



1,000 Cases Impact Report

Remote Radiology Reporting, Consultation and Teaching

Worldwide Radiology and
Collective Minds Radiology



Worldwide Radiology is a registered charity in England and Wales as Worldwide Radiology. Charity Commission Number 1178885. Company Number 11042080.

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Foreword



As the Director of Worldwide Radiology, I am delighted to present this report which details our collaborative journey with Collective Minds Radiology since 2021.

Collective Minds Radiology, based in Sweden, is at the forefront of healthcare collaboration, specialising in enabling consultation, education, and research. Their cloud-based platform has been instrumental in allowing healthcare professionals to effectively collaborate on radiology cases, engage in interactive online education, and partake in cutting-edge radiological research, including sponsored clinical trials.

Over the past 3 years, Collective Minds Radiology have provided their cloud-based image reviewing platform to the hospitals and clinics we support at a discounted charity rate. This rollout is accompanied by comprehensive support for our project leads and implementing radiographers, ensuring that the benefits of this platform are maximised.



This report sheds light on the significant progress we have made together. We are honoured to collaborate with Collective Minds Radiology and eager to share the impact that our combined efforts have achieved.



Thank you for your continued support and interest in our mission to improve healthcare through better access to medical imaging worldwide.

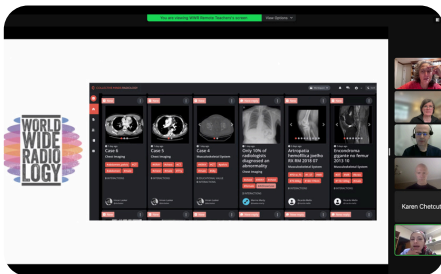
Warm regards,
Dr Elizabeth Joekes
Director



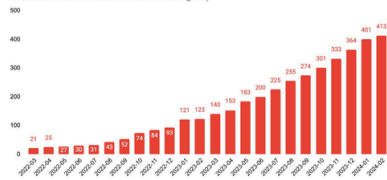
"We are honoured to partner with Worldwide Radiology and support the great work they are doing in providing access to quality diagnostic imaging in underserved areas of low-and middle-income countries"

- Anders Nordell, CEO Collective Minds Radiology

1,000 Cases consulted on to date



Evolution in the number of cases in the group



We have consulted on 1,000 cases to date

Teleradiology, the sharing of X-rays and scans for remote expert review, has become routine practice in wealthy countries and private medical care. Millions of images are transferred commercially each year. For the majority of patients in the world, however, this solution is unavailable and unaffordable.

Worldwide Radiology's mission is to make medical imaging diagnostics accessible to all. Over the last three years we have worked intensively with our partners to implement a teleradiology solution that is free at the point of access to health providers and patients, delivered by volunteer experts and funded by donations and grants. We are therefore very proud to have achieved this milestone of 1,000 image reviews for patients and colleagues who would otherwise not have had access to expert radiology opinions.



Remote Radiology Consultation Service

Komfo Anokye Teaching Hospital in Ghana



Worldwide Radiology has a long history of supporting radiology services at the Komfo Anokye Teaching Hospital (KATH). Collective Minds allows us to offer ongoing support to their Radiologists as they develop their sub-speciality knowledge, by facilitating remote consultations on complex CT and MRI scans.

Radiologists at KATH can upload any scans they need assistance with to a dedicated Collective Minds group. Volunteer sub-speciality expert radiologists at Worldwide Radiology are on hand to provide their input. To date, around **30 complex cases** have been shared and discussed.

Cases have included complex paediatric neurology, chronic musculoskeletal injuries, as well as acute cases such as respiratory distress syndrome and splenic artery aneurysm. A selection of complex Neuroradiology cases was presented live from Ghana at the 2023 British Society of Neuroradiology meeting in Edinburgh, extending the learning from Ghana to a UK based audience.

75%



A user survey demonstrated that patient management was changed in **75%** of cases as a direct result of the advice offered, guiding treatment choices and decisions on further investigations.

Patient was managed for the infarct without need of additional imaging or investigations.

- Feedback from KATH radiologist

50%



The survey also demonstrated a 'major' impact on practice in **50%** of the cases discussed, with a moderate or minor impact in the remainder. The Ghanaian radiologists reported an increased confidence in their diagnostic abilities, as well as receiving valuable education on various pathologies from Worldwide Radiology consultants.

My confidence in diagnosing [periventricular leukomalacia] on MRI has increased and I will be more likely to independently make a diagnosis in the future.

- Feedback from KATH radiologist



Remote Radiology Consultation Service

Medical Research Council (MRC) The Gambia



Like all low-income countries in the African region, The Gambia suffers from a severe lack of radiology expertise. This means that the majority of radiology images receive no specialist report and are interpreted by the healthcare staff looking after the patient. In an effort to address this problem, Worldwide Radiology has been offering an expert second opinion service, using the Collective Minds platform to connect MRC clinicians with volunteer radiologists and reporting radiographers.

The platform is also used to share radiology images at the MRC's monthly multi-disciplinary team (MDT) meeting, which is attended remotely by Worldwide Radiology volunteer radiologists.

So far, **456 cases** have been shared in the dedicated MRC group, with many of these also being discussed at the MDT. These include mainly X-ray and CT images, covering a wide range of patients and pathologies. A total of **33 MRC clinicians** have benefitted from the learning provided by Worldwide Radiology volunteers.

A user survey revealed that the expert advice provided changed patient management in **70%** cases. This included detecting abnormalities not picked up by the clinician, guiding treatment decisions and preventing unnecessary investigations, guiding decisions about further imaging, and improving confidence in diagnosis, which helped clinicians to advocate for their patients and provide them with better explanations of diagnoses and treatment options.

"We had not recognised the aspergilloma."

"Patient had been on long-term antibiotics for osetomyelitis, based on MDT discussion antibiotics were stopped for this indication."

"The poor patient had multiple attempts at a pleural tap. A clear answer that the changes were chronic and did not need acute treatment saved them further trauma and reassured us."

"In The Gambia, the cost of a CT is very high for the patient. Having help to decide if it is definitely needed is useful."

"We were able to explain the diagnosis to the family which meant that we were able to persuade them to allow the patient to stay in the MRC to receive treatment, rather than take him home to try local remedies."

"We have pushed more for management by the TB team due to the information given"

"It makes an ENORMOUS amount of difference to our patient group"

- Feedback from MRC clinicians

The survey also revealed a significant impact on practice in **nearly 50% of the cases** discussed, with a moderate or minor impact in the remainder. This impact included improved understanding of specific pathologies and differential diagnoses, enhanced image interpretation skills, increased confidence, and encouragement to utilise other imaging modalities.

"Very useful comments by the specialist helping with understanding current processes in the lung and differentiating between active/chronic/scarred appearances."

"I will be a bit more confident to trust myself if I think an image is normal."

"Encouraged me to use CT to get a fuller picture."

- Feedback from MRC clinicians



Remote Radiology Reporting & Teaching Service

Queen Elizabeth Central Hospital in Malawi

Malawi Government
Ministry of Health



A severe lack of qualified radiologists is also a major problem in Malawi. This means that there is a huge backlog of CT scans at Queen Elizabeth Central Hospital (QECH) awaiting an expert report, negatively impacting on patient diagnosis and care.

To address this challenge, Worldwide Radiology, in collaboration with QECH and the Malawi Liverpool Wellcome Trust programme, has been piloting a cross-border remote reporting service for QECH since January 2023.

The Collective Minds platform enables Worldwide Radiology volunteer radiologists from a range of countries to securely access and review these CT scans and offer their opinions pro bono.

Sustained increase in capacity will only be achieved by building in-country expertise at the same time. The first group of doctors to train as radiologists in Malawi started their training in September 2022.

Worldwide Radiology has been supporting their education both in-country and via regular remote teaching sessions between the trainees and a growing team of volunteers. Having a secure platform like CMRAD allows discussion of anonymised cases from Malawi, which are often quite different from those in the UK and other high income countries, making the learning directly relevant to their radiology practice in Malawi.

Since the service commenced in January, a total of 492 cases have been reported by Worldwide Radiology volunteers. Cases have included acute injuries, TB, sarcoma, liver lesions and paediatric neurology.

A total of 7 volunteer consultant radiologists from a range of specialties and countries are active in reporting cases.

The impact of this service will be formally evaluated in 2024. However, informal feedback has so far been very positive and the service seems to be making a real difference to patients and radiology staff at QECH.

Feedback from the remote reporters has also been encouraging, with 50% saying that they have learned something new or advanced their practice by reporting cases from Malawi.

"Late presentation of disease not typically seen in the UK"

- Feedback from WWR volunteer radiologist

"This training is a great learning opportunity for us as JW is an experienced reporting radiographer and since we started interacting with him, our understanding of X-Ray images is improving."

"This current program has solved the problem of the unavailability of the practical learning material from our side. It also has added extra tutors for us, which means we have an opportunity to also learn from more than one expert on the interpretation of X-rays and scans."

"In the long term, it is our expectation that we will become better at interpreting X-ray images and scans, which is necessary for our patients to have a correct radiological diagnosis so that they get appropriate care. It will also help us excel in our career as future radiologists."

"It is therefore our hope that such sessions continue and many more other experts join the arrangement so that we can be exposed to as much diverse knowledge as possible, hence solidifying our competency."

- Feedback from QECH trainee radiologists Chisomo Kadammanja and Rashid Ngalawango

"I have been involved in teaching radiographers, medical students, physiotherapists, radiologists and nurse practitioners in the NHS since 2004. Being able to contribute to this has been a great privilege and hugely rewarding. There is the perception that it is only possible to do this type of work in the field, by doing placements. I hope I've been able to demonstrate that with a few hours a week I can make a positive impact."

- Feedback from Jeremy Weldon, reporting radiographer and WWR volunteer



The support from WWR has allowed us to develop our medical imaging review meeting into a true MDT. It has coincided with an increase in access to cross-sectional imaging in The Gambia and has allowed us to take full advantage of this access, as there would be no point getting the images, if we couldn't get a reliable opinion that related to our clinical findings.

- Dr Karen Forrest, Head of Clinical Services at
MRC Unit The Gambia at LSHTM



Improving care through worldwide access to appropriate diagnostic imaging

Contact Us

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