

INCAPS COVID

IAEA Noninvasive Cardiology Protocols Survey on the Impact of COVID-19 on Cardiovascular Diagnostic Testing Practices and Working Conditions

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Country Participation

We used IAEA-specific coding for world regions. Specifically, region participation included the following countries:

- **Africa** (n=11 countries): Algeria, Egypt, Ghana, Kenya, Mauritius, Morocco, Niger, Nigeria, South Africa, Tunisia, Uganda
- **Eastern Europe** (n=22 countries): Albania, Armenia, Belarus, Bosnia – Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Montenegro, Poland, Republic of North Macedonia, Republic of Slovenia, Romania, Russian Federation, Serbia, Slovak Republic, Ukraine, Uzbekistan
- **Far East** (n=8 countries): Cambodia, Japan, Lao People's Democratic Republic, Mongolia, People's Republic of China, Philippines, Republic of Korea, Vietnam
- **Latin America** (n=19 countries): Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay
- **Middle East and South Asia** (n=16): Afghanistan, India, Iraq, Islamic Republic of Iran, Israel, Jordan, Kuwait, Lebanon, Nepal, Oman, Pakistan, People's Republic of Bangladesh, Qatar, Saudi Arabia, Sri Lanka, United Arab Emirates
- **North America** (n=2 countries): Canada, United States of America
- **South East Asia and the Pacific** (n=9 countries): Australia, Brunei Darussalam, Indonesia, Malaysia, Myanmar, New Zealand, Papua New Guinea, Singapore, Thailand
- **Western Europe** (n=21 countries): Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, Republic of Ireland, Spain, Sweden, Switzerland, Turkey, United Kingdom

Survey Questions

INCAPS COVID: IAEA Noninvasive CARDiology Protocols Survey on the impact of COVID-19 on cardiac imaging practices and working conditions

Kindly complete no more than one survey from each laboratory/centre. We ask individuals within each centre to talk with their colleagues and share the information so that only one survey is completed per facility. If you are affiliated with multiple laboratories/centres, we would be grateful if you would complete the survey separately for each. The deadline for completing the survey has been extended until May 30.

About Yourself	
* Your First/Given Name (Example: Diana)	
* Your Family Name/Surname (Example: Paez)	
Your Title (example: MD, PhD)	
* Would you like to be listed as a member of INCAPS COVID Investigators Group for publications?	<input type="checkbox"/> Yes <input type="checkbox"/> No
* Your Email	
Your Telephone Number (include country code)	
* Your Profession (choose one, reflecting your major specialty)	<input type="checkbox"/> Cardiologist <input type="checkbox"/> Radiologist <input type="checkbox"/> Nuclear Medicine Physician <input type="checkbox"/> Technologist/Radiographer <input type="checkbox"/> Nurse Practitioner <input type="checkbox"/> Physician Assistant <input type="checkbox"/> Physicist <input type="checkbox"/> Other
* Cardiac modaliti(es) practiced	<input type="checkbox"/> CT <input type="checkbox"/> SPECT <input type="checkbox"/> PET <input type="checkbox"/> Echocardiography <input type="checkbox"/> MRI
Number of years post-training performing cardiac imaging	
* Redeployment outside of usual imaging service(s) during the past few months (select all that apply)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Please specify	<input type="checkbox"/> Fever Clinic <input type="checkbox"/> Emergency Department <input type="checkbox"/> Inpatient COVID-19 service <input type="checkbox"/> Inpatient General service <input type="checkbox"/> Intensive Care Unit <input type="checkbox"/> Workforce/Occupational Health <input type="checkbox"/> Other

About second individual who contributed data to this survey	
* Is there a second individual who contributed data to this survey and would like to be listed as a member of INCAPS COVID Investigators Group for publications?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Their First/Given Name (Example: Rodrigo)	
Their Family Name/Surname (Example: Cerci)	
Their Title(s) (Example: MD)	

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About Your Facility			
* Name of Facility			
* Type of Site	<input type="checkbox"/> Hospital Inpatient <input type="checkbox"/> Hospital Mixed Inpatient/Outpatient <input type="checkbox"/> Hospital Outpatient <input type="checkbox"/> Outpatient Facility With Physician Practices <input type="checkbox"/> Outpatient Imaging-only Facility <input type="checkbox"/> Emergency Department <input type="checkbox"/> Observation Unit		
* University-Affiliated Teaching Facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Number of beds (if Hospital):			
Address			
* Country/Administrative Area			
Province/State/Territory			
* City			
Zip Code/Postal Code			
At any time during the pandemic, has the institution's supply of the following materials been insufficient to meet the needs of cardiac imaging staff and patients?			
	Always Been Sufficient	At Times Insufficient	Never Available
Surgical Masks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N95/KN95/KF94/FFP2 Masks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gloves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gowns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eye Shielding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technetium-99m Generators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F-18 FDG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N-13 Ammonia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rubidium (Rb-82) Generators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cold kits (Sestamibi/Tetrofosmin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Laboratory/Facility	
For each of the following activities, with reference to nuclear cardiology and/or cardiac CT, please select whether your laboratory or facility does not currently have plans to implement it (N), is planning (P) to implement it but has not done so yet, or has already implemented (I) it:	
Some outpatient activities cancelled/postponed during peak pandemic	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
All non-urgent outpatient activities cancelled/postponed during peak pandemic	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
All outpatient activities cancelled/postponed during peak pandemic	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Phased re-opening/resumption of activities after peak pandemic	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Extended hours after peak pandemic	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
New weekend hours after peak pandemic	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Use telehealth to maintain contact with patients	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Use telehealth for patient interactions aspects (registration, consent)	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Use (telehealth) remote reading/reporting/communication of studies	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented

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Patients/Visitors	
For each of the following activities, with reference to nuclear cardiology and/or cardiac CT, please select whether your laboratory or facility does not currently have plans to implement it (N), is planning (P) to implement it but has not done so yet, or has already implemented (I) it:	
Alteration in patient transport, e.g. spacing use of elevators	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Change waiting areas to allow physical distancing	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Separate spaces for patients with and without COVID-19	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Reducing patient time in waiting room	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Limit accompanying family members and/or visitors	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Take temperature measurements for all patients/visitors	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented

Administer a screening questionnaire to all patients/visitors	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Test for COVID19 in all patients prior to diagnostic testing	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Require cloth/surgical mask for all patients/visitors	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented

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Testing protocols	
For each of the following activities, with reference to nuclear cardiology and/or cardiac CT, please select whether your laboratory or facility does not currently have plans to implement it (N), is planning (P) to implement it but has not done so yet, or has already implemented (I) it:	
Avoid exercise stress testing, use pharmacologic testing if possible	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Modify cardiac nuclear imaging protocols (e.g. higher dose, shorter acquisition time, stress first when applicable)	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Modify cardiac CT protocols (e.g. less use of IV rate-control agents)	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Allocate additional time for each scan to allow for thorough cleaning/disinfection between patients	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented

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Staff Conditions	
For each of the following activities, with reference to nuclear cardiology and/or cardiac CT, please select whether your laboratory or facility does not currently have plans to implement it (N), is planning (P) to implement it but has not done so yet, or has already implemented (I) it:	
Limiting staff proximity to patients	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Mandate personal protective equipment	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Altering or eliminating protocols requiring close patient contact for extended time	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Rotating staff work shifts	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented

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Employment	
For each of the following activities, with reference to nuclear cardiology and/or cardiac CT, please select whether your laboratory or facility does not currently have plans to implement it (N), is planning (P) to implement it but has not done so yet, or has already implemented (I) it:	

Temporarily furloughed (placed on unpaid leave) some imaging physicians due to economic crisis from COVID-19	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Temporarily furloughed (placed on unpaid leave) some imaging staff due to economic crisis from COVID-19	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Reduced salaries of some imaging physicians due to economic crisis from COVID-19	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Reduced salaries of some imaging staff due to economic crisis from COVID-19 Laid off/fired some imaging physicians due to economic crisis from COVID-19	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented
Laid off/fired some imaging staff due to economic crisis from COVID-19	<input type="checkbox"/> No Plans <input type="checkbox"/> Planning <input type="checkbox"/> Implemented

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Procedure Number Estimates			
<p>This is the last page of the survey, and the most important data being collected. Please estimate the number of procedures in each category performed in your facility for each of the following months. Kindly speak with colleagues in these areas if you do not have sufficient expertise to estimate with reasonable accuracy. If you are unable to obtain the information, you can leave a cell blank. Thank you for your help in completing the survey.</p>			
	March 2019	March 2020	April 2020
Stress ECG (treadmill or bicycle, no imaging)			
Stress Echocardiogram			
Stress SPECT Myocardial Perfusion Imaging			
Stress PET Myocardial Perfusion Imaging			
Stress Cardiac MRI			
CT Coronary Artery Calcium Scoring Alone			
CT Coronary Angiography (with or without Calcium Scoring)			
Transthoracic Echocardiogram (TTE, rest)			
Transesophageal Echocardiogram (TEE)			
PET for Endocarditis Evaluation			
Cardiac MRI (without stress)			
Invasive Coronary Angiography			