections from current page	Restructure page
Plan for possibility of care with scarce resources	underconstruction.htm	No current page	Write page
Prepare Prototype hospital orders	Prototype for Adult Medical Facility Orders adultorderform.htm		Ok
Conduct practices, exercises, and drills	Practices and Drills remm_Drill.htm		OK
Equip the emergency department for decontamination	Equip an Emergency Department for Decontamination ersupplies.htm		OK

PLAN & PREPARE: Training and Reference



What's changed:

- Reversed order of headings on page
- Removed "Practices and drills" (now on Prepare Your Team)
- Removed Educational Goals for New Users (now on side of page)

Fly-out, heading, link	Target page title and URL	Notes on work	Status summary
Training			
Online Training	Training and Education training.htm#online		OK
Classroom- based Training	Training and Education training.htm#classroom		Ok
Educational competencies	Training and Education training.htm#edcompetency	Keep here or in Prepare Your Team?	Ok
Reference			
Radiation Basics	Understanding Radiation remm_RadPhysics.htm	Match title	OK
Units of measurement	Understanding Radiation remm_RadPhysics.htm#SI	(section of page)	OK
Dictionary of radiation terms	Dictionary of radiation terms dictionary.htm		OK
Abbreviations on this site	Abbreviations on this site abbreviations.htm		OK
Bibliography of radiation information	Sources of Radiological/Nuclear Information remm_SourcesofRadInfo.htm		OK

Annex: About the participants

Clinicians – Physicians (5)

#	Job Title	Emergency Response and radiation experience	Gender Yrs/Field
P3	Surgeon Emergency Medicine & Medical Management. Director of Center for Public Health Preparedness & Biomedical Research	<ul style="list-style-type: none"> Chief Medical Officer for Medical Reserve Corps Delivers training on ER, including general radiation issues Last ER drill – April 2010 as Evaluator/Senior Advisor 	M – 52
P6	Manager of Clinical Ops & Advanced Practice Nursing, Acute Care Nurse Practitioner	<ul style="list-style-type: none"> Assisted in creation of ER plan including radiation emergencies Received basic and advanced disaster training in 2008 Last ER exercise - 2008 as observer 	M - 10
P7	1 st year resident, Emergency Medicine EMS Paramedic (5 yrs)	<ul style="list-style-type: none"> (local) Emergency Responders Program General training on radiation Last ER drill – July 2010 Biohazards as First Responder 	F - 1
P8	4 th year resident, Emergency Medicine	<ul style="list-style-type: none"> General training on radiation Last ER drill – 2008 	M - 4
P9	3rd year resident, Emergency Medicine	<ul style="list-style-type: none"> General training on radiation Last ER drill – July 2010 as Triage 	M – 3

Clinicians – Other Specialties (4)

#	Job Title	Emergency Response and radiation experience	Gender Yrs/Field
P1	CNA in Hospital ICU	<ul style="list-style-type: none"> Volunteer Medical Reserve Corps Participated in creating ER plan through MRC Radiation decontamination training Last ER drill – Aug 2010 as Transport Team 	F – 6.5
P2	*Certified Respiratory Therapist & Cert. Neonatal/ Pediatric Specialist	<ul style="list-style-type: none"> Participated in creating an ER plan for a group of churches General training on radiation Last ER drill in triage & command center 	F - 35
P4	BSN RN	<ul style="list-style-type: none"> Created ER plan General training on radiation Last ER drill Aug 2010 as patient 	M – 10

Planners (5)

#	Job Title	Emergency Response and radiation experience	Gender Yrs/Field
P5	MSN RN, Pediatric Nurse, Credentialed in Pediatric Nursing, Director of Emergency Medical Serv. For Children	<ul style="list-style-type: none"> Participated in creating an ER Created ER training materials General training on radiation Last ER drill Feb 2010 as evaluator 	F – 29
P11	Planner	<ul style="list-style-type: none"> Responsible for ER planning Participated in creating an ER plan Received general training for ER through USPHS in Washington, D.C. (Aug. 2010) Scheduled to receive radiation response training in Nov 2010 Participated in ER exercise as Triage & Transport (Aug. 2010) Member of Medical Reserve Corps Veterinarian 	F – 1 yr. as planner, 3-4 yrs. With MRC
P12	Firefighter EMT	<ul style="list-style-type: none"> Responsible for ER planning Participated in creating an ER plan and training, included radiation emergencies Participated in ER exercise, role = triage (Jun 2010) Health Project Coordinator at Univ. & Public Health Preparedness Specialist for County in NY and Medical Reserve Corps Coordinator for County 	9 yrs. as responder 3 yrs. as planner
P15	*Independent consultant & Lieutenant at Metro Police Dept., Reserve Corps Div.	<ul style="list-style-type: none"> Created ER plan & training Responsible for ER planning – planned volunteer/reserve officers for the inauguration Received radiation response training at NV test site (2005/2006) Participated in ER exercise as an evaluator (2009) Master Firefighter/ Paramedic, CPP (Certified Protection Professional) and CEM (Certified Emergency Manager) 	M – 20
P18	Cities Readiness Initiative Program Coordinator	<ul style="list-style-type: none"> Participated in creating an ER plan that includes radiation emergencies Received general training for the ER at MRC Federal Deployment (Jun 2010) Received radiation response 	1 yr as planner, 20 yrs as paramedic 20 yrs as Hazmat

		<ul style="list-style-type: none"> training WMD course (Jul/Aug 2010) tech Last ER drill 2009 as Logistics Officer Member of Reserve Corps Disaster Researchers & Disaster Management Professionals Franklin County & Columbus Medical Management Corps
P19	Paramedic and Directory of County EMS	<ul style="list-style-type: none"> Responsible for ER planning Participated in creating an ER plan and training General training on radiation Last ER drill June 2010 as triage

Session conducted in person (*)

First Responders (3)

#	Job Title	Emergency Response and radiation experience	Gender Yrs/Field
P14	Volunteer – EMT Basic	<ul style="list-style-type: none"> Received general training for emergency response (2002) Participated in ER exercise with Capital Shield in role as first responder (2009)& has signed up to participate again in Oct. 2010 CERT member since 2003 Police officer in CT 1984-1997 	4
P16	*Firefighter/EMT	<ul style="list-style-type: none"> Participated in creating an ER plan Received general training for ER Hazmat refresher class (Jan 2010) Rescue boat course (Jun 2010) Last ER drill March 2010 with Special Rescue Ops as Responder Teaches CPR and Wilderness 	30
P17	*Firefighter/EMT 3	<ul style="list-style-type: none"> Received radiation training for ER 6 mos. Ago General radiation training 3 yrs. ago Last ER drill March 2010 as Dispatcher coordinating response 	8 ½

Session conducted in person (*)

Government Specialists (3)

In addition, 3 government specialists participated in the test. One filled a “no-show” session as (P13), the others were pilot participants.

Annex: Interview Guide

Participant background

Tell me a little bit about your role in emergency response. Emergency experience. Radiation experience

First reaction to the site (before leaving the home page).

- A. What is this site about?
- B. What does the site title mean to you?
- C. Who do you think this web site is made for?
- D. What kinds of things would you expect to find here?
- E. Who is responsible for this site?
- F. What is your first reaction to what you see here?
- G. What is the first thing you'd like to click on this site for yourself?

Tasks

Now, I'd like you to try using the site. This is a prototype, so only some of the links will work. When we hit one of those, just tell me what you think the link will lead to.

Let's say you have volunteered to be on a large team of [role] who will be called up to respond to a terrorist event.

Before your first practice, you want to find out more about how to respond if the emergency includes a radiation event.

Can you think of something you might want to look up on a site like this for your team?

Where would you go on this site to find that information?

General information tasks for all

1. Find descriptions of the different kinds of radiation events.

Follow up: What is the difference between a radiological event and a nuclear event.
(Answer: Types of Emergencies and link in first section or Multimedia: Event Types)

2. During emergencies, radiation can produce a variety of medical problems. Before responding to these problems, medical personnel must identify how exactly a victim has encountered radiation. Find an explanation about the 2 major ways that people encounter radiation.

(Answer: Types of Emergencies: exposure vs. contamination – do they recognize this as the answer?)

3. If something like on a scale of the explosions at Hiroshima and Nagasaki happened, find information about that kind of event.
(Answer: Types of Emergencies: Nuclear Explosion or Featured Guidance -- Nuclear Detonation Reponse)
4. Your team has been told that a “dirty bomb” has been identified at a bus station in your area.
 - a. For planners. The HAZMAT team has reported that the dirty bomb contained Cesium-137. Find information about Cesium-137 and how to respond to an event like this. Is this information helpful to you?
 - b. For clinicians. You expect patients with contamination from Cesium-137. Can you find information about all the things should be done when the patient comes into the hospital?
(Answer: Type of Emergencies – RDD – Isotopes in RDDs – View OR Quick Links: Isotopes of Interest - treatment link for Cs137 – Ion Exchange with Prussian Blue)
5. What is the right procedure for moving people who have only been *exposed* to radiation to a medical facility?
(Answer: Transport/Triage – Transport Victims – Read down to see that no radiation protection for vehicle is required for exposure, but yes it is for contamination. Or Multimedia: Triage and Transport – Transporting Patients)

Tasks for: clinicians or responders.

6. Your team has been told to prepare for victims who may have the “Acute Radiation Syndrome”. Find information about what Acute Radiation Syndrome is. What kind of encounter with radiation gives you ARS?
(Answer: exposure)
 7. You have heard the experts on your team talking about the various units used to measure how much radiation people have encountered. Find information about that on this site?
(Answer: Learn-Units of Measurement or possibly Dictionary or Learn-Basics - Units)
 8. You know that people who have been contaminated with radiation need to be decontaminated. Find information about that on this site?
(Answer: Triage/Tr/Treat – Decontamination)
 9. Like with any condition or disease, radiation affects different people differently, and this could result in the need to customize treatment. Can you find anything about this on this site?
(Answer: Medical Treatment Modifiers – Special Needs)
- If they fail on (a)
- b. For example, what if one of the victims is a pregnant woman or has a disability. Where would you look to find information about that?
(Answer: Medical Treatment Modifiers – Combined Injury)
 - c. Take a look at the links on the left. When you read “Medical Treatment Modifiers” what do you expect to find there?

Now take a look at the links inside. Can you think of a better label for this collection of information. Is there something that you think is missing?

10. a. When people who have been contaminated with radiation die, are there things that need to be done to handle the remains?

(Answer: more key tasks – Manage Fatalities)

- b. When you read “More Key Task” what do you expect to find there?

Now take a look at the collection of links. Can you think of a better label?

Tasks for clinicians

11. You suspect that your patient has been exposed to radiation. Is there information on this site that can help you find out how much radiation your patient has received?

(Answer: Dose Estimator (from T/T/T or Quick links))

12. In radiation emergencies, burns can be a problem. Is there anything on this site about that?

(Answer: Medical Treatment Modifiers – Burn Triage & Treatment or Radiation + Burns)

13. We are working on a revision of the algorithm for managing treatment for radiation **exposure**. I'm going to show you two versions. In each one, I'd like you to find information about the subsyndromes of ARS (Acute Radiation Syndrome) for an event with only a few patients involved.

Alternate starting version, so they see the in different orders.

Tasks for planners or others with planning responsibilities.

14. You are on a task force for your state that is charged with creating a new radiation response plan? Find guidance documents or sample plans.

(Answer Plan (provides basics, a better choice is Prepare – Develop a radiation response plan))

15. You are in charge of stocking the Emergency Department of your hospital with all the things you need to respond to radiological emergencies? Find information about what to stock and store?

(Answer: Prepare – Be prepared with supplies and equipment)

16. You are part of a team that is charged with creating a mock radiation event for your hospital. Find information to help you plan the drill.

(Answer: Prepare – Exercise, drills or Learn: Practices, exercise drills)

17. You are on your hospital's team that is responsible for creating a group of people who have trained to respond to a radiation emergency. Who should be on the team?

(Answer: Prepare – Assemble a Response Team)

18. You are on a team that will admit patients to a medical facility after a radiation emergency. Can you find information about what kinds of things might need to be done for patients like this?

(Answer: Treat – Prototype Hospital Orders, or same link in Quick Links)

19. You are trying to train [your team] to protect themselves from radiation. Is there any information on the site that you could include in a presentation.

(Answer: Multimedia – Radiation Safety. Prompt to Multimedia section if they go to the flyouts)

Site features

20. What do you think of the REMM multimedia library? Its organization, its content, do you understand the category groups that are presented?

(Note, the alpha radiation animation does not replay)

21. Is there a version of this web site that would work on an iPhone

22. (low priority) On the right side of the home page are a group of links labeled “Featured Guidance”. What do you expect to see when you click those links?

23. (low priority) There are many links at the bottom of this home page. What do you think of this group of link? Why are they there?

Comparing old and new sites

We’ve been working with one version of the site, but I’d like to show you an alternate home page.

Show image of prototype home page (A)

Show image of current home page (B)

Which do you prefer? Why?

Wrap up

What is your overall impression of the site?

Is there any information that you think is missing? What else would you like to see on the site?

Now that you have seen the site, if you needed this kind of information, how likely would you be to turn to this site for it?

Very unlikely (1) Unlikely (2) Neutral (3) Likely (4) Very likely (5)

How likely would you be to recommend this site to a colleague?

Very unlikely (1) Unlikely (2) Neutral (3) Likely (4) Very likely (5)

Do you have any other thoughts? Anything we haven’t discussed that you think is important?