

1 **ADMINISTRATIVE ORDER**

2 No. 2024 - \_\_\_\_\_

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4 **SUBJECT: Guidelines on Medical Preparedness and Response to a**  
5 **Nuclear or Radiological Emergency and Medical**  
6 **Management of Radiation Injuries**  
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9 **I. RATIONALE**

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11 With the signing of Executive Order No. 164 s. 2022 or "Adopting a National  
12 Position for a Nuclear Energy Program, and for other Purposes," the Philippines  
13 intends to embark in the inclusion of nuclear energy in the national energy mix. This  
14 was also reflected in the current national medium-term roadmap or the Philippine  
15 Development Plan 2023-2028, through Executive Order No. 14 s. 2023.  
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17 Through these developments, the national government is establishing the  
18 necessary infrastructure, legal, and regulatory framework for the implementation of  
19 this position in line with the recommendations of the International Atomic Energy  
20 Agency (IAEA). Among others, this includes the establishment of an effective  
21 nuclear or radiological emergency preparedness and response mechanism. Since  
22 such emergencies, if not properly managed, pose an imminent threat to human  
23 health and security.  
24

25 Additionally, nuclear or radiological emergencies are classified as public health  
26 emergency of international concern (PHEIC) under the World Health  
27 Organization's International Health Regulations (WHO-IHR) 2005, which is an  
28 international law, legally binding on WHO member states such as the Philippines.  
29 The establishment of a national medical response framework and mechanism for  
30 nuclear or radiological emergencies is one of the critical health measures required  
31 by the WHO-IHR.  
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33 As such, this Order is issued to provide comprehensive and rationalized  
34 guidelines in the preparedness, response, management, and surveillance of nuclear  
35 and radiological emergencies vis-à-vis the current DOH health emergency response  
36 framework established through DOH Administrative Order (AO) No. 168 s. 2004  
37 or the "National Policy on Health Emergencies and Disasters" and other relevant  
38 issuances, aligning also with the Medium-Term Strategy of the Health Sector for  
39 2023-2028 in ensuring a responsive and resilient health systems for health crises  
40 and emergencies.  
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42 Furthermore, these guidelines shall be based on the 2015 International Atomic  
43 Energy Agency (IAEA) General Safety Requirements Part 7 and the Generic

44 Procedures for Medical Response During a Nuclear or Radiological Emergencies  
45 published by the IAEA-WHO as Emergency Preparedness and Response – Medical  
46 (2005), and other relevant international guidelines, which asserts that national  
47 arrangements should be in place for the provision of appropriate medical screening  
48 and triage, medical treatment, and longer-term medical actions for people who  
49 could be affected in a nuclear or radiological emergency.  
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## 51 52 **II. OBJECTIVES**

53  
54 This Order aims to provide guidelines on medical preparedness and response to  
55 nuclear or radiological emergencies, and medical management of radiation injuries.  
56 Specifically, it aims to:  
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- 58 A. Establish the medical preparedness and response framework and infrastructure  
59 for nuclear or radiological emergencies, harmonizing and augmenting current  
60 national emergency response mechanisms established through the National  
61 Radiological Emergency Preparedness and Response Plan (RADPLAN) and  
62 other relevant national emergency plans;  
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- 64 B. Establish guidelines and protocols to be used by Health Emergency Response  
65 Teams (HERTs), health facilities, and other health sector partners for emergency  
66 medical response to nuclear or radiological emergencies;  
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- 68 C. Identify and capacitate HERTs, health facilities, and other health sector partners  
69 responsible to medically prepare, respond, and manage nuclear or radiological  
70 emergencies;  
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- 72 D. Ensure sustainability and improvement of systems and mechanisms through  
73 continuous professional development and conduct of routine exercises for  
74 emergency preparedness.  
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## 76 77 **III. SCOPE OF APPLICATION**

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79 This Order is issued for the guidance of the DOH Central Office and its attached  
80 agencies, Centers for Health Development (CHDs), DOH Hospitals, Local  
81 Government Units (LGUs), Philippine and International Health Emergency  
82 Response Teams (P/IHERTs), and other government and non-governmental  
83 agencies in the health sector.  
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85 These guidelines are applicable only to health-related preparedness and  
86 response procedures for nuclear or radiological emergencies. All other aspects of

87 the general emergency preparedness and response procedures shall be referred to  
88 the RADPLAN or any relevant national guidelines.  
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90 It shall also apply to the Bangsamoro Autonomous Region in Muslim Mindanao  
91 (BARMM), subject to the applicable provisions of Republic Act No. 11054 or the  
92 “Organic Law for the Bangsamoro Organic Autonomous Region in Muslim  
93 Mindanao” and its subsequent laws and issuances.  
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#### 95 96 **IV. DEFINITION OF TERMS** 97

98 For the purpose of implementing this Order, all the terms or words and phrases  
99 used that are already defined in related FDA and DOH implemented health law and  
100 their respective Implementing Rules and Regulations (IRR) and international  
101 standards shall have the same meaning as defined herein.  
102

103 **A. Apex or end-referral hospitals** refer to single specialty hospitals that are  
104 designated by law or licensed by DOH or general hospitals with accredited  
105 teaching and training programs in at least four major departments with at least  
106 two specialty centers according to DOH standards.  
107

108 **B. Casualties** refers to victims who may have been harmed by one or more of the  
109 following causes: (a) external exposure (localized, partial and whole body), (b)  
110 contamination (external/internal), and (c) conventional trauma.  
111

112 **C. Clinical Practice Guidelines (CPG)** refers to recommendations intended to  
113 optimize patient care, which are informed by a systematic review of evidence  
114 and an assessment of the benefits and harms of alternative care options.  
115

116 **D. Decorporation** refers to the biological processes by means of which  
117 incorporated radionuclides are removed from the human body which may be  
118 promoted or aggravated by chemical or biological agents.  
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120 **E. Disaster Risk Reduction and Management in Health (DRRM-H)** - an  
121 integrated, systems-based, multi-sectoral process that utilizes policies, plans,  
122 programs, strategies to reduce health risks due to disasters and emergencies,  
123 improve preparedness for adverse effects and lessen adverse impacts of hazards  
124 to address needs of affected population with emphasis on the vulnerable groups.  
125

126 **F. Event-based Surveillance and Response (ESR)** refers to the organized and  
127 rapid capture of information about events that are a potential risk to public  
128 health including events related to potential risk-exposures in humans. Its core

129 processes are capture, verify, filter, assessment, response, and feedback and  
130 information dissemination.

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132 G. **Health Emergency Response Teams (HERTs)** refers to all types of teams  
133 mobilized during events, emergencies, and disasters to provide health and  
134 health-related services by any health sector, agency, or organization, whether  
135 local or international.

136

137 H. **National Radiological Emergency Preparedness and Response Plan**  
138 **(RADPLAN)** refers to the organized emergency response capability for timely,  
139 coordinated action of Philippine authorities in a nuclear or radiological  
140 emergency.

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142 I. **National Disaster Risk Reduction and Management Plan (NDRRMP)** refers  
143 to the long-term national sectoral plan aiming to address four main priority areas  
144 as disaster prevention and mitigation, disaster preparedness, disaster response,  
145 rehabilitation and recovery.

146

147 J. **Nuclear or Radiological Emergency** refers to an emergency in which there is,  
148 or is perceived to be, a hazard due to (a) the energy resulting from a nuclear  
149 chain reaction or from the decay of the products of a chain reaction (*nuclear*);  
150 or (b) radiation exposure (*radiological*). Specifically, and for the purposes only  
151 of **medical response**, the types of nuclear or radiological emergency are as  
152 follows:

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154 a. **Reactor Emergencies** referring to emergencies involving any type of  
155 nuclear reactor which may lead to widespread contamination and non-  
156 radiological consequences;

157 b. **Criticality Emergencies** where sufficient quantities of special nuclear  
158 material are inadvertently allowed to undergo fission;

159 c. **Emergencies involving lost/stolen dangerous sources;**

160 d. **Emergencies resulting from use or misuse of dangerous industrial**  
161 **sources;**

162 e. **Accidental medical radiation overexposure** refers to miscalculation of  
163 the activity of a therapy source, improper function of an X ray device or  
164 accelerator, or when higher activities than intended are inadvertently  
165 administered during diagnosis and therapy;

166 f. **Transport and laboratory emergencies with involvement of**  
167 **radioactive material;**

168 g. **Emergencies involving malicious use of radioactive material** in  
169 scenarios that include (1) spread of sealed sources, (2) use of a  
170 radiological dispersal device, or (3) detonation of a crude or  
171 sophisticated nuclear weapon; and

172 h. **Emergencies involving radioactive contamination of air, food**  
173 **products, and water supplies.**

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175 And any other type of nuclear or radiological emergency categorized by  
176 the Department of Health.  
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178 K. **Public health emergency** refers to an occurrent or imminent threat of an illness  
179 or health condition that:

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181 a. Is caused by any of the following: (1) Bioterrorism; (2) Appearance of  
182 a novel or pre previously controlled or eradicated infectious agent or  
183 biological toxin; (3) A natural disaster; (4) A chemical attack or  
184 accidental release; (5) A nuclear attack or accident; or (6) An attack or  
185 accidental release of radioactive materials; and  
186 b. Poses a high probability of any of the following: (1) A large number of  
187 deaths in the affected population; (2) A large number of serious injuries  
188 or long-term disabilities in the affected population; (3) Widespread  
189 exposure to an infectious or toxic agent that poses a significant risk of  
190 substantial harm to a large number of people in the affected population;  
191 (4) International exposure to an infectious or toxic agent that poses a  
192 significant risk to the health of citizens of other countries; or (5) Trade  
193 and travel restrictions;  
194

195 L. **Stable iodine prophylaxis** refers to the administration of stable iodine to  
196 prevent and compete with the absorption of radioactive iodine to the thyroid  
197 gland, released during nuclear or radiological emergencies, thus lowering the  
198 radiation dose to the organ.  
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201 V. **GENERAL GUIDELINES**  
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203 A. Coordination mechanisms and roles and responsibilities of covered health  
204 sector and health sector partners for the medical response to nuclear or  
205 radiological emergencies shall be updated in consonance with the Philippine  
206 Disaster Risk Reduction Management system, National Disaster Risk  
207 Reduction and Management Plan (NDRRMP), and National Radiological  
208 Emergency Preparedness and Response Plan (RADPLAN), among other  
209 relevant policies and plans.  
210

211 B. Nuclear or radiological emergencies, categorized as a public health emergency  
212 under RA No. 11332 and its implementing rules and regulations, shall be  
213 captured by the Event-based Surveillance and Response (ESR) core processes

214 of the Philippine Integrated Disease Surveillance and Response (PIDSRS) system  
215 as one of the notification mechanisms for nuclear or radiological emergencies.  
216

217 C. The guidelines set forth in this Order and its supplementary issuances shall be  
218 included and adopted in the Disaster Risk Reduction and Management in Health  
219 (DRRM-H) plans of province-wide and city-wide health systems.  
220

221 D. For identified or possible nuclear or radiological emergencies following the  
222 NDRRMP and RADPLAN trigger, activation, and notification mechanisms,  
223 specialized Health Emergency Response Teams (HERTs) shall be mobilized and  
224 demobilized in accordance with DOH AO No. 2018-0018.  
225

226 E. Referral hospitals in the country, as specialized care centers for the medical  
227 diagnosis, treatment, and management of casualties from a nuclear or  
228 radiological emergency, shall be classified and identified in accordance with  
229 DOH AO No. 2020-0019 or the “Guidelines on the Service Delivery Design of  
230 Health Care Provider Networks.” For international hospital referrals, patient  
231 transfers shall be coordinated by DOH-HEMB, through BIHC and the PNRI.  
232

233 F. Medical diagnosis and treatment protocols of radiation injuries, outlined in the  
234 IAEA EPR-Medical 2005 publication, IAEA Safety Report Series Nos. 2, and  
235 101 shall be reviewed, vetted, and adopted as National Clinical Practice  
236 Guidelines (CPG), following DOH Administrative Order No. 2023-0002 or the  
237 “Institutionalization of the Expanded National Practice Guidelines Program.”  
238

239 G. Nuclear and radiological facilities, including designated HERTs, and referral  
240 hospitals shall include the medical preparedness and response procedures  
241 established in this Order, in both RADPLAN-mandated and other institutionally  
242 established routine emergency drills and preparedness exercises.  
243

244 H. HERTs, hospital personnel, and other relevant emergency workers for nuclear  
245 or radiological emergencies, identified through the RADPLAN, shall be entitled  
246 to health protection mechanisms with specific medical attention vis-à-vis the  
247 occupational dose they incurred during mobilization and demobilization  
248 processes.  
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250 I. The DOH shall maintain a knowledge management system to consolidate  
251 information regarding nuclear or radiological emergencies, including the list of  
252 health facilities, trainings, reported incidents and accidents, and lessons learned,  
253 among others.  
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256 **VI. SPECIFIC GUIDELINES**

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**A. Medical Preparedness to Nuclear or Radiological Emergencies**

- a. Nuclear or radiological emergencies shall be categorized as **Category I** or immediately notifiable health event of public health concern, in line with the Implementing Rules and Regulations (IRR) of RA 11332.
- b. Strategic, operational, and tactical preparedness and response in the health sector, including but not limited to the mobilization of appropriate HERTs and medical management of radiation injuries, shall be commensurate to the nuclear or radiological threat categorization and characteristics of possible or potential health consequences outlined in **Annex A**.
- c. Specific DOH-designated Apex or End-Referral Hospitals with authorized radiotherapy or nuclear medicine facilities shall be classified and identified as specialized care centers for radiation injuries in a separate issuance, in accordance with the Philippine Health Facility Development Plan and RA No. 11959 or “the Regional Specialty Centers Act.”
- d. General logistical requirements for HERTs and health facilities for pre-hospital and hospital response to nuclear or radiological emergencies are listed in **Annex B**, supplementing current requirements set forth by DOH AO No. 2018-0018 and other relevant issuances.
- e. The DOH and identified specialized care centers for radiation emergencies shall also establish and maintain a stockpile of stable iodine prophylaxis to be used in public health response.
- f. Identified specialized care centers shall institute annual emergency drills and capacity building activities relevant to the implementation of the incident command system (ICS) for a nuclear or radiological emergency.

**B. Medical Response to Nuclear and Radiological Emergencies**

- a. The following entities involved in the medical response to nuclear or radiological emergencies, including the definition and function of the response organization, are outlined in **Annex C**, while the overall framework is presented in **Annex D**:
  - i. First responder
  - ii. Operations Center

- 300                           iii. Specialized Health Emergency Response Team  
301                                 1. Radiological Assessor  
302                                 2. Decontamination Team  
303                                 3. Specialized Ambulance Team  
304                           iv. Hospital Incident Command System (HICS) Commander  
305                                 v. First Receivers  
306                                 vi. Referral Hospital  
307                                 vii. Specialized Medical Teams  
308                                 viii. Public Health Advisor  
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310                           b. The classification of casualties related to nuclear or radiological  
311                                 emergencies and its practical applications during a nuclear or  
312                                 radiological emergency is outlined in **Annex E**.  
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314                           c. The generic medical response mechanisms to nuclear and radiological  
315                                 emergencies, outlined in **Annex F**, shall be adopted, and issued as the  
316                                 Manual of Procedures for the Medical Response to Nuclear or  
317                                 radiological Emergencies through a separate issuance.  
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319                           d. Biological Dosimetry Laboratories DOH as authorized clinical  
320                                 laboratories in identified specialized care centers shall be established  
321                                 and capacitated, to provide bioassay, radiopathology, and bio dosimetry  
322                                 services.  
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324                           e. International assistance and coordination mechanisms, including the  
325                                 entry, management, and exit of International HERTs, from but not  
326                                 limited to, the International Atomic Energy Agency (IAEA) and the  
327                                 World Health Organization – Radiation Emergency Medical Assistance  
328                                 Network (WHO-REMPAN) through DOH-HEMB, shall be in  
329                                 accordance with DOH Administrative Order No. 2022-0002.  
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## 331 **VII. ROLES AND RESPONSIBILITIES**

### 332 **A. DOH Central Office**

#### 333 **a. Office of the Secretary**

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336                           i. Shall provide oversight on the mobilization of HERTs and DOH  
337                                 agencies, including special instructions from the President of the  
338                                 Philippines, if any;  
339                                 ii. Shall act or designate a DOH official, as the Public Health  
340                                 Advisor, to provide immediate and long-term public health  
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343 advice for nuclear and radiological emergencies, in particular,  
344 the administration of stable iodine prophylaxis.

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**b. Health Emergency Management Bureau**

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**c. Epidemiology Bureau (EB)**

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**d. Health Facility Development Bureau**

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- i. Shall identify and classify specific DOH-designated Apex or End-Referral Hospitals as specialized care centers for radiation injuries, in accordance with the Resource Stratified Framework of the Philippine Health Facility Development Plan, in

- 386 coordination with the Philippine Nuclear Research Institute  
387 (PNRI);
- 388 ii. Shall develop plans, policies, programs, and strategies related to  
389 health facility development, planning, operation, maintenance,  
390 in accordance with this Order, including the establishment of  
391 National Biological Dosimetry Laboratories in identified  
392 specialized care centers, in coordination with the PNRI.  
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- 394 e. **Health Facilities Enhancement Program Management Office** shall  
395 equip and provide financial support to hospitals for the development and  
396 design relevant to preparedness and response to nuclear or radiological  
397 emergencies, in coordination with the PNRI.  
398
- 399 f. **Health Facility Services and Regulatory Bureau**
- 400
- 401 i. Shall establish or update hospital standards and regulations to  
402 ensure capability of identified specialized care centers to respond  
403 to nuclear or radiological emergencies;
- 404 ii. Shall ensure the compliance of hospitals through the assessment  
405 of availability and inclusion of written policies and procedures  
406 in preparing, reporting, responding, and managing nuclear or  
407 radiological emergencies.  
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- 409 g. **Knowledge Management and Information Technology Service**
- 410
- 411 i. Shall establish and maintain the IT infrastructure needed in  
412 support of the implementation of this Order;
- 413 ii. Shall organize response teams to provide support on information  
414 management to the Operation Center; and,
- 415 iii. Shall establish and maintain an Information Management  
416 System for nuclear or radiological emergencies;  
417
- 418 h. **Field Implementation and Coordination Team**
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- 420 i. Shall oversee HEMS and coordinate with its field units on  
421 matters concerning the implementation of DRRM-H plan;
- 422 ii. Shall provide direction and support coordination to CHDs, DOH  
423 Hospitals, and other members of the health sector in the  
424 deployment of teams responding to nuclear or radiological  
425 emergencies; and,
- 426 iii. Through the CHDs, shall provide leadership through technical,  
427 logistical, and financial assistance to ensure functionality of the  
428 ESR systems of the regional, local, and hospital ESU.

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**i. Health Human Resource Development Bureau**

- i. Shall provide technical assistance on the development of competency standards for health professional staff as members of the nuclear or radiological emergency teams;
- ii. Shall include nuclear and radiation qualified experts, such as but not limited to, radiological medical practitioners or physicians, medical and health physicists, radiologic technologists, and Emergency Medical Technicians, to the National Human Resources for Health Master Plan, and develop frameworks and strategies in the implementation of such;
- iii. Shall provide technical assistance on the development of learning and development (L&D) packages or required modules and L&D interventions of personnel designated to medical response to nuclear or radiological emergency teams.

**j. Bureau of Quarantine**

- i. Shall develop detection and response for exposed international travelers for immediate medical management in accordance with this Order; and,
- ii. Shall capacitate all international points of entry to detect and respond to nuclear or radiological emergencies for exposed travelers arriving from foreign countries with nuclear or radiological incidents, in coordination with PNRI.

**k. Disease Prevention and Control Bureau**

- i. Shall oversee and initiate the adoption of diagnostic and treatment protocols for radiation injuries as national clinical practice guidelines.

**l. Health Promotion Bureau**

- i. Shall establish and create information, education, and communication (IEC) materials, in coordination with PNRI, HEMB, and FDA-CDRRHR, relevant to the medical response to nuclear or radiological emergencies.

**m. Bureau of International Health Cooperation**

- 471 i. Shall coordinate and manage international patient referrals and  
472 entry and logistics of International Health Emergency Response  
473 Teams (IHERTs) in accordance to concurrent DOH guidelines.  
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475 **B. Food and Drug Administration – Center for Device Regulation, Radiation**  
476 **Health, and Research**  
477

- 478 a. Shall provide technical inputs in the development of the health sector's  
479 plan in preparedness and response for nuclear or radiological incidents;  
480 b. Shall review, monitor, and evaluate, in coordination with DOH-HEMB,  
481 the implementation of this Order;  
482 c. Shall participate with other government agencies charged with the  
483 formulation, review, and regular update of the plans and policies  
484 relevant to nuclear or radiological emergencies.  
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486 **C. Ministry Of Health – Bangsamoro Autonomous Region in Muslim**  
487 **Mindanao (MOH-BARMM), Centers for Health Development, DOH**  
488 **Hospitals, and other Members of the Health Sector**  
489

- 490 a. Shall maintain the system to mobilize and capacitate HERTs;  
491 b. Shall ensure proper implementation of ESR systems to capture,  
492 investigate, and report suspected cases of nuclear or radiological  
493 emergencies; and,  
494 c. Shall maintain a system for logistics management to ensure availability  
495 and accessibility of health emergency commodities.  
496 d. Shall allocate funds and infrastructure towards effective implementation  
497 of this Order.  
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499 **D. Philippine Nuclear Research Institute (PNRI), National Disaster Risk**  
500 **Reduction and Management Council (NDRRMC) Members, Other**  
501 **National Government Agencies, Non-Government Organizations, Civil**  
502 **Society Organizations, local and international Non-Government**  
503 **Organizations / International Humanitarian Partners / Development**  
504 **Partners, and the Private Sector**  
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- 506 a. With respect to their roles and responsibilities in the RADPLAN,  
507 support the DOH in its initiative and strategies in building, developing,  
508 and maintaining responsive and resilient health systems, especially for  
509 health emergencies and disasters.  
510 b. Participation and support in relevant, long-term, and solution-driven  
511 policies for the institutionalization of this Order.  
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514 **VIII. FUNDING MECHANISMS**

515  
516 A. Funding for the logistical requirements for pre-hospital and hospital level  
517 response for nuclear or radiological emergencies including the maintenance or  
518 calibration thereof, shall be included in the budget of designated health facilities  
519 and relevant DOH agencies vis-à-vis their roles and responsibilities established  
520 through this Order.

521  
522 B. Establishment and construction of additional facilities and procurement of  
523 required substances and monitoring devices or instruments shall be funded  
524 through the Health Facilities Enhancement Program Management Office.  
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527 **IX. SEPARABILITY CLAUSE**

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529 In the event that any provision or part of this Order is declared unauthorized,  
530 unconstitutional, or rendered invalid by any court of law or competent authority,  
531 those provisions not affected by such declaration shall remain valid and in force.  
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534 **X. EFFECTIVITY**

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536 This Order shall take effect (15) days after its publication in the Official Gazette  
537 or in a newspaper of general circulation and filing with the Office of the National  
538 Administrative Register of the UP Law Center.  
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543 **TEODORO J. HERBOSA, MD**  
544 Secretary of Health  
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