Pediatric surgical residency training in Taiwan: A Cross-institutional collaboration and engagement through social media in helping and auditing

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I have nothing to disclosure
Far Eastern Memorial Hospital
Pediatric Surgical Training in Taiwan

General rotation 2 years

Chest
Cardiovascular
Plastic Surgery
Neurosurgery

2 years training

General Surgery
Colorectal
Pediatric Surgery

Board Examination

General Surgeon

Pediatric Surgery 2 years

Board Examination

Pediatric Surgeon
Lowest Birthrate in Taiwan

Around 150,000 newborn per year

How to ensure the quality and quantity of PedS

Due to the progress of prenatal diagnosis coupled with a declining birth rate, many rare congenital surgical diseases are even rarer. Thus pediatric surgeons may not have sufficient clinical experiences and adequate training quality.
Discussion in annual meeting of TAPS in 2017

• Traditional board examination
  • Fundamental training for 2-4 years
  • R6: Written and oral examination

• Additional requirements
  • R5: Case presentation and challenge by committees
  • Minimal requirement of index Surgeries
<table>
<thead>
<tr>
<th>Setup index surgeries</th>
<th>Thoracic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neonatal</strong></td>
<td><strong>Esophageal resection/replacement</strong></td>
</tr>
<tr>
<td>• Gastrochisis/omphalocele</td>
<td>• Pulmonary resection</td>
</tr>
<tr>
<td>• EA/TEF Esophageal atresia</td>
<td>• Thoracotomy (tumor/cyst)</td>
</tr>
<tr>
<td>• CDH</td>
<td></td>
</tr>
<tr>
<td>• Duodenal atresia/stenosis</td>
<td><strong>GU</strong></td>
</tr>
<tr>
<td>• Intestinal atresia/stenosis</td>
<td>• Hypospadias</td>
</tr>
<tr>
<td>• Malrotation/volvulus</td>
<td>• VUR</td>
</tr>
<tr>
<td>• NEC</td>
<td>• UPJ  O</td>
</tr>
<tr>
<td>• Hirschprung’s disease</td>
<td>• Nephrectomy (total, partial)</td>
</tr>
<tr>
<td>• Anorectal malformation</td>
<td><strong>Malignant Tumor</strong></td>
</tr>
<tr>
<td></td>
<td>• Hepatoblastoma</td>
</tr>
<tr>
<td><strong>GI and Biliary</strong></td>
<td>• Neuroblastoma</td>
</tr>
<tr>
<td>• Biliary atresia</td>
<td>• Rhabdomyosarcoma</td>
</tr>
<tr>
<td>• Choledochal cyst</td>
<td>• Wilms’ tumor</td>
</tr>
<tr>
<td>• Fundoplication</td>
<td><strong>Teratoma</strong></td>
</tr>
<tr>
<td>• Bowel obstruction/perforation</td>
<td></td>
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<tr>
<td>• Intussusceptions</td>
<td></td>
</tr>
<tr>
<td>• Splenectomy/splenorrhaphy</td>
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Cross-institutional collaboration through social media

- Share the rare index surgeries by different centers
- The Association help the trainees to overcome the different institution’s barrier
Through LINE to announce the index cases and engage the members

We have a choledochal cyst next Monday noon.......

Welcome, let’s meet 12pm

I want to join the surgery

We have a TE fistula 3/9 afternoon

We would like to see
Questionnaire 8 months after implementation

58 members in line and 31 responded (53%)

Gender

- 80.5% Female
- 19.4% Male

Identification

- 54.3% Young VS
- 19.4% R1
- 9.7% R2
- 9.7% R3
- 9.7% R4
- 9.7% CR
- 9.7% Senior VS
- 9.7% Program Director

Most common used social media

- 100% LINE

What for

- 77.4% Communicate with family or friend
- 22.6% Discussion with colleagues
- 17.6% Read News
- 11% Watching movie
- 8.4% Get discount information
- 4.2% Line pay
For Trainers or Institutions

Facilitate the cross-institutional resources sharing

Build the training consensus among different institutions

Audit trainees to fulfill the training requirements

Motivate to share of index surgeries
For Trainees

Opportunity for cross institution cases learning

- Strongly agree: 77.4%
- Agree: 12.9%
- Neither agree nor disagree: 9.7%

Build partnership among different institutions

- Strongly agree: 80.6%
- Agree: 19.4%

Absorb their goodness of different institutions

- Strongly agree: 22.6%
- Agree: 21.4%
- Neither agree nor disagree: 9.7%
- Disagree: 16.1%
- Strongly disagree: 74.2%

The association set the index surgeries can motivate me to participate the index surgeries
Discussion
Role of social media in physician

- Professional interactions and collaboration
- Build an online reputation/digital presence
- Engage in continued education
- Facilitate patient education
- Expand research efforts
- Disseminate campaigns to increase disease awareness
- Communicate new research findings and best practice guidelines

Social Media Application in Surgery

• The International Hernia Collaboration (IHC) was the first online Facebook discussion platform: Chui PC, Jacobs B. 2012

• In April 2015, the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) established a Facebook group dedicated to discussion of surgery of the esophagus, stomach, and small intestine—the “SAGES Foregut Surgery Masters Program”. This is a “closed” Facebook group.

• Social media as a platform for surgical learning: use and engagement patterns among robotic surgeons. Myers CG, Ann Surg. 2017
The challenges of social media

• Maintaining confidentiality
• Lack of active participation
• Finding time
• Lack of trust
• Workplace acceptance, and support
• Information anarchy
  • Panahi S et al, Health Informatics J. 2016
Social media application in rare diseases

• There are a lot of examples of rare diseases collaboration through social media but they are mainly for the diagnosis or research.

• Through this study, we think using social media collaboration for surgical residency training in rare diseases are feasible and can overcome the shortage of resources and build cross-institutional collaboration and partnership.