On-line partnerships and tele-radiology reporting
- what you need to know

Savvas Andronikou MBBCh, FCRad, FRCR, PhD, PhD
Professor of Radiology at the University of Pennsylvania
The John Westgate Hope Endowed Chair in Faculty Development
Vice Chair-Clinical Research, Children's Hospital of Philadelphia
AND

Hansel J Otero, MD, FAAP
Outreach Lead WFPI
Director of Global education and Outreach
Children's Hospital of Philadelphia

Disclosure

Nothing to disclose

If you doubt the shortage of diagnostic radiology resources around the world - read this!

The Lancet Commissions

The *Lancet* Commission on diagnostics: transforming access to diagnostics

Kenneth A Fleming, Susan Horton, Michael L Wilson, Rifat Atun, Kristen DeStigter, John Flanigan, Shahin Sayed, Pierrick Adam, Bertha Aguilar, Savvas Andronikou, Catharina Boehme, William Cherniak, Annie NY Cheung, Bernice Dahn, Lluis Donoso-Bach, Tania Douglas, Patricia Garcia, Sarwat Hussain, Hari S Iyer, Mikashmi Kohli, Alain B Labrique, Lai-Meng Looi, John G Meara, John Nkengasong, Madhukar Pai, Kara-Lee Pool, Kaushik Ramaiya, Lee Schroeder, Devanshi Shah, Richard Sullivan, Bien-Soo Tan, Kamini Walia

Executive summary

At the end of 2019, the first reports of a new respiratory virus appeared in China. The subsequent COVID-19 pandemic has affected every person, in every country, in the world. One early lesson was the crucial importance of timely accurate diagnosis. A second lesson was the widespread scarcity of such diagnostic capacity and capability.

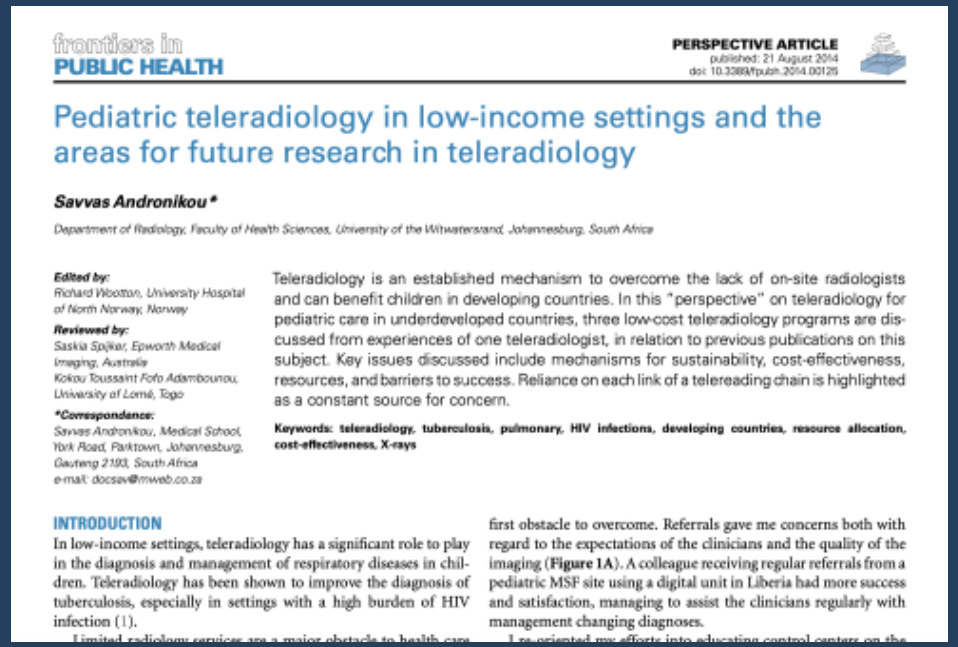
The second lesson supported the findings of the 2018 Lancet Series on Pathology and Laboratory Medicine in Low-Income and Middle-Income Countries, namely that despite diagnostics being central to health care, access to diagnostic testing in pathology and laboratory medicine (PALM) is poor and inequitable in many parts of health systems, namely health service delivery, health workforce, health information systems, access to diagnostics (analogous to essential medicines), financing, and leadership and governance, as the basis. Given the dearth of reliable and comprehensive data, the Commission's first step was to quantify, where possible, the current state of diagnostics globally. We use six tracer conditions (diabetes, hypertension, HIV, and tuberculosis in the overall population, plus hepatitis B virus infection and syphilis for pregnant women) and show that the diagnostic gap (ie, the proportion of the population with the condition who remain undiagnosed) is, at 35–62%, the single largest gap in the care pathway (the cascade of care comprising screening, diagnosis, treatment, and

Published Online
October 6, 2021
https://doi.org/10.1016/S0140-6736(21)00673-5

See Online/Comment
https://doi.org/10.1016/S0140-6736(21)02093-6

Green Templeton College, University of Oxford, Oxford, UK (K A Fleming FRCPath); **School of Public Health and Health Systems, University of Waterloo, Waterloo, ON, Canada** (Prof S Horton PhD, D Shah BSc); **Denver Health and Hospital Authority, Denver, CO, USA** (Prof M L Wilson MD);

Categories of online partnerships for radiologists



frontiers in
PUBLIC HEALTH

PERSPECTIVE ARTICLE
published: 21 August 2014
doi: 10.3389/fpubh.2014.00125

Pediatric teleradiology in low-income settings and the areas for future research in teleradiology

Savvas Andronikou*

Department of Radiology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

Edited by:
Richard Wootton, University Hospital of North Norway, Norway

Reviewed by:
Saskia Spijker, Epworth Medical Imaging, Australia
Kokou Toussaint Foto Adambounou, University of Lomé, Togo

***Correspondence:**
Savvas Andronikou, Medical School, York Road, Parktown, Johannesburg, Gauteng 2193, South Africa
e-mail: docsav@mweb.co.za

Teleradiology is an established mechanism to overcome the lack of on-site radiologists and can benefit children in developing countries. In this "perspective" on teleradiology for pediatric care in underdeveloped countries, three low-cost teleradiology programs are discussed from experiences of one teleradiologist, in relation to previous publications on this subject. Key issues discussed include mechanisms for sustainability, cost-effectiveness, resources, and barriers to success. Reliance on each link of a telereading chain is highlighted as a constant source for concern.

Keywords: teleradiology, tuberculosis, pulmonary, HIV infections, developing countries, resource allocation, cost-effectiveness, X-rays

INTRODUCTION

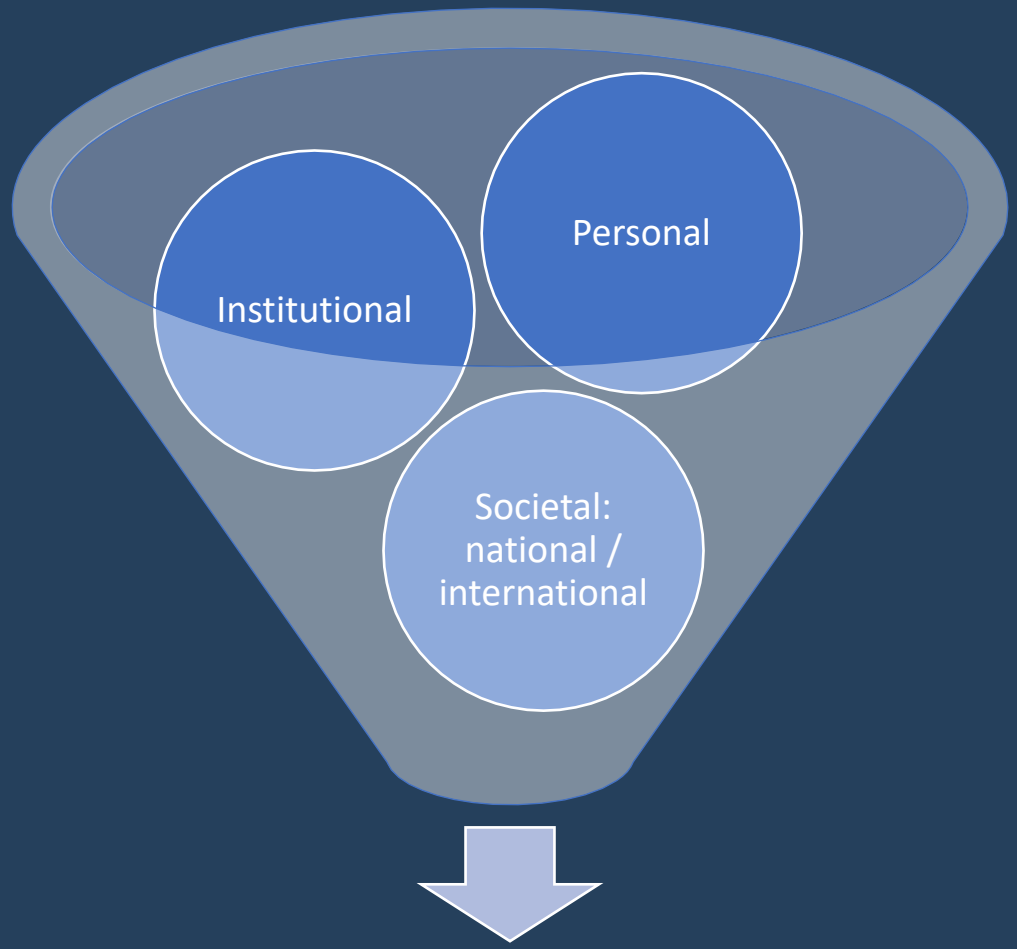
In low-income settings, teleradiology has a significant role to play in the diagnosis and management of respiratory diseases in children. Teleradiology has been shown to improve the diagnosis of tuberculosis, especially in settings with a high burden of HIV infection (1).

Limited radiology services are a major obstacle to health care

first obstacle to overcome. Referrals gave me concerns both with regard to the expectations of the clinicians and the quality of the imaging (**Figure 1A**). A colleague receiving regular referrals from a pediatric MSF site using a digital unit in Liberia had more success and satisfaction, managing to assist the clinicians regularly with management changing diagnoses.

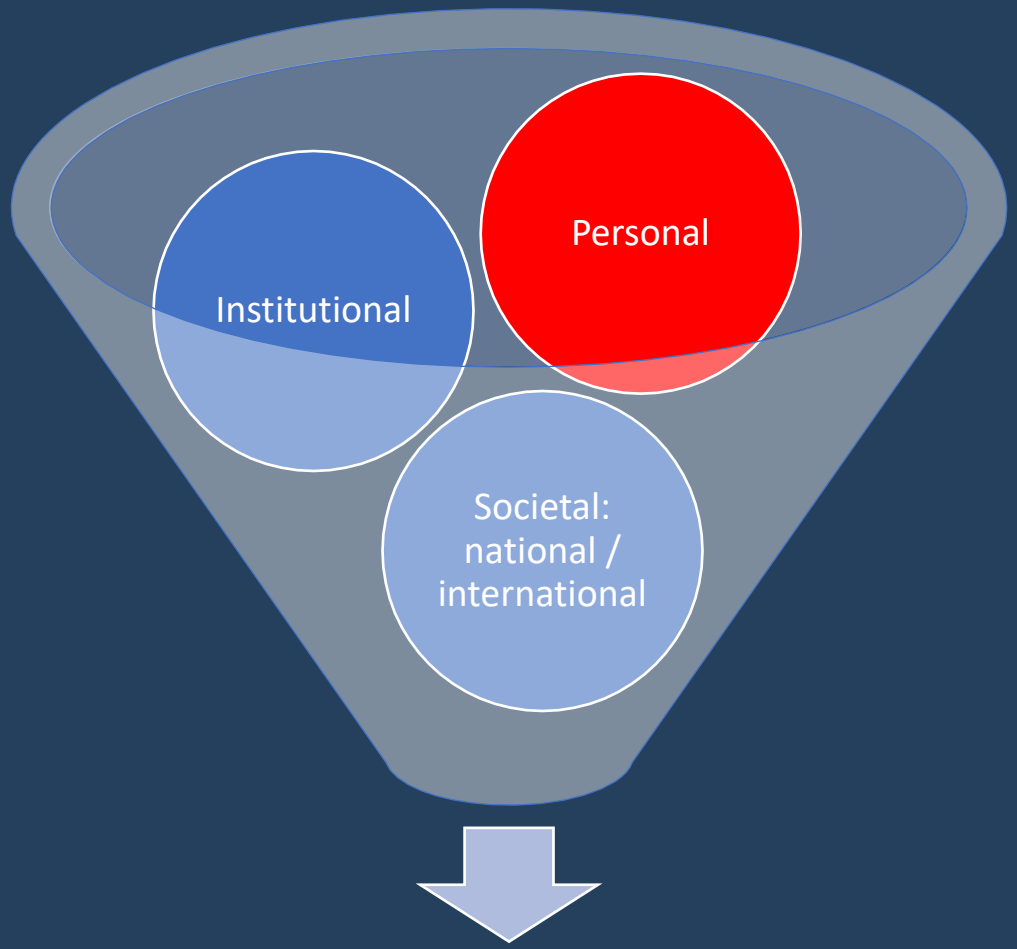
I re-oriented my efforts into educating control centers on the

Types of Partnerships

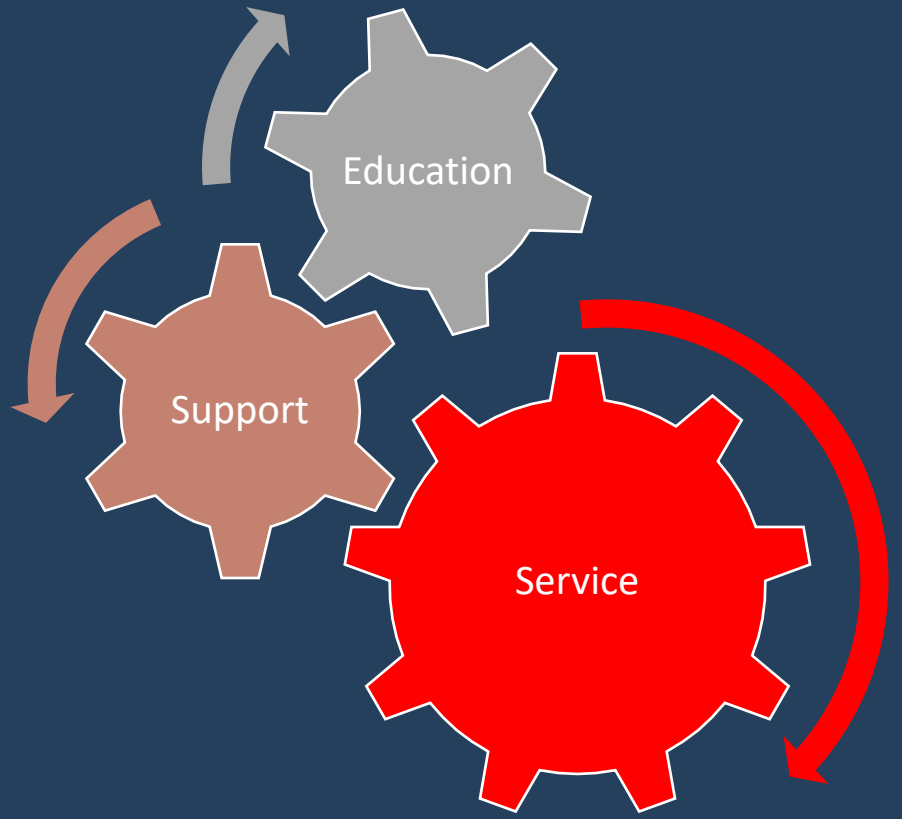


Global Support

Types of Partnerships



Global Support



Personal

MEDECINS SANS FRONTIERES
DOCTORS WITHOUT BORDERS

NATIONAL OFFICE | BUREAU NATIONAL
551 Adelaide Street West
Toronto, ON M5V 0N8
Canada

Tel | tél : 1 800 982 7903
Fax | téléc : 1 416 963 8707
doctorswithoutborders.ca |
medecinssansfrontieres.ca

Dear Dr Savvas Andronikou,

I would like to take this opportunity to thank you on behalf of *Médecins Sans Frontières* for your time and commitment helping meet the medical needs of people affected by conflict, epidemics, disasters, and exclusion around the world.

Your knowledge and expertise contribute immeasurably towards direct patient care in the field. We could not accomplish the high level of medical care we strive for without your assistance. Your remote expert consultation supports the delivery of timely, high-quality medical assistance to people in need guided by medical ethics and the principles of impartiality, independence and neutrality. Telemedicine is rapidly becoming integral to our medical humanitarian response worldwide and your role in this is essential.

Due to your dedication and valued assistance with specialty-level support, we are pleased to be nominating you today with the title of *Senior Specialist Consultant*.

Senior Specialist Consultant refers to a specialist who has shown significant commitment towards MSF's telemedicine program by providing timely expert opinion and consultation for our field doctors on over one-hundred cases in the field. At this point in time we feel your expertise goes beyond your specialty and also involves a greater understanding of situational awareness that MSF field hospitals face. Due to your high level of commitment and experience as a *Senior Specialist Consultant,* we invite you to begin mentoring junior level specialist consultants.

We hope to continue to grow our relationship with you and greatly look forward to your continued expertise in the

MEDECINS SANS FRONTIERES
DOCTORS WITHOUT BORDERS

TELEMEDICINE ANNUAL REPORT

Highlights

Target | Baseline 2020

usage 177 Projects

access 198 Projects

198 (291 / 216)
MSF Projects have access to SF platform

89% (80% / 68%)
MSF Projects with access posted at least one case

3556 (3800 / 2463)
cases were posted on SF platform

Satisfaction
N/A not been tracked in 2021*

*Feature unavailable on the new platform. Please find more information at p. 19 (satisfaction survey)

REAL TIME

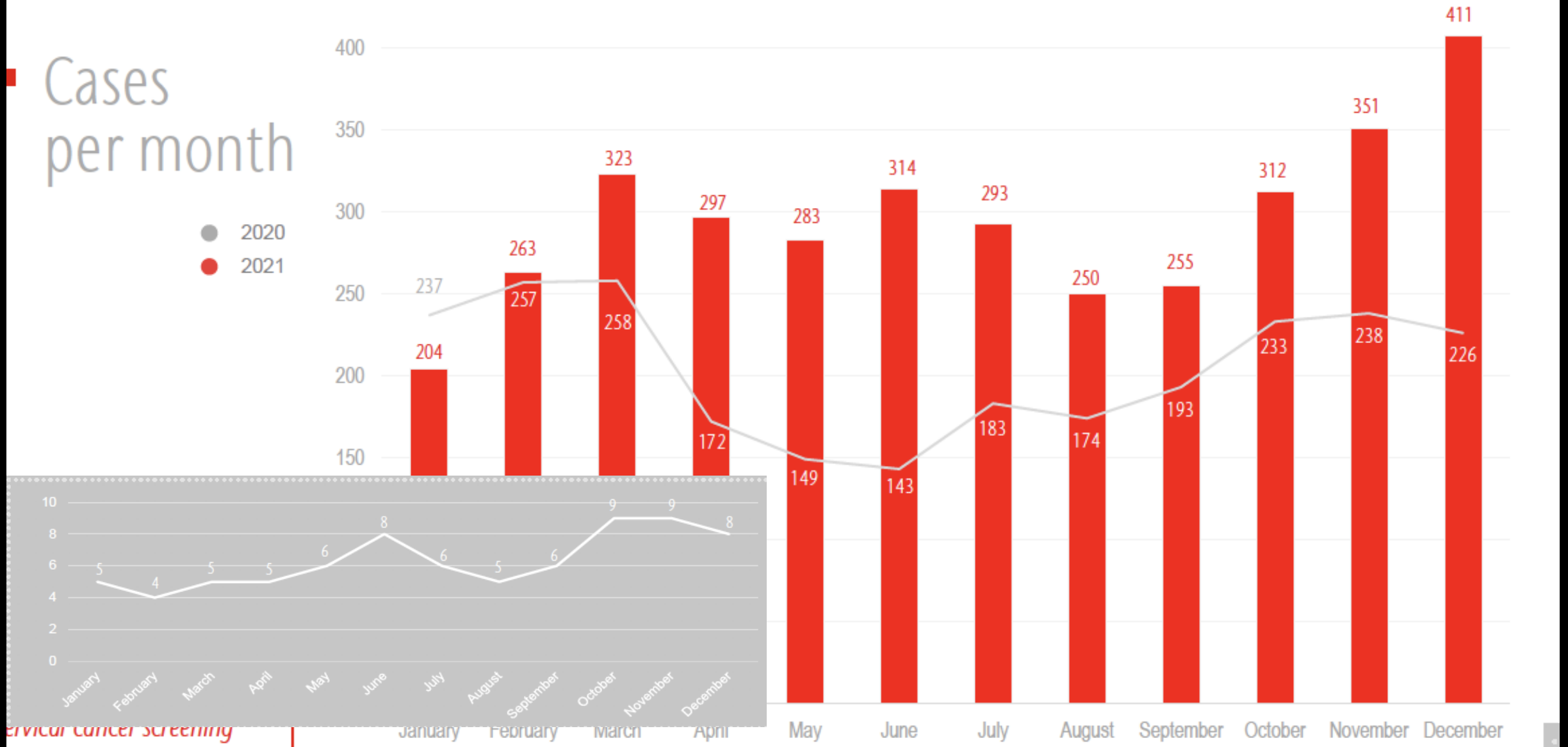
162 (200 / 136)
Cases were discussed over videoconferencing

283 (1300 / 180)
Sessions were held for clinical cases discussions & telepsychiatry program

SECURE MESSAGING

36,587 (N/A / 34,912)
messages were exchanged on secure messaging

Cases per month



lizes telemedicine for

Active specialties and subspecialties

Telemedicine cases often involve the consultation of more than one specialist. There were **8213 total consultations** in 2019.

Allied Health	**14**
Physiotherapy	12
Rehabilitation	2
Anaesthesia	**30**
Intensive care	28
Emergency medicine	**61**
Toxicology	3
Internal Medicine	**1457**
Cardiology	85
Dermatology	235
Endocrinology	24
Gastroenterology	33
Genetics	40
Geriatrics	2
Haematology	91
Hepatology	28
Infectious diseases	573
Intensive care	42
Neurology	63
Oncology	4
Renal	49
Respiratory	93
Rheumatology	7
Toxicology	2
Tropical medicine	57

Mental Health	**180**
Psychiatry	145
Psychology	12
Nurse	**10**
Midwife	10
Obstetrics and gynaecology	**232**
Colposcopy	26
Reproductive	78
Paediatrics	**3365**
Cardiology	259
Dermatology	7
Endocrinology	27
Gastroenterology	59
Haematology	70
Immunology	5
Infectious diseases	229
Intensive care	336
Neonatal	125
Neurology	220
Oncology	49
Radiology	63
Renal	358
Respiratory	33
Rheumatology	10
Surgery	72

Pathology	**9**
Clinical chemistry	6
Microbiology	3
Radiology	**1591**
Diagnostic	1437
Ultrasound	16
Surgery	**771**
Abdominal	6
Burns	14
ENT	36
General	107
Max-Fac	94
Neurosurgery	40
Oncology	13
Ophthalmology	80
Orthopaedics	154
Plastic	12
Urology	43
Vascular	1
Other	**63**
Dietetics	26
Hospital pharmacy	1
Wound care	36
Undefined	**471**

Store-and-forward
cases per country

In 2021, SF services were used in 48 countries where MSF operates. Sierra Leone, South Sudan, Afghanistan and Democratic Republic of Congo (DRC) posted the most cases through the year. The 10 countries that used the service the most are identified on the following map.

Sierra Leone

OCB-Kenema X-ray has a very high usage of the SF platform (558 cases, 81% of Sierra Leone cases). This project explains the high number of cases for Sierra Leone.

South Sudan

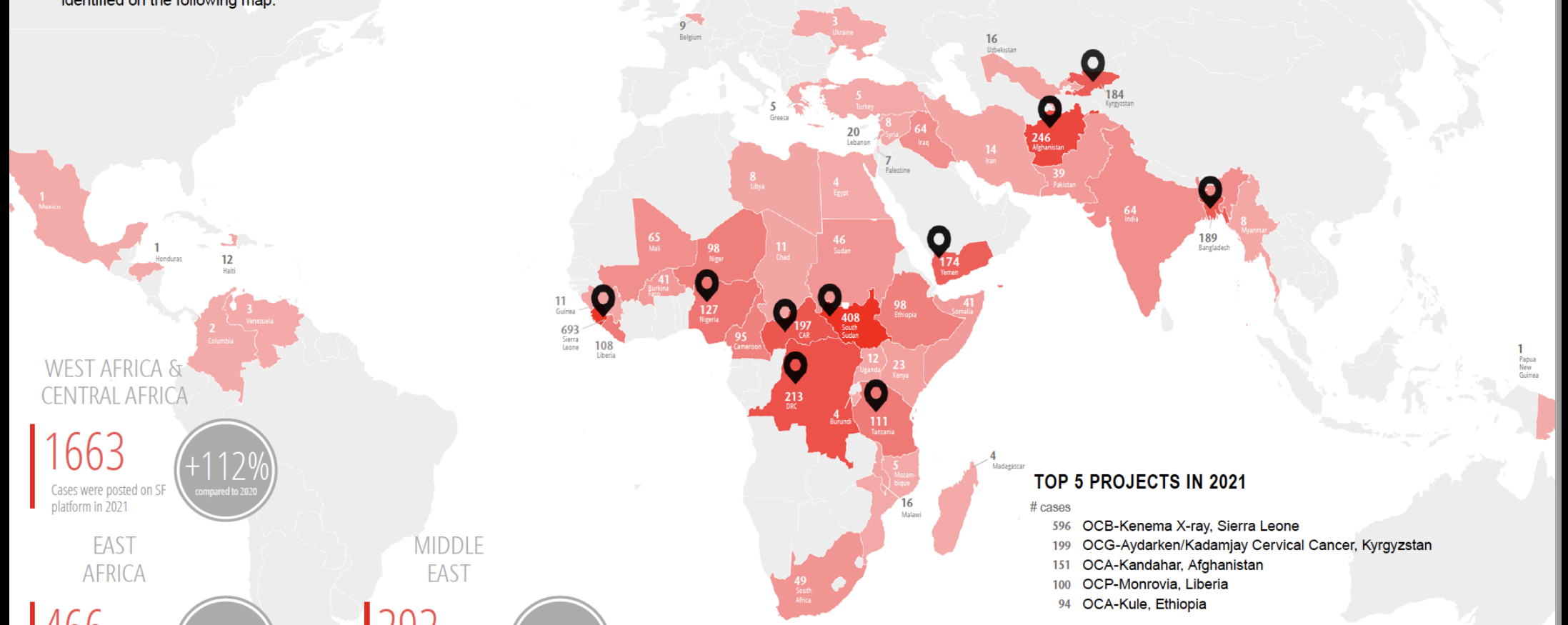
There are 10 active projects in South Sudan. Although South Sudan ranks second, a significant reduction of cases was recorded year over year (407 cases in 2021 vs 658 cases in 2020). The large decrease can be explained in part by the reduction of usage from OCG-Agok-X-ray due to an X-ray equipment issue.

Afghanistan

OCA-Kandahar posted 60% of the cases in Afghanistan.

Democratic Republic of Congo

A combination of 15 active projects is responsible for the country's high usage of SF.



WEST AFRICA & CENTRAL AFRICA

1663
Cases were posted on SF platform in 2021

+112% compared to 2020

EAST AFRICA

466
Cases were posted on SF platform in 2021

-32% compared to 2020

MIDDLE EAST

292
Cases were posted on SF platform in 2021

+38% compared to 2020

TOP 5 PROJECTS IN 2021

# cases	
596	OCB-Kenema X-ray, Sierra Leone
199	OCG-Aydarken/Kadamjay Cervical Cancer, Kyrgyzstan
151	OCA-Kandahar, Afghanistan
100	OCP-Monrovia, Liberia
94	OCA-Kule, Ethiopia

Inbox (30,306 messages)

Get Mail | New Message | Archive | Delete | Junk | Reply | Reply All | Forward | Flag | Mute | Move to... | Move

Mailboxes | Inbox | VIPs | Sent | Drafts

Mailboxes
- Inbox
  - docsa...
  - Google
- VIPs
- Flagged 31
- Drafts
- Outbox
- Sent
  - On My Mac
  - docsa...
  - Google

Sort by Date

MSF 07:26
URGENT: Case Updated... Inbox - Google
Dear Savvas Andronikou - Paediatric Radiology, Jiske Steensma [OCA HQ] P...

Jovan & Joanna 05:00
ESPR outreach Inbox - Google 2
I'll be there. Looking forward to meeting all of you. Best regards to....

Joanna Kasznia-Brown 04:35
ESPR outreach Inbox - Google
Dear All, I hope you are keeping well and looking forward to the ESPR meeting ne....

American Airlines 04:03
Action required – Enterin... Inbox - Google
Verify with VeriFLY [https://www.aa.com/content/images/email/cne/hdr_email_lo...

MSF

URGENT: Case Updated - 102090 has been updated with

To: savvas andronikou

Dear Savvas Andronikou - Paediatric Radiology,

Jiske Steensma [OCA HQ] Paediatric Emergency Medicine h

Please follow this link to view the response.

Thank you,
MSF

MEDECINS SANS FRONTIERES DOCTORS WITHOUT BORDERS

CASES | TO-DO

Search | Draft | Closed

ID	Creation	Country	Project	Initial CCC	Last CCC		Primary Specialty
103001	09/06/2022, 07:44	South Africa	OCB-Kawazulu na...	Jaap Karsten, t...	Jaap Karsten, t...		Pediatrics
102996	09/06/2022, 07:37	Afghanistan	OCA-Kandahar	Jaap Karsten, t...	Jaap Karsten, t...		Radiology
102568	06/06/2022, 10:21	Yemen	OCG-Ad Dahi	Lindsay Osei	Jaap Karsten, t...		Pediatrics
102567	06/06/2022, 09:53	South Africa	OCB-Kawazulu na...	Lindsay Osei	Lindsay Osei		Pediatrics
102566	06/06/2022, 09:45	South Africa	OCB-Kawazulu na...	Lindsay Osei	Lindsay Osei		Pediatrics
102417	05/06/2022, 08:33	Afghanistan	OCA-Kandahar	Serge Kabore	Serge Kabore		Radiology
102369	05/06/2022, 02:57	Afghanistan	OCA-Kandahar	Jaap Karsten, t...	Jaap Karsten, t...		Radiology
102367	05/06/2022, 02:50	Afghanistan	OCA-Kandahar	Jaap Karsten, t...	Jaap Karsten, t...		Radiology
102053	02/06/2022, 11:17	Yemen	OCG-Ad Dahi	Jaap Karsten, t...	Teresa Gadsden		Pediatrics
101573	30/05/2022, 00:18	India	OCA-Bihar	Angmo Nilza	Angmo Nilza		Infectious Diseases
101293	27/05/2022, 07:44	Sierra Leone	OCB-Kenema Xray	Sophie Delaigue...	Jaap Karsten, t...		Radiology
101157	26/05/2022, 03:32	Kenya	OCP-Homa Bay	Sophie Delaigue...	Adi Nadimpalli		Radiology
101125	25/05/2022, 12:43	Sierra Leone	OCB-Kenema Xray	Lindsay Osei	Lindsay Osei		Radiology
101034	25/05/2022, 05:08	Somalia	OCA-Galkayo	Jaap Karsten, t...	Teresa Gadsden		Surgery
100926	24/05/2022, 07:28	Pakistan	OCA-East Baloch...	Jaap Karsten, t...	Jaap Karsten, t...		Radiology
100678	22/05/2022, 05:51	South Sudan	OCA-Unity Prima...	Jaap Karsten, t...	Serge Kabore		Pediatrics
100572	21/05/2022, 08:00	Congo - Kinshasa	OCBA-Salamabila	Serge Kabore	Jaap Karsten, t...		POCUS

Comments only

Patient

I confirm that informed consent has been obtained from the patient about making an E-referral and its consequences.

I confirm that informed consent has been obtained from the patient about the use of their data in clinical research.

Patient Age
11 Years

Patient Gender
Male

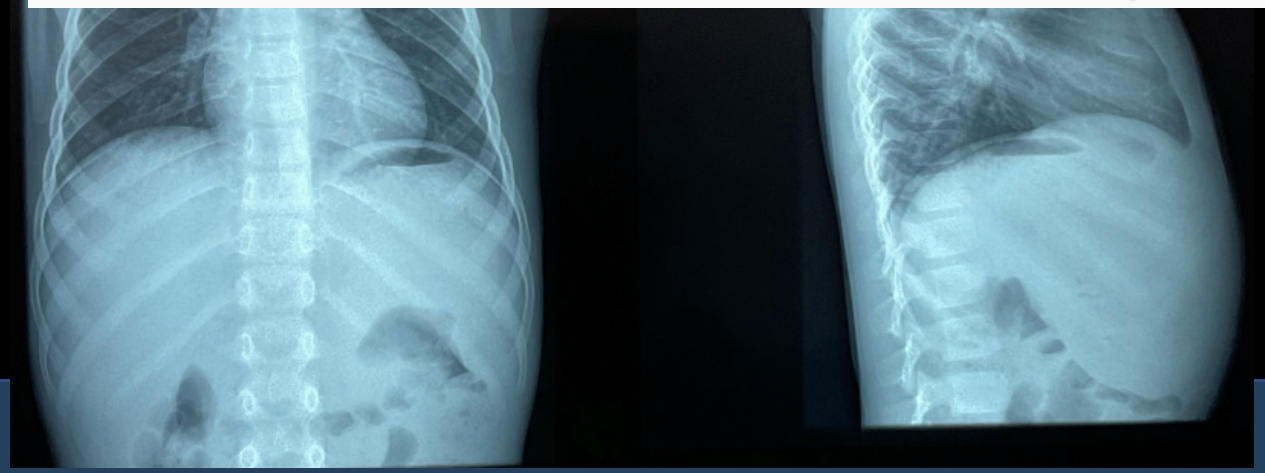
General

Question/Primary Reason
differential diagnosis

Patient Weight
29 kg

Presenting Complaint
swelling on the left proximal tabia for 4 months

History of Presenting Complaint
10 years old boy presented with left proximal tabia swelling for 4 months, which started small and gradually increasing in size. mother reported child experience pain especially during cold weathers.Mother wound developed over the overlying 2 weeks ago but healed. The wound was not discharging pus.



Telemedicine specialists

External volunteer specialist | HQ Medical Advisor

407
288 (71%)
119 (29%)
specialists in the network

303
214 (71%)
89 (29%)
specialists have logged in the last 3 months
(From October 1st to December 31st, 2021)

61
28 (46%)
33 (54%)
specialists onboarded in 2021

"Without adequate care, a child's earliest years can be the deadliest in many low-resource countries.[1]"

In 2021, the specialties most often requested[2] in the cases sent to the SF platform are Radiology and Pediatrics. A high demand for pediatrics is hardly surprising considering the contexts in which MSF operates. In 2020, children under 15 years represented more than 60 percent of patients in MSF projects. Pediatric cases come from many different projects whereas radiology cases

ACHIEVEMENTS & UPDATE

- Specialist recognition initiative launched at the end of 2021 to thank TM volunteer specialists for their precious contributions.
- Recruitment of 61 new specialists through the year (33 HQ medical advisors and 28 external volunteer specialists).

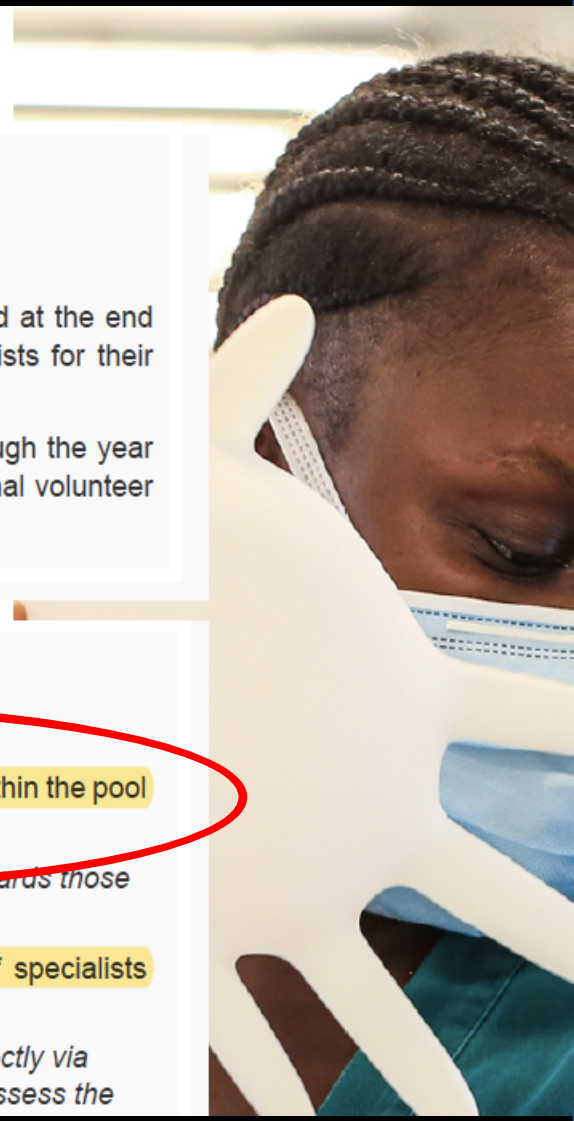
CHALLENGES

- Lack of pediatricians and radiologists within the pool of specialists

  Action: Targeted recruitment towards those two specialties was initiated.

- Difficult to determine the availability of specialists when allocating a case

  Action: Contact the specialist directly via other communication means to assess the



Telemedicine case

Why this case was selected among 3,000?

The easiest answer, "it was selected because it represents one of the most frequent telemedicine postings: pediatrics and radiology", is not correct. It was chosen for a completely different reason.

This case illustrates how MSF Telemedicine is not merely a complementary medical service to be used at the doctor's discretion.

MSF Telemedicine is an essential part of what MSF has to offer in order to correctly help patients with conditions that have to do with their specific habits and unique envi-

By Jaap Karsten
Clinical Case Coordinator

A three-year-old boy, weighing 7 kg (normal weight at that age is 14 kg) from a Middle East country, is admitted in an MSF project focusing on severe malnutrition in children under five.

After a fall two months prior to admission, the child no longer walks. The grandmother further reports that the boy is often feverish and both his knees are painful and swollen. There are no other complaints.

At the physical examination, the boy is found to be severely malnourished and anemic. Both knees are exactly as described by the grandmother. No other remarkable physical findings, specifically no other swollen joints. After the start of antibiotics for possibly bone infection, the fever stops. However, the boy still refuses to walk.

Karen Chetcuti	Jaap Karsten	Jarred Halton	Michelle Fink
Radiologist & Ultra-sound trainer	Clinical Case Coordinator & Pediatric specialist for TM	Radiographer	Radiologist

There is a strange fracture line in the lower right leg. A type unlikely to happen after a simple fall in an otherwise healthy child. She notices lack of calcification of the bones, but there are more highly unusual findings. Michelle then solves the case with an elaborate search in medical (online) literature.

Though radiology did not exist at the time that this disease was common and responsible for the death of 2 million seamen, the images are typical for scurvy

told by our history teacher, Vitamin C deficiency is caused by the lack of fresh produce over a prolonged period.

The team quickly examines the boy again but cannot detect the other, better-known symptom of scurvy e.g., red, swollen and bleeding gums.

Still, after providing ample Vitamin C, the knee pain disappears within weeks and the boy starts walking again.

Apply Now

Telemedicine Medical Specialist (Volunteer opportunity)

at Doctors Without Borders/Médecins Sans Frontières (Telemedicine) (View all jobs)

Anywhere

Department: Programs Department, MSF Canada

Reports to: Telemedicine Clinical Operations Lead for administrative and operational matters; MSF Clinical Referents for technical matters

Position status: Volunteer

Duration of Contract: Minimum time commitment is for 12 months

Location: Offsite (remote)

Working Hours: Normally expected few hours (2 to 3) per week, depending on cases from clinical projects. Sometimes there might not be a case for months or there might be 3 to 4 cases in a week.

POSITION OBJECTIVE:

The main objective of this position is to provide long-distance clinical support to MSF projects' medical teams worldwide. When cases require a specialist clinician's opinion, Medical Specialists in the volunteer network are consulted. This consultation is provided via MSF's dedicated Telemedicine solutions.

BACKGROUND:

MSF Canada is the lead section rolling out Telemedicine services across MSF projects movement wide. MSF Canada works with all MSF operational centers implementing Telemedicine services in projects globally.

MSF's International Store & Forward Telemedicine Platform has a global network of more than 300 specialists and has been providing specialist support to MSF patients since 2010. The platform provides services in English and French.

MSF's telemedicine specialist pool is a vast network of clinical specialists worldwide who support MSF's telemedicine services on a volunteer basis and contribute actively to the social mission of MSF. Our team is consistently looking for multilingual (EN, FR, ESP) medical specialists from all over the world to support our field medics using their relevant expertise. We are actively looking for the profiles below:

- Radiologists

Education and experience

- University degree in pediatric specialization/ super-specialty training.
- **Certificate of registration with the Order of Physicians for the current year.**
- At least 4 years of work experience in the area of specialization.
- MSF experience or experience in low resource settings and exposure to Telemedicine/ remote clinical training, supervision is highly desirable.
- Training in tropical medicine is an asset.
- Ability to read and understand English, French and Spanish. Arabic is highly desirable.
- Skilled in the use of smart phone and/or a computer.
- Skilled in the use of technological tools including those that can be used in telemedicine.

Teleradiology - Impact

Bull World Health Organ. 2012 September 1; 90(9): 705–711. PMCID: PMC3442390
Published online 2012 June 21. doi: 10.2471/BLT.11.099473

Feasibility of using teleradiology to improve tuberculosis screening and case management in a district hospital in Malawi

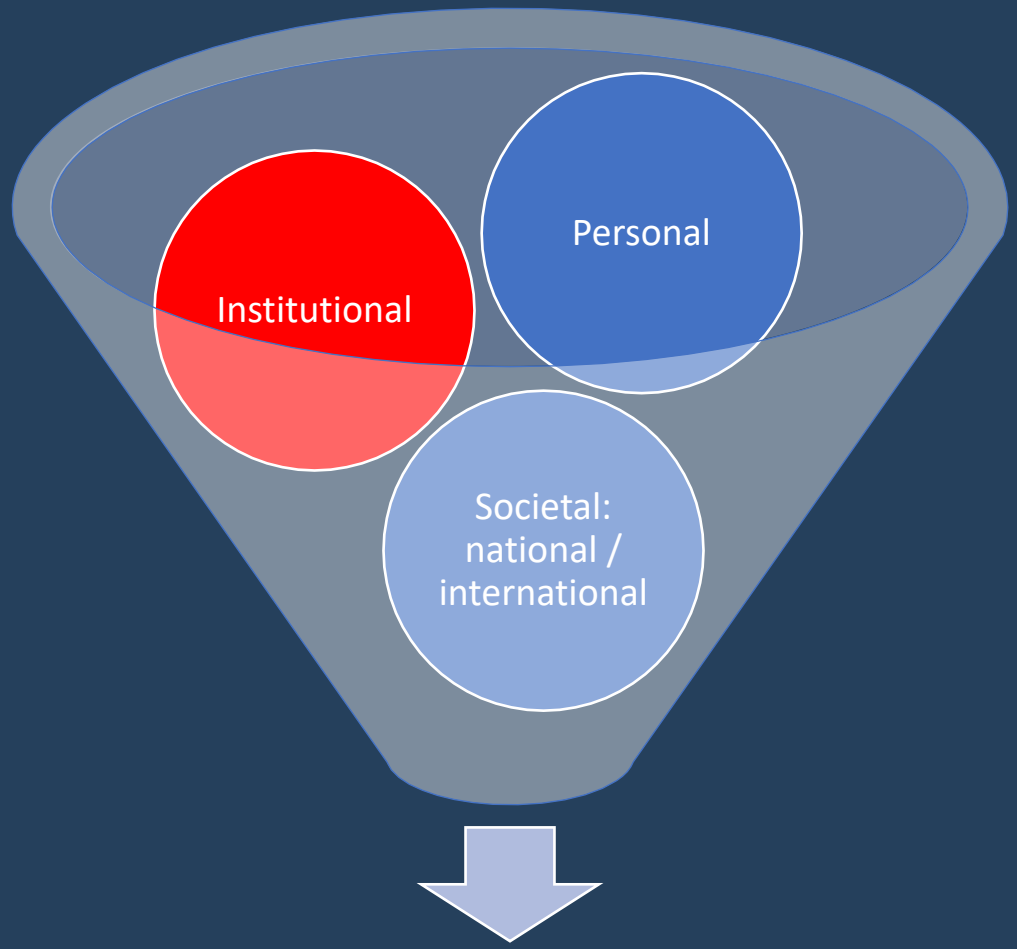
Rebecca Marie Coulborn,[a] Isabella Panunzi,[a] Saskia Spijker,[b] William E Brant,[c] Laura Triviño Duran,[a] Cara S Kosack,[b] and Michael Mitchell Murowa[d]

Author information ▶ Article notes ▶ Copyright and License information ▶

Relevant changes

From September 2010–2011, 159 images (from 158 patients) were reviewed by teleradiology. Teleradiology changed patient management in 36 cases (23.5%). Two (1.3%) of them were cases of pulmonary tuberculosis not previously suspected by clinical staff. In addition, the radiologist's review corrected the misdiagnosis of tuberculosis and averted inappropriate treatment in 16 patients (10.5%).

Types of Partnerships



Global Support

Hansel Otero, MD
Director, Global Outreach & Education Program

Hermon Miliard Derbew, MD
Research Fellow, Global Outreach & Education Program

Tigist Hailu, MPH
Manager, Global Outreach & Education Program

Monica Miranda-Schaeubinger, MD, MSPH
Research Assistant, Global Outreach & Education Program

Yadel Mekete, BS
Coordinator, Global Outreach & Education Program

Institutional:
CHOP Radiology Global Outreach & Education

CHOP Radiology Global Outreach & Education

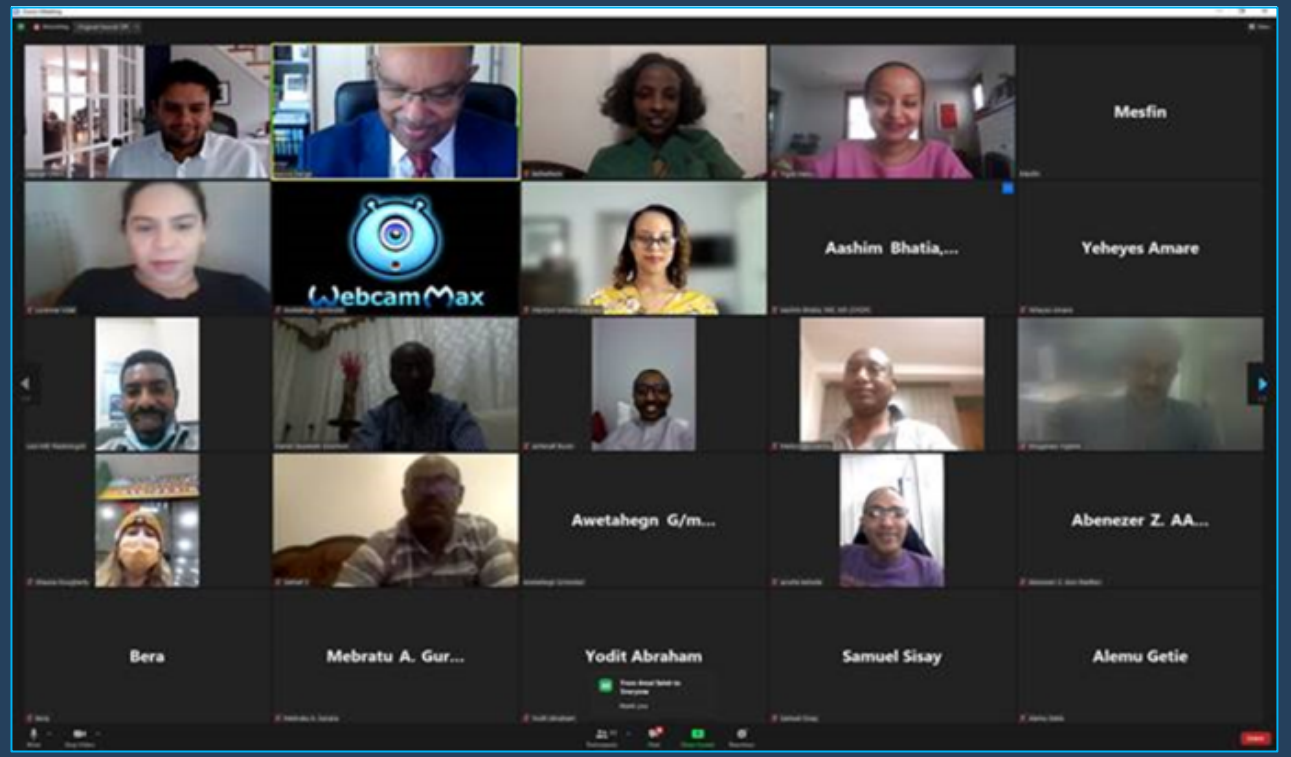
Black Lion Hospital, Addis Ababa, Ethiopia (www.pedradethio.org)

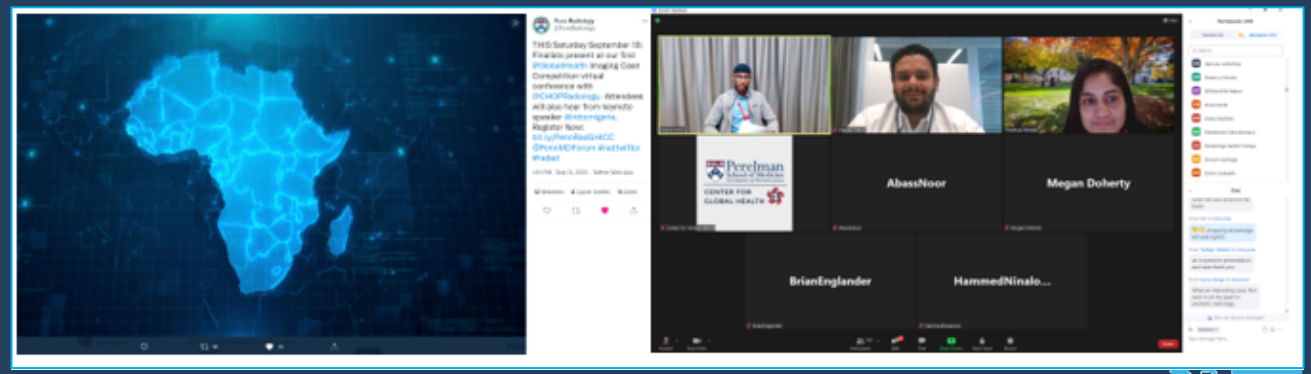
- 2 Peds Radiology Fellows - final exam held virtually by 4 examiners
- Annual CME Course - 2021 & 2022 virtual via Zoom
- Weekly Case Sessions - residency and fellowship programs (started March 2021)- via Zoom

CHOP Radiology Global Outreach & Education

CHOP-HUP Global Health Imaging Case Report Competition

- For trainees in low- and middle-income countries to present cases unique to their region.
- Free virtual webinar event features presentations by the finalists, “unknown cases” challenge, and a keynote speaker.
  - Inaugural focused on Africa
  - Second focused on Latin America and Caribbean





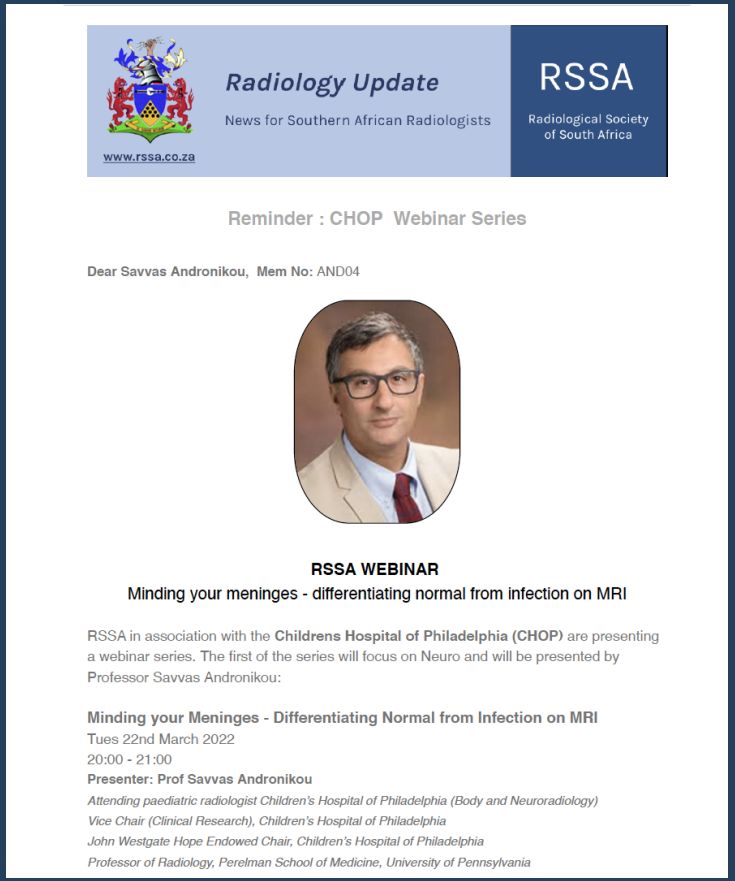
CHOP Radiology Global Outreach & Education

Radiological Society of South Africa

- Monthly pediatric Radiology Lecture – for all radiologists and trainees [Zoom]

Princess Marina Hospital, Gaborone, Botswana

- Monthly Pediatric Radiology lecture series [Zoom] for residents (start August 2021)



www.rssa.co.za

Radiology Update

News for Southern African Radiologists

RSSA

Radiological Society of South Africa

Reminder : CHOP Webinar Series

Dear Savvas Andronikou, Mem No: AND04

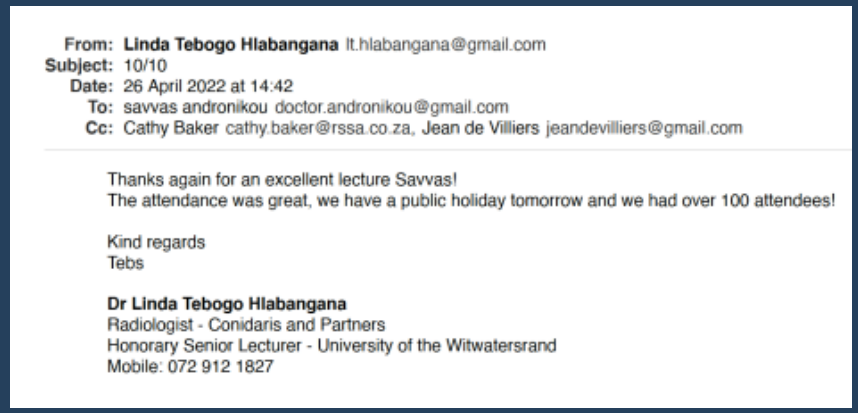
RSSA WEBINAR

Minding your meninges - differentiating normal from infection on MRI

RSSA in association with the **Childrens Hospital of Philadelphia (CHOP)** are presenting a webinar series. The first of the series will focus on Neuro and will be presented by Professor Savvas Andronikou:

Minding your Meninges - Differentiating Normal from Infection on MRI
Tues 22nd March 2022
20:00 - 21:00
Presenter: Prof Savvas Andronikou
Attending paediatric radiologist Children's Hospital of Philadelphia (Body and Neuroradiology)
Vice Chair (Clinical Research), Children's Hospital of Philadelphia
John Westgate Hope Endowed Chair, Children's Hospital of Philadelphia
Professor of Radiology, Perelman School of Medicine, University of Pennsylvania

Attendee Report										
Report Generated:	Apr 28, 2022 10:27 AM									
Topic	Webinar ID	Actual Start Time	Actual Dur	# Registere	# Cancelled	Unique Vie	Total Users	Max Concu	Enable Registration	
RSSA/CHOP Neuro: Using new MRI sequen	Apr 12, 2022 7:4		45	244	1	145	174	140	Yes	
Host Details										
Attended	User Name (Ori	Email	Join Time	Leave Time	Time in Ses	Is Guest	Country/Region Name			
Yes	Cathy Baker	cathy.baker@rss	Apr 12, 20	Apr 12, 20	15	No	South Africa			
Yes	Cathy Baker	cathy.baker@rss	Apr 12, 20	Apr 12, 20	1	No	South Africa			
Panelist Details										
Attended	User Name (Ori	Email	Join Time	Leave Time	Time in Ses	Is Guest	Country/Region Name			
Yes	Eric Buirman	eric.buirman@gr	Apr 12, 20	Apr 12, 20	45	Yes	South Africa			
Yes	Dr Tebs Hlaban	lt.hlabangana@g	Apr 12, 20	Apr 12, 20	37	Yes	South Africa			
Yes	Prof Savvas And	doctor.andronik	Apr 12, 20	Apr 12, 20	3	Yes	United States			
Yes	Prof Savvas And	doctor.andronik	Apr 12, 20	Apr 12, 20	37	Yes	United States			
Yes	Dr Tanyia Pillay	tanyiapillay@gm	Apr 12, 20	Apr 12, 20	37	Yes	South Africa			
Attendee Details										
Attended	User Name (Ori	First Name	Last Name	Email	Registratio	Approval St	Join Time	Leave Time	Time in Ses	Is Guest
Yes	Kumeshnie Koll	Kumeshnie	Kollapen	kumeshnie	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	31	Yes
Yes	Nonkululeko M	Nonkululeko	Mbuyisa	Nonke.nwr	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	16	Yes
Yes	Sibusiso Maling	Sibusiso	Malinga	sjbmalinga	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	30	Yes
Yes	Sharon De Kock	Sharon	De Kock	sharonhdel	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	5	Yes
Yes	Zizukise Njumb	Zizukise	Njumba	zeteez@ya	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	26	Yes
Yes	Willem Davel	Willem	Davel	wgdavel@	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	31	Yes
Yes	MATIMATI BORI	MATIMATI	BORNAVEN	drmatimat	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	28	Yes
Yes	Nafisa Paruk	Nafisa	Paruk	nafskha@h	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	24	Yes
Yes	Lerato Mirriam	Lerato Mirriam	Tsheole-Ma	pebetsets@	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	31	Yes
Yes	Isabella Meiring	Isabella	Meiring	isabella.me	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	31	Yes
Yes	Sipokazi Gazi	Sipokazi	Gazi	sipokazigaz	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	27	Yes
Yes	Suraya Arbee	Suraya	Arbee	suraya_arb	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	1	Yes
Yes	Suraya Arbee	Suraya	Arbee	suraya_arbee@hotmail.com			Apr 12, 20	Apr 12, 20	29	Yes
Yes	Hoosen Lakhi	Hoosen	Lakhi	hilakhi@w	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	10	Yes
Yes	Hoosen Lakhi	Hoosen	Lakhi	hilakhi@worldonline.co.za			Apr 12, 20	Apr 12, 20	21	Yes
Yes	Nirvash Govenc	Nirvash	Govender	govnir@gm	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	29	Yes
Yes	Ivan Kruger	Ivan	Kruger	ivanmkrug	Apr 06, 20	approved	Apr 12, 20	Apr 12, 20	6	Yes
Yes	Ivan Kruger	Ivan	Kruger	ivanmkruger@gmail.com			Apr 12, 20	Apr 12, 20	3	Yes



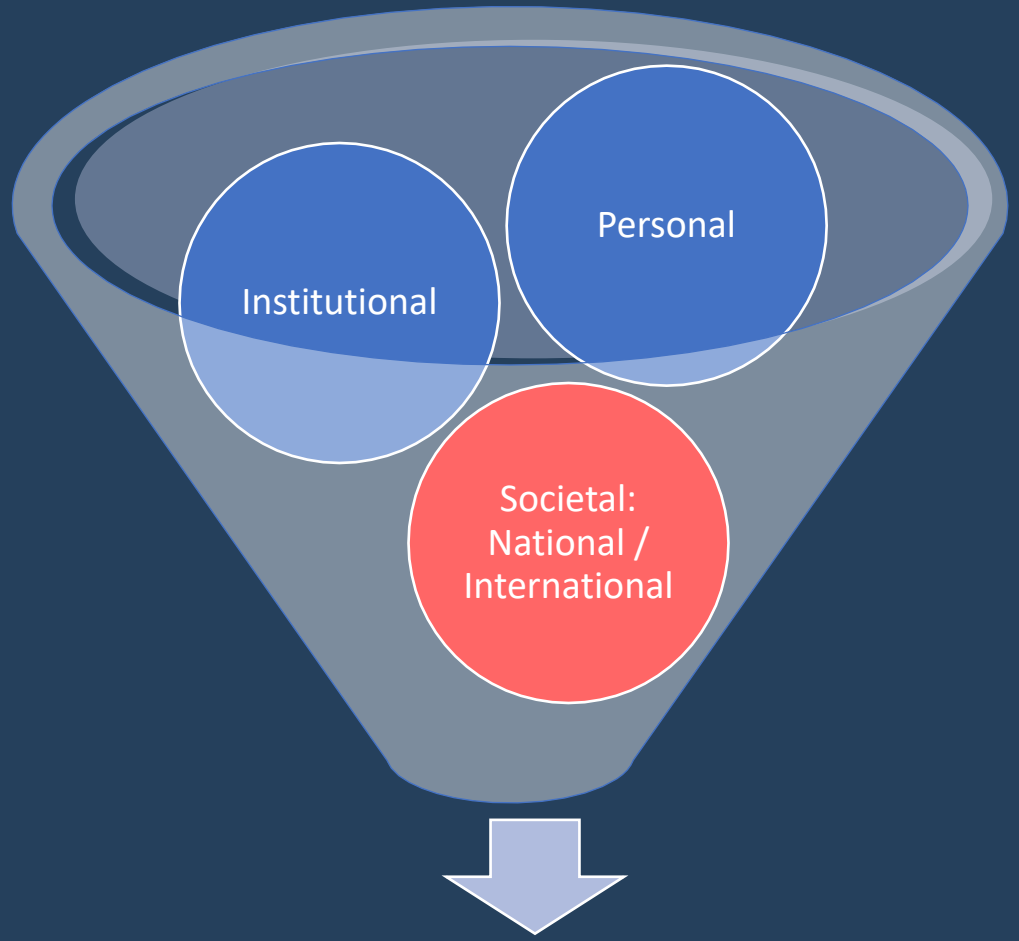
From: **Linda Tebogo Hlabangana** lt.hlabangana@gmail.com
Subject: 10/10
Date: 26 April 2022 at 14:42
To: savvas andronikou doctor.andronikou@gmail.com
Cc: Cathy Baker cathy.baker@rssa.co.za, Jean de Villiers jeandevilliers@gmail.com

Thanks again for an excellent lecture Savvas!
The attendance was great, we have a public holiday tomorrow and we had over 100 attendees!

Kind regards
Tebs

Dr Linda Tebogo Hlabangana
Radiologist - Conidaris and Partners
Honorary Senior Lecturer - University of the Witwatersrand
Mobile: 072 912 1827

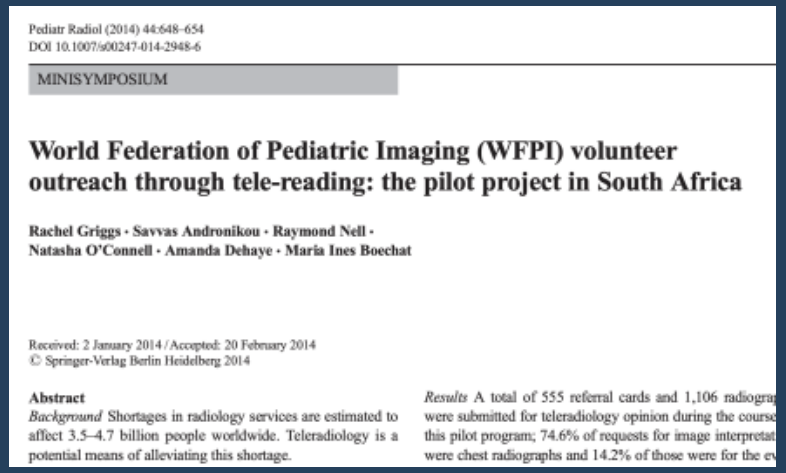
Types of Partnerships



Global Support

Societal

WFPI in South Africa



Pediatr Radiol (2014) 44:648–654
DOI 10.1007/s00247-014-2948-6

MINISYMPOSIUM

World Federation of Pediatric Imaging (WFPI) volunteer outreach through tele-reading: the pilot project in South Africa

Rachel Griggs · Savvas Andronikou · Raymond Nell · Natasha O'Connell · Amanda Dehaye · Maria Ines Boechat

Received: 2 January 2014 / Accepted: 20 February 2014

Abstract
Background Shortages in radiology services are estimated to affect 3.5–4.7 billion people worldwide. Teleradiology is a potential means of alleviating this shortage.

Results A total of 555 referral cards and 1,106 radiograp were submitted for teleradiology opinion during the course this pilot program; 74.6% of requests for image interpretat were chest radiographs and 14.2% of those were for the ev

- Program design:
  - acquiring / delivering images
  - interpretations
- Referral load
- Types of referrals
- Volunteer demographics
- Technical, language, legal barriers
- Sustainability challenges

- Volunteer tele-readers enlisted
- Mass e-mail WFPI and SASPI
- Digital radiographs anonymized on-site- export JPEG
- Forwarded by email to the project control teleradiologist
  Control radiologist distributed to a volunteer
- Tele-readers interpreted on personal computers
- Findings returned via e-mail
- Considered expert opinion

Considerations

Khayelitsha hospital

230 beds: 32 pediatric, 12 neonatal,10 kangaroo prem care,6 short-stay emergency

Pediatric outpatient clinics three times a week.

2012 the admitted a total of 2,524 children

2013 increase to 2,399 admissions first 6 months.

Prior to the WFPI pilot teleradiology project, only clinicians interpreting radiographs.

Volunteer tele-reading program was developed after district pediatrician requested

Response

50 teleradiologist from 18 countries

United States (12)

South Africa (8)

Brazil, China and India (4 each)

Colombia, Pakistan, China, Spain, the United Kingdom, Argentina, Bolivia, Cuba, Sri Lanka, Australia, Panama, New Zealand and Italy

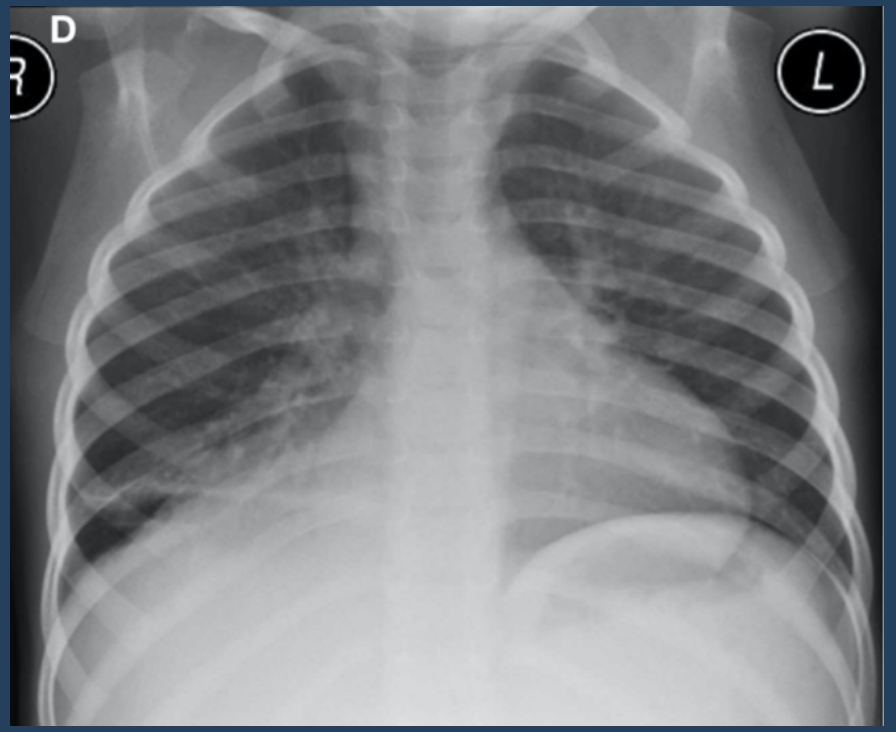
14 bilingual

8 Spanish

5 Portuguese

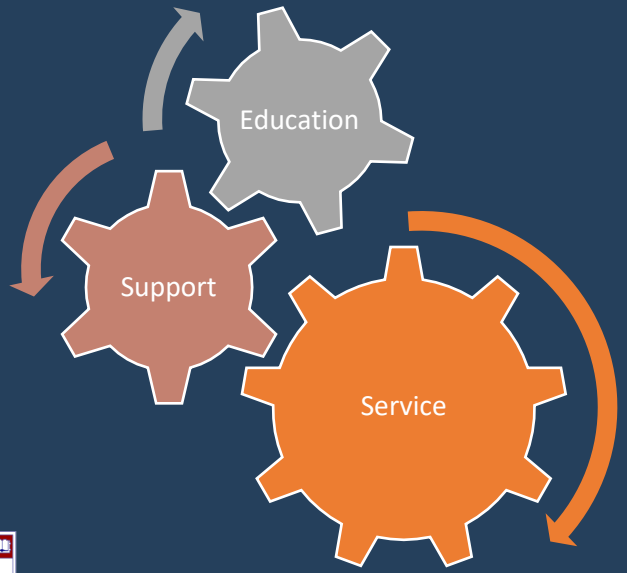
Results

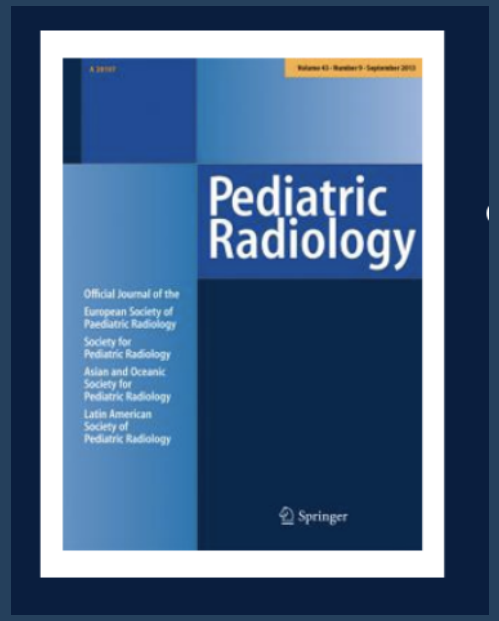
	Number	Percentage of total
Patient referrals (n=555)		
Referrals with no provided or illegible indications	12	2.2
Referrals with incomplete/illegible patient demographic information	66	11.9
Referrals mentioning tuberculosis (TB) in the indication (positive TB contact, known TB, or concern for TB)	79	14.2
Submitted radiographs (n=1,106)		
Chest radiographs	825	74.6
All other radiographs, including those of the abdomen and extremities	281	25.4

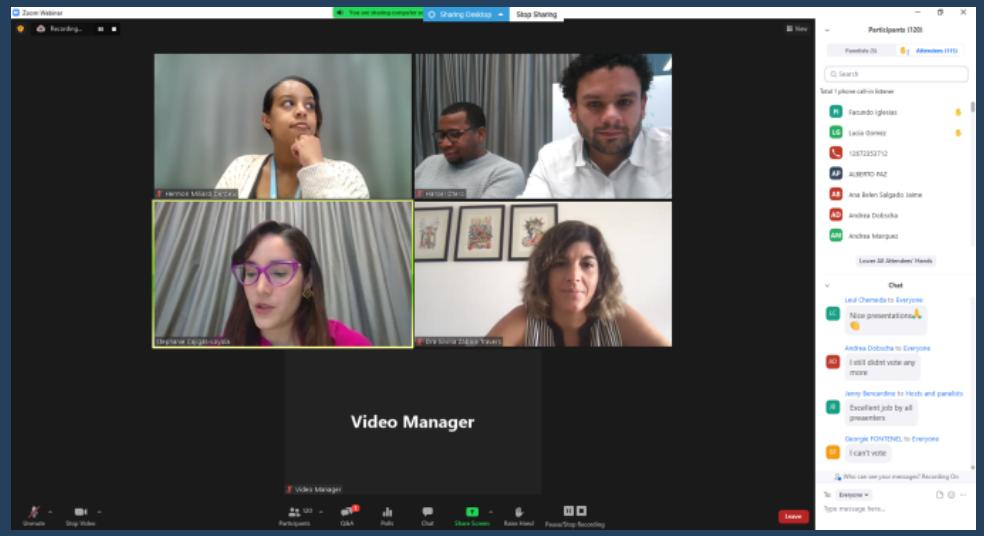


NEW Societal: Research support

- Research education
- Research support mentorship
- Service – papers not making the language grade from developing countries - volunteer editors







In Summary

- On-line engagement is essential and complimentary to personal connections
- Service and education are intertwined and must be adapted to local environment
- Participation in online outreach and education is good for children, colleagues, academic societies and the profession

¿PREGUNTAS?

Twitter: @oterocobo
email: oteroh@chop.edu