

# **CAMERA Needs Assessment Survey**

Dear Radiologist or Radiographer or Physicist or Scientist,

Thank you in advance for taking time to complete this survey from the Committee for Advancement of MRI Education and Research in Africa (CAMERA). CAMERA is a Working Group of the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) that is working to develop a sustainable framework for accelerating MRI research and education excellence in Africa, a region of the world with the lowest density of MRI scanners.

This 15 minute survey is the first step towards achieving CAMERA's vision of reducing the disparity in MRI research capacity in Africa.

By completing this survey, you will help CAMERA:

- 1. Identify and understand needs and challenges of conducting MRI for clinical use and research in Africa.
- 2. Identify and understand gaps in training of highly qualified personnel in MRI research and clinical practice.
- 3. Create educational programs to help close gaps in training of highly qualified personnel in MRI.
- 4. Help create a consortium of MRI experts and users from Africa interested in collaborating with African MRI scientists and global partners.
- 5. Help our vendor partners know how to support MRI needs in Africa.

All information provided in this survey is confidential and accessible solely to the members of the CAMERA MRI listed at the end of this survey.

If you have questions about this survey, please contact: udunna.anazodo@mcqill.ca

1	Fmail *			

\* Indicates required question

### **A.Facility Information**

2.	Please indicate your specialty or designation *
	Mark only one oval.
	Radiologist
	Radiographer / Technologist
	Physicist
	Other:

V	/here is your Diagnostic Imaging facility located? Please select only one. *
N	flark only one oval.
(	Algeria
(	Angola
(	Benin
(	Bostwana
(	Burkina Faso
(	Burundi
(	Cabo Verde
(	Cameroon
(	Central African Republic
(	Chad
(	Comoros
(	Congo
(	Cote d'Ivoire
(	Democratic Republic of the Congo
(	Djibouti
(	Egypt
(	Equatorial Guinea
(	Eritrea
(	Ethiopia
(	Eswatini
(	Gabon
(	Gambia
(	Ghana
(	Guinea
(	Guinea-Bissau
(	Kenya
(	Lesotho
(	Liberia
(	Libva

) Madagascar

#### CAMERA Needs Assessment Survey

Malawi
Mali
Mauritania
Mauritius
Morocco
Mozambique
Namibia
Niger
Nigeria
Republic of Congo
Rwanda
Sao Tome & Principle
Senegal
Sierra Leone
Somalia
South Africa
South Sudan
Sudan
Tanzania
Togo
Tunisia
Uganda
Zambia
Zimbabwe

Public/Gove Private pract Non-Profit in University Ho Community Tertiary or R Other:	tice/out-pa ecluding re ospital hospital of egional Ho	ligious cha r health ca ospital/ He	arities re center d ealth Care (	Center	_	ty *
wark only one ov	None	1	2-5	6-10	>10	
Radiologists						
MRI Radiographer / technologists						
MRI Physicists						
Nursing Staff						
Other Staff						
Do you have an  Mark only one o		nner at yo	our Imagir	ng Facility	or Departr	ment? *

## **B. Scanner Description**

7.	What is th	ie total ni	umber of	MRI scan	ners at yo	our at you	r center *	
8.	How man		otal numl	ber of MR	l scanner	s are worl	king (not l	oroken) and in use
	Mark only	one oval	•					
	0 1 2 3 4 5 All							
9.	Select the Select ON Check all th	LY what a				canner typ	oe you hav	ve at your center.
		0	1	2	3	4	5	_
	3 Tesla							_
	1.5 Tesla							_
	1.0 Tesla							
	<1.0 Tesla							
								_

10.	Describe your scanner, make and field strength. Select ONLY what applies to your
	facility

Check all that apply.

	Toshiba/Canon	Siemens	General Electric	Philips	Other
3 Tesla					
1.5 Tesla					
1.0 Tesla					
<1.0 Tesla					

11. How long have you had your scanner? Select ONLY what applies to your facility

Check all that apply.

	5-10 years	3-4 years	1-2 years	< 1 Year
3 Tesla				
1.5 Tesla				
1.0 Tesla				
<1.0 Tesla				

12.	Does your facility have access to a Service Engineer who takes care of technical issues with the MRI scanner	*
	Mark only one oval.	
	Yes	
	No Skip to question 15	
C. Ma	aintenance	
13.	If you have a service engineer, is the engineer *	
	Check all that apply.	
	A staff of the facility/insitution/clinic	
	from a 3rd party service provider	
	Other	
14.	If yes, how often does your Service Engineer perform scheduled and regular performance maintenance of your scanner	*
	Check all that apply.	
	Monthly	
	up to 2-3 times per year  Once per year - Annually	
	Never - only when the scanner is broken or down	

### D. Usage

15.	What is the approximate total number of patients that you scan on your MRI at your facility per day					
	Mark only one oval.					
	up to 5					
	<u> </u>					
	10-15					
	<u></u>					
16.	Downtime Frequency. How often is your MRI scanner unavailable for use or down *					
	Mark only one oval.					
	Often (1-2 times per week)					
	Occasional (1-3 times per month)					
	Seldom (<1 time in a 6 month span)					
	Never					
17.	What are the most common indications for MRI scans at your facility? Choose all that apply.					
	Check all that apply.					
	Brain - Routine, Seziure, Orbits, Headaches/Migraine, Space Occupying lesions<					
	Angiograms					
	Cardiac - Ischaemia, infiltrative disease, congential malformation, cardiomayopathy<					
	Musculoskeletal (MSK) - Wrist, Shoulder, Knee, Ankle, Hip, Long bones					
	Breast					
	Cerebrovascular and Vascular studies  Abdomon and Polyio Liver Kidney Regio Abdomon					
	Abdomen and Pelvis - Liver, Kidney, Basic Abdomen  Spine - Cervical, Thoaraic and Lumbo-Sacral					
	The Opine Octaion, thousaid and Euribo Sacial					

### E. Facility Infrastructure

18.	How often is the power supply at your facility? Is power available *
	Check all that apply.
	<ul><li>☐ 100% of the time</li><li>☐ 75% (3/4) of the time</li><li>☐ 50% (1/2 to 3/4) of the time</li></ul>
	Less than 50% of the time
19.	Do you have a source of back- up power
	Mark only one oval.
	Yes
	No
20.	Does your facility have a Picture Archiving and Communication System (PACS) to store and retrieve images
	Mark only one oval.
	Yes
	◯ No
21.	Does your facility use teleradiology? Teleradiology is the interpretation and/or consultation of MRI acquired at your facility at another location
	Mark only one oval.
	Yes
	No

## F. Personnel Training and Education

22.	If you have a Radiologist at your Facility, how often does the Radiologists at your facility engage in continuing medical education each year
	Mark only one oval.
	I don't know
	Often (at least 2-3 times per year)
	Seldom (once per year)
	Never
23.	How often does the Radiographer/Technologists at your facility engage in continuing education each year
	Mark only one oval.
	I don't know
	Often (at least 2-3 times per year)
	Seldom (once per year)
	Never

24. If you have a Radiologist at your Facility, how often does your Radiologists attend the following forms of continuing medical education

Mark only one oval per row.

	Often (at least 2- 3 times per year)	Seldom (once per year)	Never
Training (in person) - rounds, in service, seminars			
Training (online)			
Local Conferences / meetings			
National Conferences/ Meetings			
Regional Conferences / Meetings - Within Africa			
International Conferences / Meetings			

25.	How often do your Radiographer/Technologists attend the following forms of
	continuing medical education

Mark only one oval per row.

	Often (at least 2- 3 times per year)	Seldom (once per year)	Never
Training (in person) - rounds, in service, seminars			
Training (online)			
Local Conferences / meetings			
National Conferences/ Meetings			
Regional Conferences / Meetings - Within Africa			
International Conferences / Meetings			

	Would your staff be interested in attending a Local/National/Regional MRI Workshop?
	Mark only one oval.
	Yes No
27.	Please could you elaborate on specific reasons for your selection below. Is access (including but not limited to costs) to training opportunities a challenge?
G. H	Health Economics
<b>G.</b> H 28.	Health Economics  What is the average cost of an MRI scan at your facility (in US Dollars) *
28.	What is the average cost of an MRI scan at your facility (in US Dollars) *
28.	What is the average cost of an MRI scan at your facility (in US Dollars) *  How is the cost of MRI scans covered *
28.	What is the average cost of an MRI scan at your facility (in US Dollars) *  How is the cost of MRI scans covered *  Check all that apply.
28.	What is the average cost of an MRI scan at your facility (in US Dollars) *  How is the cost of MRI scans covered *  Check all that apply.  Fully public funded - National Health Insurance Scheme  Some public funding Private (out-of-pocket)
28.	What is the average cost of an MRI scan at your facility (in US Dollars) *  How is the cost of MRI scans covered *  Check all that apply.  Fully public funded - National Health Insurance Scheme  Some public funding  Private (out-of-pocket)  Private Insurance
28.	What is the average cost of an MRI scan at your facility (in US Dollars) *  How is the cost of MRI scans covered *  Check all that apply.  Fully public funded - National Health Insurance Scheme  Some public funding Private (out-of-pocket)

### H. Research

30.	What areas of MRI research has your facility participated in or interested in participating in. Please select all that apply.
	Check all that apply.
	Physics- hardware (scanner development, coil development) Physics - Pulse sequence development Image Processing Brain Imaging Application Cardiac Imaging Application Tumour Imaging Application Musculoskeletal Imaging Application Neuroscience Informatics and Radiomics
31.	Does your facility lead or participate in research using MRI *
	Mark only one oval.
	Yes
	No
32.	Does your facility have a Research Ethics Board or Institutional Research Board? *
	Mark only one oval.
	Yes
	○ No

#### I. Optional - Challenges

The following questions are optional but provides an opportunity for you to describe in your own words some of the challenges you face at your facility with operating your MRI facility and with participating in MRI research.

We encourage you to please take some time to briefly describe your challenges to help CAMERA better understand how to create a sustainable framework to increase MRI access, research and use in Africa.

33.	Please describe briefly some challenges faced by your facility that impairs its day-to-day operation of the MRI program?
34.	Please describe briefly some challenges faced by your facility that impairs its ability to conduct or participate in MRI-related research?
35.	Please describe briefly any challenges in personnel capacity that impairs your facility's ability to perform clinical MRI imaging well

36.	Please describe any solution you envision for tackling challenges you face in using MRI clinically		
0.7			
37.	Please describe any solution you envision for tackling challenges you face in conducting MRI research		
J. Op	otional - Contact information		
be inc	ollowing questions are optional. Please complete these questions, if your facility wish to luded in future CAMERA initiatives, such as upcoming educational training tunities, information for research collaborations, or be part of the CAMERA Research ork Database.		
38	. Please provide the name of your of facility		
39	Please provide the address of your facility - Street number, name, city, province/state, country		

40.	Postal Code
41.	Name of the primary contact person at your facility (Chief Radiographer or Chief Radiologist, or Managing Director)
42.	Title/Role of the primary contact person
43.	Contact phone number of the primary contact person
44.	Email address of the primary contact person

#### **Disclaimers**

This survey tool is designed by the CAMERA MRI Environmental Scan Task Force comprising of the following individuals; Udunna Anazodo PhD, Edward Chege Nganga MBBS, Henk-Jan Mustaerts MD PhD, Godwin Ogbole MBBS, Mario Forjaz Secca PhD, and Johnes Obungoloch, PhD.

Information captured in this survey is confidential and will be solely accessible to the members of the CAMERA MRI Environmental Scan Task Force listed above. The information captured in this survey will be analyzed and maybe be published as part of a larger effort to describe the state of MRI access, use and readiness for research in Africa.

This survey tool is based on questions from RAD-AID Radiology-Readiness Tool. For more information on RAD-AID Radiology-Readiness Tool please see <a href="https://www.rad-aid.org/resource-center/radiology-readiness">https://www.rad-aid.org/resource-center/radiology-readiness</a>

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Anazodo UC, Ng JJ, Ehiogu B, Obungoloch J, Fatade A, et al., A framework for advancing sustainable magnetic resonance imaging access in Africa. NMR Biomed. 2023 Mar;36(3):e4846. doi: 10.1002/nbm.4846.

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