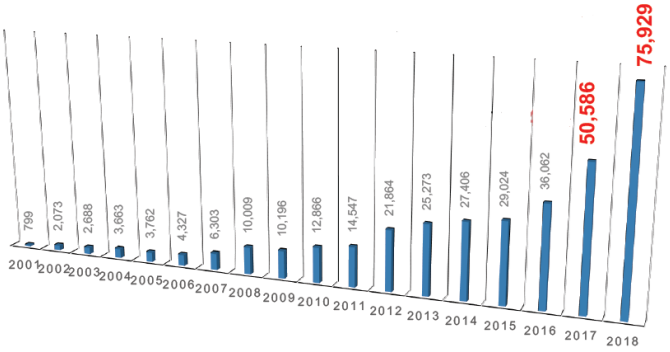
Postcard from IMO Queretaro Mexico

Jan 28 - Feb 1, 2019

Resident Graduation 2018 – Tucson Arizona – Dra Pamela Gonzalez and Dr Ellery Lopez came to give the Jorge Rodriguez Memorial Lecture. They told the story

of the work done by their organization, IMO, in Mexico. I was invited for a visit, and happily it came to pass. Queretaro is about 2 hours drive north of Mexico City. There was an American Airlines flight direct from DFW. We (Sarah and I) were set!

The Instituto Mexicano de Oftalmologia (IMO, pronounced as E-MO) was founded in the 1980s as a charity clinic by Dr Corona and other community ophthalmologists. In 2001, it was reorganized as a residency program and NGO health care group, and has exhibited exponential growth. IMO is recognized around the world as an innovator in delivery of eye care to Mexico. I wanted to learn what I could from them in providing affordable care on a fee-for-service basis. The graph below shows the number of patients served by IMO each year since its founding. ***The growth that is seen shows a 50 percent annual growth rate for last year… how are they doing that? I wanted to learn.***



IMO annual patient encounters by year

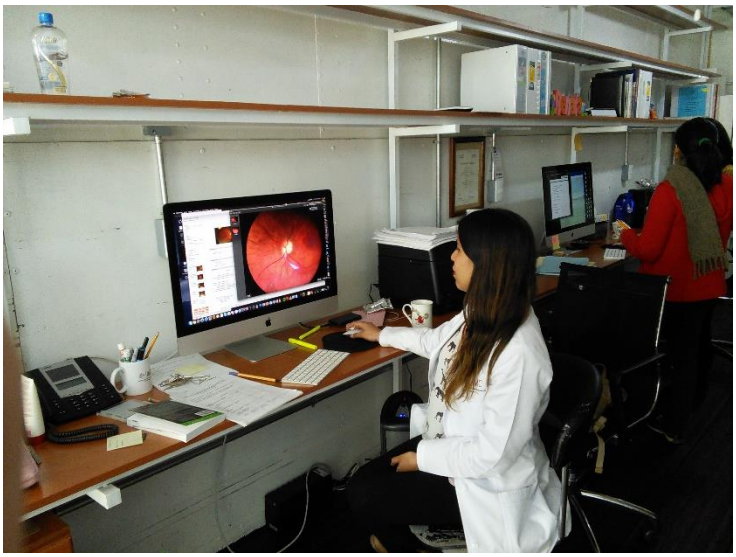
Brunescent Cataract after removal

The first thing that I learned is that there are a lot of people in Mexico (about 120 million, or about a third of the US population), and while IMSS and Seguro Popular (the Mexican Universal Health Care plans) offer access, the wait times are long, sometimes years for cataract surgery. Many patients can afford health care if

affordable. This is where IMO, under the leadership of Ellery Lopez, has differentiated itself in delivery. **First**, sliding scale fee structure is in place so patients pay a price based upon the resources at their disposal. IMO has built a system that meets its operating costs through cash collections, and does not depend on either the Government or Charity to keep going. It is self supporting by patient care revenues, and gifts are used for capital improvements. **Second**, outreach programs to perform eye screenings on site generate referrals to the home institution.

Here is the Mobile Examination Facility – a full size bus with two interior examination rooms. It is used as a home base for large scale screening programs within a few hours drive of IMO.

More familiar to me is the minivan concept where a team of four loads up and goes to a host – place of employment, community center, school – for screening examinations.



The explosive growth (50 percent per annum) is a result of large numbers of diabetic eye exams performed by telemedicine. A non-mydriatic fundus camera obtains two images per eye, centered on the macula and optic nerve, and the images are read back at IMO at their reading center. If treatable disease is encountered, the patients are referred.

Alternatively, screenings are also performed for decreased visual acuity, need for refractive correction, and for treatable eye disease. Again, if a patient has need for continued care, they are given a referral to IMO.

Additionally, there are four fully staffed vision centers located in surrounding communities within the state.

THE INITIAL IMO EVALUATION

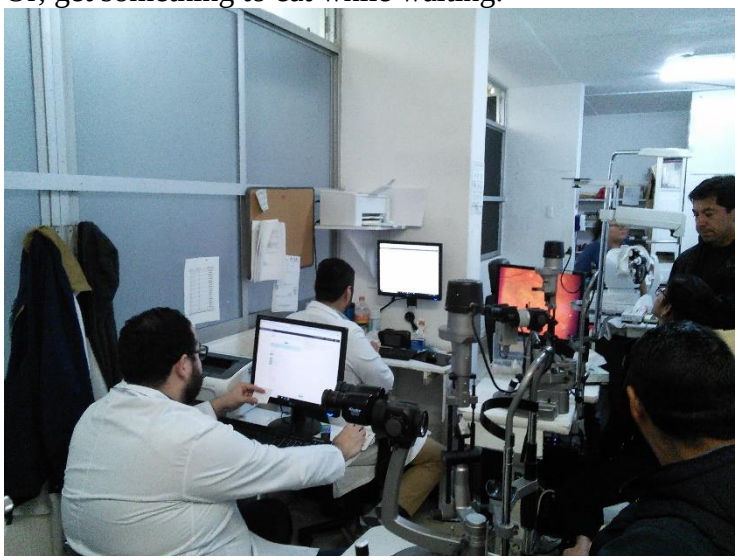
Here is where the innovation seems to begin. The IMO itself is next to the Queretaro Corregadora Stadium at 20.575919, -100.363239 with great parking. The patients don't get an appointment. While most families have a cell phone, most individuals do not**. Innovation Number 1 – No appointments are made.** Instead, patients are given the address and told to show up early on a day that works for them. The line starts to form at 5 am. It is first come, first served, numbers are assigned, and an expected wait time is given with the number. The longer the line gets, the longer the expected wait, and the more likely people will decide to come back earlier another day. There is no schedule, but if you are willing to wait you will get seen.

Innovation Number 2 – The initial visit is cash only, and everyone pays the same price – 150 Pesos, or about $7 US.

Early in the day, the waiting room is full. By 1 pm, the crowds have thinned out

The Central waiting area is a busy place. This was around 9 am. There was no "line" per se, as people had tickets and could move around, visit the bano, etc.

Or, get something to eat while waiting.



The residents are busy for the first part of the day but it settles out. A custom purpose EHR manages the information.

Follow up visits are then scheduled after an initial consultation with the usual service lines: Pediatrics, Anterior Segment, Glaucoma, Oculoplastics, Retina, Neuro-ophthalmology and Uveitis. The last two are staffed less than full time, while the other services meet every day. Follow up services have a fee structure that varies with the service (imaging, etc). A sliding scale fee structure is assigned after an exit interview with the social services department.

About 2/3 of the patients are under 50, with 1/3 between 19 and 49 years of age. Pediatrics represents about 2% of patients seen.

The Professional Staff are divided between attendings, residents (12) and fellows (14)

The faculty (http://imoiap.com/doctores/) all split their time between the IMO (in the AM) and private practices. Unlike the US where there is theoretically a lunch hour that divides the day into two sessions, it seems in Mexico that there is a hard division in the day between 2 and 4 pm. The professors work in clinic at IMO from around 9 till 2 pm, then head to their private offices for a practice that starts around 4 and runs till 8 or 9. It is a long day. The residents and fellows have a different experience, getting to clinic around 7 and getting home by 6ish with no night call. OR starts at 7, seemingly universal.

SERVICES OFFERED

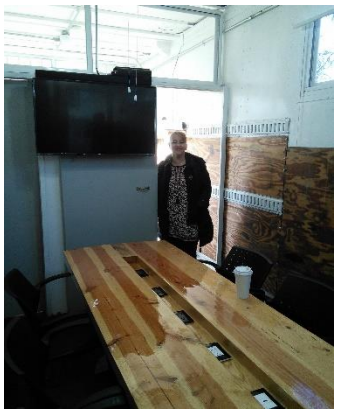
The infrastructure is incredible. There is one hole still to be plugged: This is the future home of the LASIK laser.

Any imaging modality or glaucoma testing modality is available. About 6 percent of the annual budget is directed to infrastructure. They are able to afford and deliver this very high level of technical care because

they money goes to diagnostic equipment, not brick and mortar. I say this literally, not figuratively.

THE STACKS

You may recognize this image from Spielberg's "Ready Player One" -"The Stacks" of Columbus Ohio. I am here to tell you that the stacks are actually in Queretaro.



The administrative space for the IMO is in 9 repurposed shipping containers. There is space for the resident office, the outreach office, an administrative meeting room, a wet lab, accounting, outreach – you name it. It is working well. And it is about as insulated as a can of Coca Cola! I am not sure if it is cultural, or unique to IMO – but it seems that everyone has enough sense to wear warm clothes when it gets cold in the winter, rather than trying to heat everything to shirtsleeve temperature.

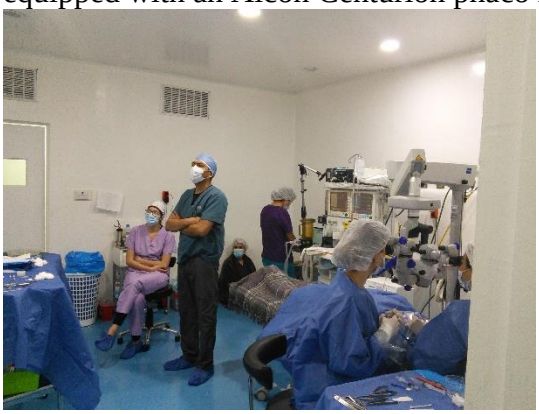
The repurposing of containers for housing is not new. Here is an image of an apartment complex in South Africa made of renovated containers.

It is working so well that there is about to be a big use of the concept again at IMO – this time with 40 more containers being placed to create a less crowded patient care experience – exam rooms, waiting areas with greenspace, office space, server racks.

Here is Ellery Lopez MD with the raw material for the new complex, waiting to be assembled. The units can be blocked adjacent with holes cut to make rooms bigger than 10 x 40 feet. The cost is significantly reduced – perhaps 30% less per square foot – but the biggest advantage is time – the entire construction project will, start to finish, take less than 2 months.

SURGICAL SERVICES

The modular structures will not be used for the OR. The present operating rooms will continue to be used for that purpose. The anterior segment OR is spacious and equipped with an Alcon Centurion phaco machine.



In a departure from the US, patients are evaluated pre operatively and based upon the LOCS score, are assigned to either MSICS or PHACO surgery based upon the needs of the patient. It appeared to me that about half the patients were receiving phaco and half MSICS. The price to the patient was the same either way. The best method for the patient was the method that was used. It seemed as though the time required by experienced surgeons was about the same for either procedure. IMO is not intended to be a high throughput cataract operating room – it is serving an educational mission and adequate teaching time is afforded. I would estimate that either way a typical procedure time was about 30 minutes.

MSICS PEARLS

The IMO is an educational institution with an international reach. They train residents from Mexico and Fellows from Central and South America. They also provide education in MSICS to practicing physicians. One of my goals in visiting was to refresh my MSICS skills prior to going to Guinea with Mercy Ships next month. I haven't done any cataract surgery since last February and hoped to have some supervised instruction by Dr Gonzalez.

My first case (and first pearl) was given to me by Dr Jaime Macias Martinez when I observed his technique in creating the MSICS tunnel. The proper creation of the surgical entry wound is the key to the MSICS self-sealing incision. His English is much better than my Spanish, but we still found ourselves using pantomime at times. He was telling me that the right side of the wound was made with clockwise circular motions of the crescent blade, and the left side of the wound with counterclockwise circular motions. He laid his hand flat and started making circles … and then I saw it!

I am afraid that I will always associate Dr Macias Martinez and Mr Miyagi in my mind from here forward! Thank you Jaime!

I would also like to thank Dr Pamela Gozalez and her fellow Eder for their excellent (and patient) instruction in the operating room while guiding me through first a very practical wet lab and later several cases of MSICS to refresh the "muscle memory" of the various manuevars of this procedure. I highly recommend the course to fellow Nordamericanos who would like to learn the method.


IMO
INSTITUTO MEXICANO DE OFTALMOLOGÍA
verparacreer
El Instituto Mexicano de Oftalmología I.A.P.
otorga el presente reconocimiento a:
Dr. Joseph M Miller MD
POR HABER COMPLETADO SATISFACTORIAMENTE EL
MSICS Training Program 2019
Santiago de Querétaro, Qro. del 28 de enero al 1 de febrero del 2019
Dr. Jaime Macias Martínez
Jefe del Servicio de Segmento Anterior del Instituto Mexicano de Oftalmología I.A.P.
Dra. Karla Pamela González Daher
Jefe del Departamento de Educación en Línea del Instituto Mexicano de Oftalmología I.A.P.

QUERETARO is a beautiful place to visit if you wish to travel to learn MSICS. Here are some street scenes taken by my wife Sarah Sandford-Miller during our visit

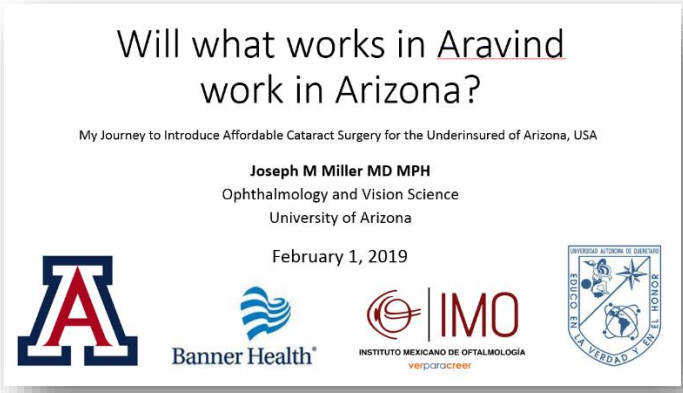
Old Queretaro, a UNESCO World Heritage site

New Queretaro, a safe, modern city

If you are a night owl, things are going on till late. If you work till 8, dinner is at 9. It is a beautiful place to visit.

GRAND ROUNDS

I'll finish with a few thoughts from my Rounds presentation.



As most of my colleagues are sick of hearing, I started in 2013 to try and introduce an affordable cataract surgery program to Tucson, offering MSICS for a $500 cash price. After a year of trying everything we teach in the MPH curriculum for recruiting, the study failed recruitment after enrolling only 8 patients.

Results

PT	AGE	EYE	SM	PREOP	POSTOP
DD	59.4	right	P	CF 2'	20/20
RW	62.9	left	P	CF 3'	20/30
EG	67.0	left	P	20/200	20/30
AA	75.5	right	P	20/100	20/20
OG	83.4	left	P	20/150	20/25
BE	58.6	right	M	20/100	20/20
DD	60.2	left	M	CF 8'	20/25
AA	76.2	left	M	20/70	20/25
EN	79.2	right	M	20/100	20/50
AB	81.0	right	M	CF 4'	20/50

Two patients had both eyes done. No clinically significant difference between MSICS and Phaco was identified. Thanks Bala and Ming, and all the others that got it to work.

Which leads me back to Tucson – While introducing MSICS to Tucson was an Epic Fail, the story is not over. We continue to price access to care beyond what most can afford. Health insurance now protects hospitals, not patients. Employees cannot afford their copays and simply do not access care, while those in the "Gig Economy" go without. I suspect the time for US to adopt IMO innovations is near, if not now.

Thanks for a great visit!

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3 February 2019