

ON YOUR SHOULDERS

Adjusting WFPI's education priorities, approach and goals

Five years after its launch, WFPI has generated some valuable data that shows where change is needed. It includes a shift in our education goals, currently set as follows:

- ⇒ To promote pediatric radiology educational needs globally for
 - Pediatric radiologists
 - Radiologists
 - Other health care professionals
- ⇒ To collate materials and tools via WFPI website, providing access to pediatric radiology education for targeted audiences worldwide
- ⇒ To promote and develop international education opportunities
- ⇒ To support and promote educational efforts by pediatric radiology groups at regional and national levels¹

We need to take stock of results in our different “communities” so as to chart WFPI's future course.

1/ WFPI's “members”

Here we refer to our starting point: the (largely) pediatric radiology society-driven community, be it national or regional societies (SPR, ESPR, AOSPR, SLARP, AfSPI, BSPR, ISPR, GPR etc). To belong to this community, physicians must take active steps - some of which bear a cost (membership fees, journal subscription, congress registration fees, courses fees) - so as to secure the knowledge and networking their society offers, and that cannot be replaced online.

These societies can in turn be members of WFPI². And at this juncture, we need to explore some myths and realities.

Myth:

Since WFPI's launch in 2011, it has established an international community of “WFPI members” within this society-driven community that can be reached for their participation in or contribution to WFPI's mission.

Reality:

To date, WFPI has only 13 members. They are all societies.

And our data (website, other) shows that we have not established robust two-way communications with the individual physician members of these 13 societies.

This may be because to communicate with these members of our members, WFPI must



¹ WFPI Annual Report 2013

² WFPI bylaws, ARTICLE II, MEMBERSHIP, Section 1: WFPI membership is comprised of pediatric radiology societies or any other group, society or sections of societies (hereafter referred to as “organizations”) whose membership allows the WFPI to fulfill its purpose as set out above. These organizations hold membership for and on behalf of the individual practitioners belonging to them. No WFPI membership can be taken out on an individual basis. http://www.wfpiweb.org/Portals/7/About/FINAL_WFPI_Bylaws_revised_April2015.pdf

pass through the different societies' representatives who sit on WFPI's board (Council). These representatives choose or choose not to facilitate and/or forward WFPI's messages, and many of the societies they represent exercise blast mail bans re their members, not all of them offer newsletters to their members, their websites are variously visited and WFPI's location on their websites may not always encourage traffic our way.

As a result, individual physicians - the members of our members - are only loosely connected to us. **(If asked, would the majority call themselves "WFPI members"? What affinity do they feel with WFPI?)**

Should individuals wish to make this connection stronger, they must spontaneously contact us, via

- ⇒ WFPI meeting attendance (the last two WFPI meetings have attracted some 20 participants who are not directly involved in WFPI's leadership or projects), or
- ⇒ email (to date, spontaneous email contacts have been limited to volunteers looking to tele-read).

They can also

- ⇒ visit our website, (11,000 users in 2015, we cannot say how many are members of WFPI member societies), or
- ⇒ join us via social media (some 2400 followers, we cannot say how many are members of WFPI member societies)

But without one of these four forms of spontaneous contact, **we cannot communicate with members of our members one on one. We rely completely on the representatives of our 13 members to do this job for us.**

And when they do, a universal truth also sets in: **we rely on what our representatives circulate** (content, or calls for participation) **inciting interest.**

RESULTS: what does the data show?

2015 website referrals from our 13 members to WFPI's site

SLARP 200
ESPR 160
SPR 106
GPR 68
AOSPR 37
BSPR 16
SFIPP 9

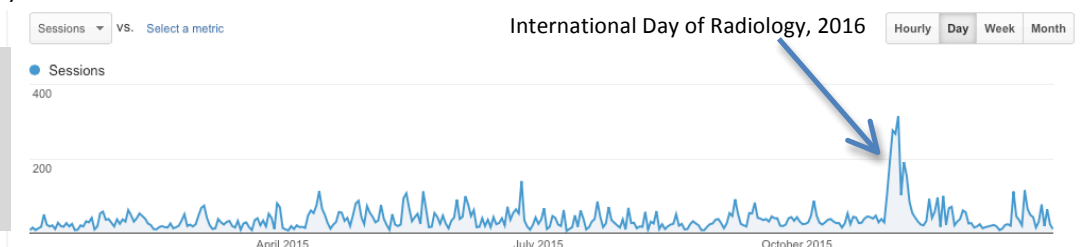
2015 spontaneous contributions from members of our members for WFPI's

- ⇒ teaching cases: 2
- ⇒ online videos: 3
- ⇒ website content: 2
- ⇒ information on pediatric imaging educational events around the world, with a request for visibility/circulation: 2

Circulation of the latest WFPI newsletter, April 2016 issue:

70 downloads from WFPI's site (we do not have data for downloads elsewhere)

2015 Website traffic
(no significant increase in 2015, bar a surge for IDoR)



Is it all gloom and doom? No! It is not!

In early 2014, “WFPI’s regional member society boards (who represent WFPI’s national society members) were called upon to assess WFPI’s trajectory to date. These boards largely reported that the creation of WFPI was “the right way to go”, both in its inclusive structural set up (all 5 regions with equal voting weight) and in its aims of providing a united front, facilitating the sharing of expertise and raising awareness of the multiple needs of pediatric imaging.”³

And in March 2014, the Society for Pediatric Radiology (SPR) polled its members on international outreach efforts. Of 273 SPR respondents (23% response rate: 85% complete, 15% partial), 79% approved of “WFPI being something SPR should continue to pursue”.



Moreover, the worldwide celebrations of the 2015 International Day of Radiology demonstrated true unity of purpose in this global drive⁴.

In conclusion: within this community, via our 13 members

1. Interest in and support for WFPI does exist - **it is just not very active**; and
2. Success in meeting our educational goals has in part **eluded** us

Are we reaching anyone out there? Yes! We are!

2/ WFPI’s “online community”

Via WFPI’s outreach and digital education teams, we do harness international pediatric imaging expertise on different topics and use it to create content of interest **that meets with online dissemination success via our social media channels.**

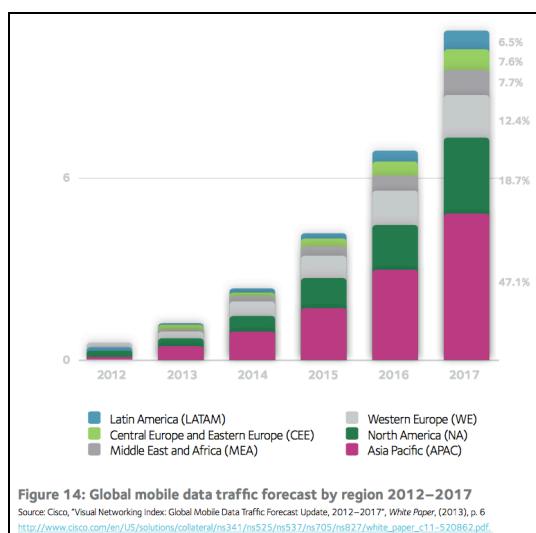
[It bears noting here that some of this content draws on expertise and leadership from lower resource areas – areas from which physicians traditionally struggle to have their knowledge recognized. Yet our data suggests that their input increases WFPI’s relevance, added value and impact].

³ (Saving the Starfish: World Federation of Pediatric Imaging (WFPI) development, work to date, and membership feedback on international outreach, <http://www.ncbi.nlm.nih.gov/pubmed/26994001>)

⁴ WFPI’s Global Wave, International Day of Radiology 2015: <http://www.sorantin.com/IDoR/>)

Who makes up this online community?

- ⇒ Its members are not necessarily affiliated with one of WFPI's 13 member societies.
- ⇒ They are often not pediatric radiologists, or radiologists. They are, however, in the medical sector and working with medical imaging.
- ⇒ They come from all over the world.
- ⇒ They are looking for globally-driven pediatric imaging information. If they have clicked to follow us, they are interested in what WFPI has to offer!
- ⇒ BUT further barriers to their participation are likely to deter. So we must do some **outreach** here – i.e. reach out to them, not vice versa.
 - They will not expect to pay for content – at all or at least right away⁵
 - They also look for easy-to-access (“one click”) content
 - With informal interaction possibilities, and
 - A rapid/immediate follow-up or response.
- ⇒ And lastly, some, if not many, community members are located in lower resource regions. They are not qualified, or cannot afford, to become part of the professional society community outlined above. And they are ever more present online⁶.



⁵ As most peer-reviewed literature remains inaccessible to the public, part of this community will be behind the charge of using technology to change this paradigm (echoed in e.g. the upcoming JACR Hackathon: Reinvent Medical Journal Access, May 14-15 2016, and a 2015 study comparing the volume of individuals who viewed online versions of research articles in peer-reviewed radiology journals (AJNR and AJR) and a radiology blog promoted by social media (Radiopaedia.org)⁵ - the blog received 13.6 and 10.7 times more page views than the two journals respectively, and 6.0 times more than both journal articles combined, suggesting that although peer-reviewed publication remains the most widely accepted measure of academic productivity, researchers in radiology should not ignore opportunities for increasing the impact of research findings via social media ("Using Social Media to Share Your Radiology Research: How Effective Is a Blog Post?" [Jenny K. Hoang, MBBS, Jonathan McCall, MS, Andrew F. Dixon, MBBS, Ryan T. Fitzgerald, MD, Frank Gaillard, MBBS, http://www.jacr.org/article/S1546-1440\(15\)00211-2/abstract](http://www.jacr.org/article/S1546-1440(15)00211-2/abstract))

⁶ The situation has been pithily summed up as follows: "New information technologies are reaching the world's poor much faster than food and toilets. A recent UN report suggested six billion people have access to mobile phones, while only 4.5 billion have access to working toilets. There are around one billion mobile phones in both China and India. Africa is home to twice as many mobile phones as the United States and is the most advanced continent when it comes to "mobile money". Developing countries accounted for 80 percent of new mobile subscriptions in 2011, with the number of Internet users doubling over a four year period. Technology offers great potential to enhance education opportunities, dramatically improve health outcomes, promote free speech and democracy, and offer greater access to global markets." ("Now for the Long Term", a report written by the Oxford Martin Commission for Future Generations, Oct 2013 http://www.oxfordmartin.ox.ac.uk/downloads/commission/Oxford_Martin_Now_for_the_Long_Term.pdf)

And the numbers in WFPI’s online community keep rising (screen capture, Facebook, 23rd April 2016)

International Day of Radiology 2016, theme pediatrics – WFPI’s Facebook page receives a massive boost via its collaboration with Radiopaedia



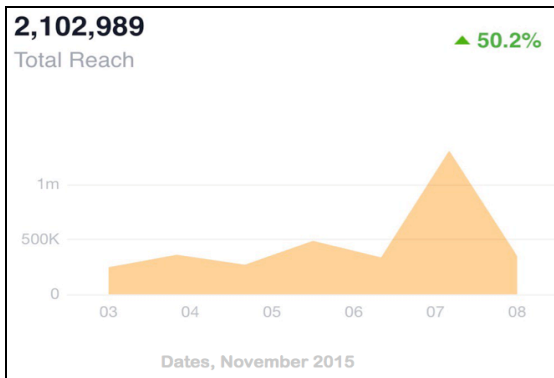
RESULTS: what does the data show?

Examples of WFPI’s digital education screen reach via Facebook

Number of screens reached

Date	Post Content	Reach	Engagement	Action
03/04/2016 13:00	Pediatric white matter disease terminology clarified!	3.1K	204 / 100	Boost Post
02/04/2016 20:01	All you wanted to know about pediatric HRCT but were afraid to ask	1.3K	1.7K / 11	Boost Post
02/04/2016 04:28	ARE YOU A RADIOLOGY OR RADIATION ONCOLOGY RESIDENT?	270	24 / 8	Boost Post
01/04/2016 13:39	12 year-old female with back pain. What are the unexpected findings?	1.1K	366 / 28	Boost Post
01/04/2016 00:55	What a great post! It's fascinating to learn about the history of pediatrics	1.1K	53 / 12	Boost Post
31/03/2016 12:50	Congratulations Amanda!	1.1K	63 / 9	Boost Post
30/03/2016 13:26	A subtle sign that pediatric radiologists need to be aware of! #xra	1.1K	243 / 11	Boost Post
28/03/2016 17:09	Ultra-low Dose CT Accurately Detects Pediatric Fractures Diagnostic	1.1K	46 / 22	Boost Post

[Original content and sharing content from other sources via its Facebook community, currently standing at 2300 followers]



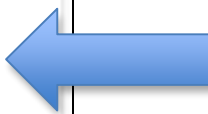
Radiopaedia Facebook dissemination of WFPI pediatric cases during the International Day of Radiology 2015, theme pediatrics. [Over 2 million screens reached, amounting to a 50% rise in (the mighty) Radiopaedia's Facebook activity that week....]

Hi wfpieducation,
Your cases are popular on Figure 1. See how many times they've been viewed.

Case	Views
What additional features do you...	40031
16 month old with a history of...	45519
Premature infant with prenatal...	115954
AP and lateral chest radiograph...	32359
What is the most likely diagnosis...	149096

Feedback on case views as WFPI gets started on Figure1, an online case-sharing platform that reached 1,000,000 healthcare professional users from around the world in April 2016.

Our TB Corner content, which includes open access Childhood TB literature produced every 2 months (<http://www.wfpiweb.org/OUTREACH/TBCorner.aspx>), was well circulated on 2016's World TB Day - by WFPI and via support from our imaging partners at Radiopaedia, Figure1, the International Radiology Society, Imaging the World and RAD-AID. A great display of solidarity for this deadly, yet neglected disease, and appreciation for WFPI's work on it.



Visit surge to WFPI's website, TB Corner, on World TB Day, March 24th 2016



We share the STOP TB partnership vision for a TB-free world and are partnering to ensure that every TB patient has access to effective diagnosis, treatment and cure.
Respectfully yours in good health,



Learn pediatric radiology with the experts!

For free!!

WFPI education channel: CLICK HERE

Launched with Prof. George Taylor's Master Classes

WFPI Online video library

13 videos viewed

- ⇒ **13,500** times, in **149** countries, on YouTube; and
- ⇒ **1100** times on Facebook

since the library went online in January 2015

Top 10 Videos		
Video	↓ Watch time (minutes)	↓ Views
Introduction to Pediatric Chest Radiography	21,577 36%	4,218 31%
Chest Radiography in pediatric heart disease	8,977 15%	1,781 13%
Necrotizing enterocolitis	6,596 11%	1,944 14%
Echogenic lesions in Pediatric Cranial Sonog...	4,809 8.1%	1,032 7.6%
Como realizar una radiografía de tórax de ca...	4,791 8.1%	1,665 12%
Master Class in Pediatric Neurosonography...	4,785 8.1%	1,184 8.8%
Imaging of Pediatric Thoracic Trauma	3,468 5.8%	502 3.7%
Approach to neonatal abdominal radiographs	1,381 2.3%	269 2.0%
Genitourinary Trauma in Children- Renal Inju...	884 1.5%	279 2.1%
Sav's 7-minute snippets- Pediatric TB- Clues ...	745 1.3%	203 1.5%

Currently using Facebook, Twitter, Instagram and Figure1, WFPI plans to explore other platforms emerging in this fast-moving arena. They include the newly-released feature of free live streaming that Facebook and YouTube now offer ⁷, allowing observation of a readout with anonymized cases, for example (a "read with the experts" experience), or webinars at no cost to the organization/user.

Resonating the success of institutions such as Cincinnati Children's Hospital (USA) in delivering social media-driven education⁸, it is interesting to note that the American Society of Neuroradiology has just appointed multiple web content editors⁹. Its social media followings are currently modest, but targeted e-content will clearly frame its future.

In conclusion:

1. WFPI's educational goals have been partially met with in this online community, albeit in a somewhat random manner due to under-development;
2. There is potential for expansion and further success, **if WFPI increases its engagement in this area.**

People have always looked for education in the midst of a busy workload. Today, we can make it easier for them to access it in bite-sizes. And we know that if we offer quality content, our followers will seek out further knowledge.

We need a sustained, substantive digital education effort to accomplish WFPI's mission of improving the quality of imaging of children, everywhere.

⁷ Tools for #Rads & #SoMe" - on Mon 5/16 "Tools for radiologists and social media", C. Matthew Hawkins, Jenny K. Hoang, Zachary Bercu <https://ww2.aievolution.com/acr1601/index.cfm?do=ev.viewEv&ev=1316>

⁸ <https://twitter.com/SaadR/status/672800431161102337>

⁹ <http://www.asnr.org/blog/asnr-selects-web-editors>

FAQs about educational development via the social media

1/ Isn't social media just for posting pictures of your kids?

No.

Facebook currently registers 1.6 billion users, around a billion of whom log on each day. It has also reached new users in emerging markets, such as Indonesia, where mobile phones are more common than desktop computers. Around a third of Facebook's active users are in Asia (excluding China, where the service is blocked). Another third are in America and Europe; and the rest are elsewhere around the world. Of the top ten apps in India, Facebook controls three.

Facebook is one of a cluster of “infotainment sites” in a fascinating virtual social media world “where people meet, interact, and share their thoughts. Although primarily a social and communication tool, social media has tremendous potential for health care professionals, including radiologists. **This powerful communications vehicle is presently underutilized with regard to global medical education.** Requiring only minimal human and financial resources, social media instantly connects users with a large population over a broad geographic area. It allows users to share and discuss topics, and it is easy to reach out to a variety of audiences. Social media is, however, not without its issues. Loose regulation over posted content, easy impersonation, minimal copyright protections, and decreased personal space are possible deterrents to educators using social media. The ever-changing privacy policies are another problem. Nonetheless, social media represents a tremendous opportunity to propagate and enhance global radiology education. Educators around the world should embrace it.”¹⁰

Radiopaedia.org – the hugely successful, rapidly growing open-edit radiology resource primarily compiled by radiologists and radiology residents/registrar and fellows from around the world that aims to create the best radiology reference available and make it available “for free, forever and for all¹¹” - **disseminates much of its content via its huge social media followings** (466k followers on Facebook, 20k on Twitter).

2/ So, great, we have our own, growing social media following. Can't we just pull it over to our website to boost traffic? And post all news/content that comes our way onto Facebook, thereby getting it OUT there and sharing the love?

No. That's not how it works.

Facebook, our primary social media channel, “owes much of its popularity to its clever predictions about what people want to see: photos and videos, relevant posts about their friends and professional interests, adverts that are not too annoying”¹². All of this is possible in part because Artificial Intelligence uses the data Facebook mines from its users and their behaviour online to target them with laser-like precision – for advertising and.... for content feed that is tailored to each and every one of them.

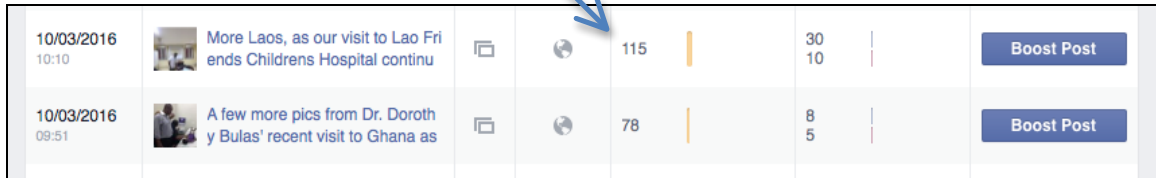
So, if people have enjoyed online radiology education elsewhere on line, Facebook is likely to serve them the online education WFPI has to offer. However, if they have never clicked on outreach teaching in Africa, for example, Facebook is not about to widen their horizons for them.











¹⁰ ACR Bulletin #SoMe, By Vibhor Wadhwa, MD, PGY1 radiology intern at University of Arkansas for Medical Sciences in Little Rock, Ark.

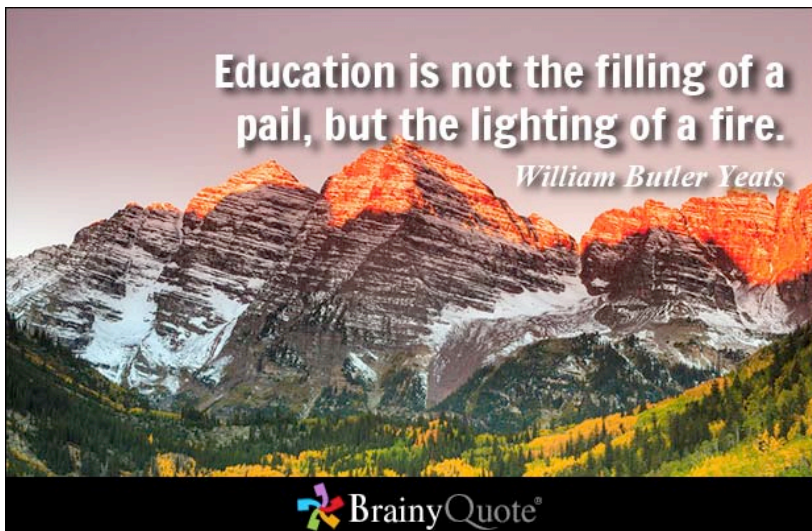
¹¹ <http://radiopaedia.org>

¹² The Economist “The new face of Facebook: how to win friends and influence people” April 9th 2016

Number of screens reached – it is regularly low for WFPI’s outreach posts



10/03/2016 10:10	 More Laos, as our visit to Lao Friends Childrens Hospital continu			115		30 10		Boost Post
10/03/2016 09:51	 A few more pics from Dr. Dorothy Bulas' recent visit to Ghana as			78		8 5		Boost Post



Can we “override” Facebook?

We know that if we post regularly, in drips (as opposed to in fits and starts - this just does not work!), at certain times of the day/week, it ups our chances of dissemination.

We also know from our analytics data that some education material incites more interest than other. We can build out on this.

And lastly, we also know that if we serve people what they want – good quality, digital education – it acts as “ice-cream”. Good content works: it’s as simple as that! And it will keep our reach expanding and our numbers rising until eventually Facebook might accept that our community might find other aspects of WFPI interesting too – and so will disseminate other types of WFPI posts. I.e. the fruit we bury in the ice cream!

Meanwhile, no: we cannot say “posted, therefore mission accomplished”.

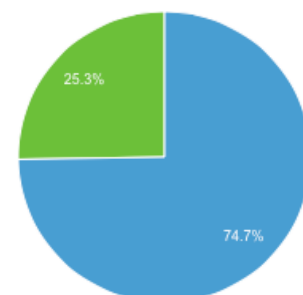
[It is interesting to note that while peer-review is absent from this media, Facebook’s own algorithms, based on users’ interests and appreciation, are proving a stern judge of what content receives dissemination!]

3/ What is our website’s role in this online dissemination drive?

Our website has found its place as repository/portal for social media-disseminated content.

This contrasts with WFPI’s original plans to offer it as a stand-alone, “bookmarked” website repository that visitors come back to spontaneously, time and again: there has been insufficient new content posted on the site for this to happen.

■ New Visitor ■ Returning Visitor



WFPI website visitors 2015

[The website “bounce rate” (i.e. people looking at one page per visit, and not exploring further) was also high for 2015: 70%]

Our conclusion, and our ask of each member of WFPI's governing Council

Firstly, via our 13 member societies, WFPI acts as an international extension to a society-driven community of physicians.

1/ Would you like to see WFPI's impact on its "member" community increase? (YES or NO)

I.e. do you consider the status quo acceptable (WFPI is already meeting its members' expectations)?

OR

Do you consider WFPI's output should have added value for this community over and above what they already obtain via their own societies/networks/the internet?

2/ If you would like increased impact, what is needed to bring this about? (PLEASE DESCRIBE CONCRETE & MEASURABLE DELIVERABLES, AND YOUR ROLE IN ASSISTING WITH THEIR DELIVERY)

Secondly, we have developed a potentially dynamic online community that has no ties to our membership.

Within this, the WFPI website primarily serves as a repository for content disseminated via social media.

3/ Would you like to see our website take on a larger role? (YES or NO)

I.e. would you like to see the website becomes a repository in its own right (as opposed to depending on social media directing traffic to it) that attracts a healthy flow of spontaneous, returning visitors?

4/ If so, what will you and your society do to ensure this happens? (PLEASE DESCRIBE CONCRETE & MEASURABLE DELIVERABLES, AND YOUR ROLE IN ASSISTING WITH THEIR DELIVERY)

Otherwise, our data would suggest that our online community does have potential - **and merits priority attention** - for development so as to meet our education goals. Yet our assessment of efforts to date concludes: *"In online education, it has been a challenge inciting members to contribute cases and encourage their trainees to use our resources. Development must now be bolder and better resourced"*¹³

5/ Do you agree that our online community has potential – and merits priority attention – for development with regard to meeting WFPI's education goals? (YES or NO)

6/ Are you ready to mobilize yourself and your society to this end, via identifying interested volunteers to work with us and generating/securing content? (YES or NO)

¹³ Saving the Starfish: World Federation of Pediatric Imaging (WFPI) development, work to date, and membership feedback on international outreach, <http://www.ncbi.nlm.nih.gov/pubmed/26994001>

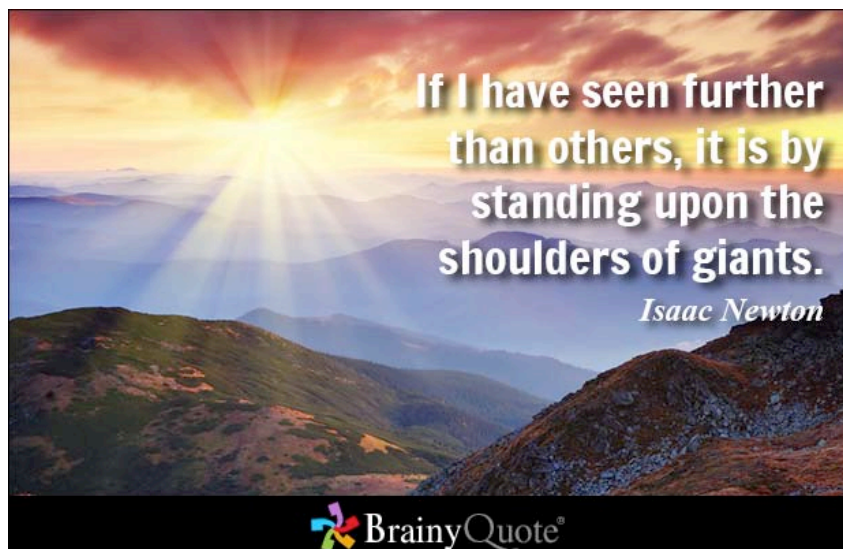
We know there is a shift in mindset here for many. But we need to overcome “I am the wrong generation”.

Generation X and Generation Y must join hands to ensure we do not fail WFPI’s founders, who sought to do outreach such as this, sharing from highly resourced settings to lower. Our data indicates that virtually, together, we might succeed.



WE NEED THE HELP OF EVERY MEMBER OF OUR COUNCIL - AND BEYOND – TO GIVE THE DEVELOPMENT OF OUR DIGITAL EDUCATION EFFORTS OUR BEST SHOT

“Lack of engagement of more experienced radiologists becomes an issue of content creation, as our younger users could benefit greatly from their experience if it could be captured”
(Saving the Starfish).



YOU are our giants!

Over and above the concrete steps to be developed in an Action Plan (Annex 1), if **every leader** on WFPI’s Council could commit to identifying 1 or more interested volunteers from his/her region, for example, and providing/securing 3 online educational content contributions per year, it would boost our digital education efforts beyond recognition. Here’s an example to guide you:

<https://www.facebook.com/176723089107785/photos/a.231814213598672.51457.176723089107785/929181190528634/?type=3&theater>

ANNEX ONE: OUTLINE, DIGITAL EDUCATION PLAN

You don't have to be great to start. But you have to start to be great (Zig Zigler)



WFPI has a huge head start over many operators in the world of online sharing: its expertise is pre-defined and uncontested¹⁴. **But we need an action plan going forward.** It will include

1/ The long-term view of where WFPI's digital education wants to go, guided by:

⇒ WFPI's existing online data – we must learn to steer ourselves with this!¹⁵

⇒ Mapping of our partners' online content and aims, so as to complement/work in partnership with them (IDoR 2015, World TB Day) as opposed to generating duplication (currently an issue, e.g., with international child patient safety information)

This will define what should we produce more of, and where we should we expand. I.e. what our messages and dissemination channels should be - WFPI's adjusted educational goals.

2/ The steps entailed in building up our back office content – videos, cases, online posts, e-publications, slides, links to webinars and online courses, streaming opportunities

4/ A re-vamp of our website, as necessary

5/ Strategies to overcome current obstacles – e.g. our inability to reach our public via email, and reach e.g. China and Japan, which use WeiBo/other social media channels more often than Facebook or Twitter

6/ Milestones for monitoring, analysis, reporting, and making adjustments to the course, and a timeline

We also need to build up our digital education leadership & team: SUGGESTIONS?

We plan to open an application process

¹⁴ "We have reason to aim high. For WFPI is not just a coterie of well-intentioned and concerned citizens, but a group of professionals with a great deal of content expertise. Five years into its existence, WFPI seeks to create tools and generate resources that can be leveraged by multiple groups to be used where the need/desire for that expertise arises – be they high resource settings, middle income, or low - with a particular focus on low, given the massive imbalance of global resources and the high number of children living in these areas" (Saving the Starfish: World Federation of Pediatric Imaging (WFPI) development, work to date, and membership feedback on international outreach, <http://www.ncbi.nlm.nih.gov/pubmed/26994001>)

¹⁵ Says Massachusetts General Hospital (MGH) radiology department, that is shooting for success with its new MyMammo program, an initiative designed to disseminate information about the importance of mammography and encourage more women to schedule appointments for their yearly screening: "That's the really cool part of having conducted these digital ad campaigns. We came out with a ton of data and used it to better understand the audience and make strategic decisions about how to allocate our marketing resources. [•••] When we compare this campaign to others, the ability to track the impact is huge. So from where we sit, being able to demonstrate its value, the reasons for investing in this kind of outreach is compelling. It's especially rewarding when we built in several calls to action." Successful Social Media Campaigns in Radiology, October 30, 2014, Practice Management, By Whitney L.J. Howell