

C. Our limits

1. Equipment maintenance and donations
2. Tele-expertise: controlling peaks and ebbs in the flows

1. Equipment donations and maintenance

1. Equipment donations

WFPI does not look to become an imaging equipment donor.

It will not always have the necessary understanding of local infrastructure and set-ups to make the most judicious choice of equipment, and it is unequipped to handle customs and exercise demands.

That said, there have been two scenarios since WFPI's creation in 2011 in which it has donated ultrasound machines (Ethiopia and Malawi ; the latter transported by air to the site by a visiting WFPI teacher).

There is a general consensus, however, that whatever the circumstances might be, WFPI (a small organization with no systematic ties to state-run equipment maintenance services) should **steer clear of X-Ray equipment donations**, where

- ⇒ a radiation dose is involved ;
- ⇒ the equipment requires servicing ; and
- ⇒ the users need QA to use of the machines becoming dangerous.

If WFPI is contacted by physicians looking to donate machines, the following links can be provided for North America :

1. A blog on donating used imaging equipment: <http://www.diagnosticimaging.com/blog/5-tips-donating-used-diagnostic-imaging-equipment>);
2. [The American Medical Resources Foundation](#) charges a small fee to collect, test, refurbish (if needed), store, and ship donated medical equipment. According to the AMRF website, they have donated free medical equipment to 190 hospitals in 90 countries valued at over \$200M.
3. [PROJECT C.U.R.E.](#) stands for PROJECT Commission on Urgent Relief and Equipment. According to the PROJECT C.U.R.E. website, they have delivered medical relief by providing medical equipment and supplies that help build sustainable healthcare infrastructures in over 120 countries.
4. [MedShare](#) collects surplus medical equipment and supplies then redistributes them to qualified healthcare facilities in 85 different countries. According to the MedShare website, they also outfit medical missions and safety net clinics in the United States and abroad.

[Similar sites may exist elsewhere in the world]

2. Equipment maintenance

Maintenance of equipment is well beyond WFPI's mandate and capacity, but we help third party donors understand that proper equipment maintenance is essential for patient and provider safety. High end equipment is particularly susceptible to staying unused for long periods when it breaks down, due to lack of funds (often state-provided) for its repair.

2. Tele-expertize: confronting peaks and ebbs in the flows

1. An overly-low tele-expertize role (given the needs)

As explored above, WFPI's tele-reading is expanding. However, many of these cases have been generated by one site alone (Lao Friends Childrens Hospital, Laos). Following a WFPI site visit in March 2016 and re-organization discussions with the hospital's staff, from mid-March 2016 onwards, this hospital will only refer "problem" cases to WFPI as opposed to all its imaging. This will reduce the overall flow of referrals to WFPI radically.

Other than Laos, WFPI receives few referrals from lower resource setting sites. Why is referral generally so slow?

Studies have shown that while experiencing growing success in the NGO arena, telereading has not always proved the hoped-for panacea in terms of providing affordable and ongoing imaging support to state-run facilities located medically underserved areas.

Apart from the key challenge of lack of control over image quality/safety at the radiology-site, which limits the usefulness of remote interpretation, there is also a frequently observed reluctance to implement teleradiology referrer-side. RAD-AID²¹ suggests in its 2013 White Paper²², suggests that this might be explained by the concerns in many countries that externally-delivered interpretation

- ⇒ lacks accountability,
- ⇒ drains local health care economy of necessary expertise, and
- ⇒ distorts communication across health care providers when radiology personnel are physically absent.

WFPI has observed another major obstacle while working in partnership with Ministry of Health (MoH) healthcare sites: access to computers with internet. Many MoH staff cannot secure this access easily, and when they do, their internet bandwidth speed can be slow. Already challenged by financial issues and towering patient loads, there is simply little time to spare for the hours required uploading cases for "extra" tele-expertise.

To this end, WFPI hopes to conduct research on secured mobile applications, including one offered by our tele-reading platform Collegium Telemedicus. Hopefully this will facilitate many sites that need imaging support but do not have the facility-based infrastructure required to receive tele-opinions. Smart phones, however, are ubiquitous.

²¹ RAD-AID <http://www.rad-aid.org>

²² RAD-AID 2013 White Paper "Improving Radiology in Resource-Limited Regions and Developing Countries" <http://www.ncbi.nlm.nih.gov/pubmed/25189930>



Smart phones: who doesn't have one?

It bears noting that when tele-reading passes through an NGO (MSF/DWB, Imaging the World), with project-dedicated, remunerated staff onsite, telereading flow can be considerable higher. Is this "middle man" a necessity or can we expect a steady flow of tele-expertize referrals when working directly with MOH/other facility staff?

In March 2016, the answer to this is not yet clear. To be monitored!

2. An overly-high tele-expertize role (given the capacities onsite)

Should the flow of referrals to WFPI become particularly significant, all efforts will be made to back-up our tele-expertize with an onsite teaching visit and support, thereby reducing the flow – when possible - to “problem” cases only (i.e. when we can be a consultant for local readers, as opposed to a replacement).