JHPS activities after Fukushima nuclear accident - Points at issues on RP -

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 - #4 Looking back over one year from the accident (with panel discussions on what is a key role JHPS should play)

Draft of Responses of and Recommendations from JHPS

Publication of "Issues Associated with Radiation Protection after Fukushima Daiichi Nuclear Power Plant Disaster - Responses of and Recommendations from JHPS -"



Voluntarily started Q&A web-site in JHPS HP



Voluntarily started activity

- On 14th March, a retired member raised his hand to make a contribution for society through JHPS activity.
- On 25th March, voluntarily developed Q&A web-site started and was linked into the top of the JHPS Homepage.







Contents of Q&A site





Volunteers

- Almost 20 JHPS members including
 - Retired experts
 - Experts in Universities mainly from western Japan
- Leader of the volunteer team was the past president of JHPS.
- Credit of all answer was in JHPS.
- ◆On 24th August, the volunteer team was reconstructed as a <u>new official committee in JHPS</u> for Q&A.



Overview of Q&A site

- ightharpoonup 10 15 questions per day.
- ◆ More than 1500 Q&As as of 11th Apr 2012.
- Questions are different from those at early stage.
 - Simple question and concerns for radiation effects
 - → More specific questions, e.g. How to deal with it?
 - → If an expert says it is safe, he's unreliable. If the experts says it may be danger, he is reliable.
- ◆Risk communication including the Q&A site will be discussed in the next plenary "Engaging with Society" this afternoon and KIDS 4 session tomorrow in IRPA13.



Fukushima accident symposia

- #1 Nuclear emergency preparedness and its criteria
- #2 Focusing on public exposure
- #3 Focusing on internal dose assessment and radioactive waste management
- #4 Looking back over one year from the accident



Fukushima accident symposium #1

- Nuclear emergency preparedness and its criteria -



16th June 2011 at Koshiba Hall, Univ. of Tokyo



Program of Symposium #1

Keynote address

Criteria on nuclear emergency preparedness and its implementations ---Nobuyuki Sugiura (NIRS)

Discussions on three topics

- Evacuation and stay in-house --- Michiaki Kai (Oita-NHS)
- Administration of stable iodine --- Hiroshi Ishihara (NIRS)
- Regulations on foods and drinks --- Jiro Inaba (REA)

Responses after accident - exchange of views

- Q&A activity after accident --- Tadashi Oumi (JAPC)
- Fukushima local situation --- Tomio Kawata (NUMO)
- Questionnaire results from younger researchers --- Haruyuki Ogino (CRIEPI) → "Engaging with Society" and Kotaro Tani (Univ. of Tokyo)
 - → Technical Session <u>TS2b.8</u>, Internal Dose Assessment
 - → Candidate of "Young Professional Prize"

→ Poster *P12.34*

→ Poster *P12.49*



Fukushima accident symposium #2

- Focusing on public exposure -



12th August 2011 at Koshiba Hall, Univ. of Tokyo



Program of Symposium #2

Keynote address

Outlook of Fukushima accident --- Syunichi Tanaka (Former Vice-chair, AEC)

Exposure of residents

- → Poster <u>P12.08</u>
- Local survey on contaminated soil and dose rate --- Kimiaki Saito (JAEA)
- Temporary access to the restricted area --- Hideo Tatsuzaki (NIRS)

Contamination in the metropolitan area and its effect on civic life

- → Poster *P04.24*
- Contaminated situation in the metropolitan area --- Takeshi limoto (Univ. of Tokyo)
- Disposal of wastes and sewage sludge after disaster --- Nobuyuki Sugiura (NIRS)
- Public concerns and questions from analysis of Q&A --- Michikuni Shimo (Fujita Health Univ.)

→ Poster *P12.64*

Proposal from younger researchers --- Takahiko Kono (JAEA)

General discussion

On the basis of experience in the local office --- Yasushi Yasuda (NIRS)



Fukushima accident symposium #3

- Focusing on internal dose assessment and radioactive waste management -



17th December 2011 at Koshiba Hall, Univ. of Tokyo



Program of Symposium #3

◆ Dose assessment of the residents at an early stage of accident

- Current status and unsolved issues for dose assessment for the residents --- Tomoyuki Takahashi (Kyoto Univ.)
- Atmospheric diffusion of radioactive materials --- Haruyasu Nagai (JAEA)
- Results of screening survey of equivalent dose at a thyroid for infants --- Yasumasa Fukushima (Cabinet Office)
- Current status of contamination in foods --- Ichiro Yamaguchi (NIPH)

Dose limit for emergency workers

- From discussion in the Radiation Council --- Nobuyuki Sugiura (NIRS)
- Actual operation & management and future issues --- Kenji Sugai (TEPCO)

♦ Radioactive waste management after the accident

- Current status of radioactive wastes --- Yuiichi Moriguchi (Univ. of Tokyo)
- Framework of waste management in existing exposure situation --- Daisuke Sugiyama (CRIEPI)

Comprehensive discussions

→ Poster *P12.22*

→ Technical Session <u>TS12c</u>,

- RP and Risk Issues -

- Issues on personal dosimetry --- Chie Takada (JAEA)
- Risk-communication on radiation through 9 months after accident --- Haruyuki Ogino (CRIEPI)
- ➤ RP points at issues after the accident --- Takatoshi Hattori (CRIEPI)
 → Poster P12.55

→ "Engaging with Society"

→ Poster <u>P12.34</u>

→ Poster <u>P12.49</u>



Fukushima accident symposium #4

- Looking back over one year from the accident -



4th March 2012 at Koshiba Hall, Univ. of Tokyo



Program of Symposium #4

Keynote address

Summarization of RP after accident --- Toshiso Kosako (President of JHPS and AOARP)

Special talks

- Press of RP and reasonable regulation for foods --- Ohtsura Niwa (Kyoto Univ.)
- RP during decontamination activities --- Sadaaki Furuta (JAEA)

Panel discussions on what is a key role JHPS should play

- Responses of and Recommendations from JHPS --- Takatoshi Hattori (CRIEPI)→ Poster P12.55
- Issues and responses from Q&A activities --- Takahiko Kono (JAEA) → Poster P12.64
- Public concerns and questions from analysis of Q&A --- Yuya Koike (Meiji Univ.)
- > Towards communication with oversea countries --- Takatoshi Hattori (CRIEPI)
- Issues and responses from standardization --- Masafumi Yamamoto (RWMC)
- > Specific issues and human resource development --- Takumaro Momose (JAEA)
- Discussions with attendees



Publication of "Issues Associated with Radiation Protection after Fukushima Daiichi Nuclear Power Plant Disaster

- Responses of and Recommendations from JHPS -"



Issues associated with RP after the accident

1) Comprehensive issues related to all the situations

- (Issue 1) Strategies for <u>reducing anxiety and doubts of the general public</u> regarding radiation risk
- (Issue 2) Methods of measuring ambient dose rate, surface contamination density, and concentration of radioactive materials in foods

2) Issues related to emergency exposure situation

- (Issue 3) Criteria for evacuation and stay in-house
- (Issue 4) Administration of stable iodide
- (Issue 5) Principles for <u>regulation of ingestion of foods and drinks</u>
- (Issue 6) Screening criteria for decontamination
- (Issue 7) <u>Dose limit for emergency workers</u>
- (Issue 8) Post disaster investigation of thyroid equivalent dose of radioactive iodine

3) Issues related to existing exposure situation

- (Issue 9) <u>Provisional criteria for judging the safety</u> of using school yards, forage, cropping soil, fertilizers, bathing areas, etc.
- (Issue 10) Systems for temporary entry into restricted zones
- (Issue 11) Management of radioactive wastes such as cesium-containing rubble, sludge, and decontaminated soil



JHPS Responses and Recommendations

- ◆ 27 (31 with overlapping 4) points at issues were pointed out from 11 issues associated with RP after the accident.
- 5 Responses of JHPS were declared.
- 12 (16 with overlapping 4) recommendations of JHPS were drawn up taking into consideration
 - 1) how to improve the current system of RP by overlooking the various opinions on RP in an emergency and
 - 2) direction towards future goals of the RP system by exploiting the strength of JHPS of having many experts in RP among its members.
- This report can be downloaded in the JHPS HP (http://www.jhps.or.jp/en/)

Issues Associated with Radiation Protection after Fukushima Daiichi Nuclear Power Plant Disaster

- Responses of and Recommendations from

Japan Health Physics Society -

17 April 2012

Japan Health Physics Society

jhps





5 Responses of JHPS

- 1. To publish experiences on **Q&A** web-site as a booklet
- To enhance <u>human resource development</u>, such as <u>spokespersons for RP</u>, through a course of lectures and explanatory sessions for public
- 3. To discuss towards the <u>re-establishment of simple RP</u> <u>systems</u> for protecting the public from radiation exposure
- 4. To make presentations and communications in IRPA13
- 5. To <u>standardize</u> radiation-related emergency methods



12 Recommendations (1 to 5)

- 1. <u>Balance</u> among other emergency criteria
- Assumption of <u>long-term emergency situation</u> and <u>maintenance of infrastructure</u> including electricity, water, and communications
- 3. Use of <u>SPEEDI and simulations</u> on the diffusion of radioactive materials in the ocean
- 4. <u>Communication with residents</u> to designate the deliberate evacuation zones
- 5. Review of emergency planning zones (EPZs)



12 Recommendations (6 to 8)

- 6. <u>Category of foods</u> and scope of radioactive nuclides except for key nuclides <u>in regulation of foods and drinks</u>
- 7. Validity of <u>screening levels for decontamination (100 and 13 kcpm)</u> from the viewpoint of RP
- 8. Transition of dose limit for emergency workers to 250 mSv and how to control individual dose after shifting back to a normal situation using a dose limit (50mSv/y & 100mSv/5y)



12 Recommendations (9 to 12)

- 9. Post disaster investigation of thyroid equivalent dose of radioactive iodine by simulating the atmospheric diffusion using SPEEDI and surveys on residents' behavior
- 10. <u>Balance among provisional criteria</u> for judging the safety of using school yards, forage, cropping soil, fertilizers, bathing areas, etc.
- 11. <u>Balance among RP measures, inconvenience and heat</u> <u>stroke</u> in relation to systems for temporary entry into restricted zones
- 12. <u>Management of radioactive wastes</u> such as cesium-containing rubble, sludge, and decontaminated soil



Way forward

- ◆ Q&A site is going to be continued <u>till the end of fiscal 2012</u>. A collection of questions received and answers given in a new booklet will be published in fiscal 2012.
- Discussions in JHPS would be held continuously with topical themes of radiological protection after the accident.







Issues Associated with Radiation Protection after Fukushima Daiichi Nuclear Power Plant Disaster

 $\hbox{\bf -Responses of and Recommendations from}$

Japan Health Physics Society -

17 April 2012

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17 April 2012 Japan Health Physics Society Executive Committee

Issues Associated with Radiation Protection after Fukushima Daiichi Nuclear Power Plant Disaster

- Responses of and Recommendations from Japan Health Physics Society -

We, executive committee in the Japan Health Physics Society (JHPS), established a working group for review and recommendation on radiation protection issues and have worked with the working group for the purpose of summarizing relevant JHPS activities, such as operating a Q&A web-site in our home page and holding symposia, over the year following the earthquake. Issues associated with radiation protection have reviewed on the basis of knowledge and lessons learned from responses after Fukushima Daiichi nuclear disaster, which results in this announcement of responses of and recommendations from JHPS after web-consulting with the JHPS members from 8th to 31st March 2012. We hope it can be of any help to a large number of experts of radiation protection as well as those in JHPS.

We would like to express our heartfelt gratitude for the people who have supported for dealing with the nuclear disaster.

Concluded