AO Alliance

Injuries, especially those related to bones and muscle (the burden of musculoskeletal injuries), are a silent and neglected epidemic in low- and middle-income countries (LMICs). The importance of preventing and treating these injuries has yet to be embraced by the global public health community and the world. The end game remains timely and appropriate treatment for all patients sustaining injuries, with local capacity to do so.

AO Alliance has focused its efforts in 24 countries in Sub-Saharan Africa and 10 countries in Asia, and has trained over 4,000 surgeons and operating room personnel in providing appropriate and timely fracture care treatment, both nonoperative and operative.
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Death and deformities from injuries are a huge, rapidly spreading, but still silent epidemic in low- and middle-income countries (LMICs). A third more people die from injuries (5 million people annually worldwide) than from many contagious diseases combined, (malaria, HIV/AIDS and TB). For every death, it is estimated that 25 survivors will suffer from disabilities and deformities due to a lack of timely and appropriate treatment. This causes physical and emotional pain to individuals, and traps many and their families in a cycle of poverty. The importance of preventing and treating these injuries has yet to be embraced by the global public health community and the world. The United Nations Sustainable Development Goals (SDGs) insufficiently recognize this epidemic. The focus of attention is on road-traffic accidents, which is a major
issue, but only reflects one fourth of the actual burden of death due to injuries. A far greater and more concerted effort is required.

The AO Alliance Board therefore puts increasing emphasis on supporting awareness building and policy advice, as well as collaborating with like-minded organizations on prevention and improved care.

Under our policy advice and advocacy activities, AO Alliance took the lead in facilitating the establishment of the Roadmap for Trauma Care in Myanmar. This plan offers a comprehensive approach for action, from prevention to rehabilitation, and could become a model for other LMICs.

AO Alliance’s operational activities have progressed further in 2017. The common denominator of the activities is to build sustainable local capacity to deal with the increasing burden of injuries and their treatment. A unique feature is the extensive AO Alliance network of healthcare professionals. Our training is designed to produce better surgeons, and other healthcare professionals, as well as teachers and leaders. We trained over 4,000 surgeons and operating room personnel in 2017 (up from 2,850 in 2016) and invested heavily in faculty education programs to train the trainers. We were also able to add to our country initiatives strategic projects to include Ethiopia and continue to strengthen our efforts in Malawi and Ghana.

We would like to thank our Board of Directors, our donors and all volunteers, along with the dedicated AO Alliance staff, for their support.

Dr Rolf Jeker and Dr Claude Martin jr.
Our Vision and Mission

Those living without access to care often face a life of severe disability, chronic pain, often spiraling in a cycle of poverty and dependency. The global burden of disease in children’s injuries should not be underestimated, where, in many LMICs, children of 16 years of age and under comprise more than half the population. Treatment administered early is usually a lot simpler. The mission of AO Alliance is to reduce suffering, disability and poverty in LMICs by enhancing the care of the injured, especially as it relates to orthopedic trauma and broken bones. Our objective is to create sustainable local capacity for the care of those injured. Our values exude everything we do: passion, collaboration, integrity and empowerment.

We believe that every person that is injured deserves access to timely and appropriate care. This includes people who live in the poorest countries in the world.

The reality is that a majority of those affected by injuries globally still receive inadequate treatment, or in a lot of cases, no treatment at all.
Our Activities

The lack of access to care for the injured and treatment in LMICs is an urgent and important public health challenge. The many dimensions: human (victim, caregiver, etc.), environment (infrastructure, legislation, etc.) and vector (motor vehicles for road traffic injuries, weapons for violence, open fires for burns, etc.) make for focused interventions difficult.

The AO Alliance has chosen to make a difference by:

- Supporting the training of healthcare professionals to properly diagnose and manage patients with injuries;
- Developing tailored country initiatives that support a holistic approach to lessening the global burden of injuries through education, fellowships, clinical research and infrastructure development;
- Supporting initiatives that can effectively advocate for recognition and funding support for the care of the injured in LMICs; and
- Partnering with like-minded organizations to advance timely and appropriate fracture care treatment in the poorest countries in the world.
The silent and neglected epidemic of injuries and broken bones

The burden is under-recognized

5 million die from traumatic injury every year

1.25 million road traffic deaths occur every year #1 cause of death among those aged 15-29 years

Although low-and middle-income countries have only half of the world’s vehicles, they have 90% of the world’s traffic deaths

Low-income countries have the highest road traffic death rates

50+ million permanently disabled from injury every year

74% 16% 10% 53% 1%
Deaths

Vehicles

18.4 24.1 17.4
High-income countries
Middle-income countries
Low-income countries
World

9.2

The chances of dying in a road traffic crash depends on where you live

Road traffic fatalities per 100,000 population

**Staggering economic toll**

- **impoverished by road traffic injuries**
- victims
- families
- countries
- cost of treatment
- lost income
- lost productivity
- absence from school

**Unchecked escalation**

By 2020, road traffic accidents will be a **top 3 cause of death and disability**

2nd in LMICs

3rd Globally

**A call to action**

**Goal 3**

**Halve**

global deaths & injuries from road traffic accidents by 2020

**Goal 11**

**Achieve**

safe, affordable, accessible, sustainable transport systems for all by 2030

Abbreviations: TB, tuberculosis; LMICs, low- and middle-income countries

*as measured by disability-adjusted life years (DALYs). The DALY is a measure of the overall burden of disease, expressed as the number of years lost due to ill-health, disability or premature death.*
AO Alliance 2017 Highlights

Global reach of AO Alliance programs in **24 countries** in Sub-Saharan Africa and **10 countries** in Asia

Delivered **90 courses** in Sub-Saharan Africa and Asia
Over 4,000 healthcare professionals trained on enhanced fracture care

Sponsored Fellowships for 29 Surgeons and 23 ORPs from Sub-Saharan Africa and Asia
Focus theme: The burden of injuries in children
AO Alliance has set the prevention of childhood injuries and access to quality care for injured children as one of its priorities. In 2017, the following programs addressed pediatric injuries through targeted and tailored solutions to ensure children receive the care they need.

If the global epidemic of injuries and broken bones is generally-speaking a neglected issue, that relating specifically to children is even more obscure.

Of the 5.1 million people worldwide who died as a result of injuries in 2010, it is estimated that over 600,000 were children (1-19 years). Of those deaths, over 50% occurred in Sub-Saharan Africa and Asia.1

Play Safe with Sisimpur

In total, Sesame Workshop Bangladesh and local partners have trained:

- 2,011 child mentors
- 2,487 adult mentors
- 336 public school teachers
- 219 first responders

The collaboration with Sesame Workshop in Bangladesh for the prevention of traumatic injuries in children completed all the major phases by end of 2017.

Sesame Workshop Bangladesh completed the roll out of Phase 2, including training:

- 1,006 child mentors, 1,234 adult mentors, 168 public school teachers, and 106 first responders. The training and community outreach was completed, and all mentors were trained.
The burden of injuries in children

Pediatric Fracture Solutions for Ghana

This program focuses on injury prevention strategies, as well as fracture care education for traditional bone healers in the community.

187 healthcare personnel were engaged in two courses on the basic principles of pediatric fracture management for operating room personnel, nonoperative pediatric fracture treatment and basic principles of pediatric fracture management.

The first call for clinical research projects was sent out earlier in the year. Six research award grants were given out for a period of nine to 18 months.

A faculty education program for selected surgeons and other healthcare workers took place in Kumasi. The faculty was selected from the different Teaching, Regional and District Hospitals specialized in orthopedic care all over the country.

A first aid treatment protocol for pediatric limb fractures and a general treatment algorithm for the project were developed.

Quantifiable outcomes at the end of the program are the following:
- Increase in the number of children receiving appropriate care by 20%
- Decrease in the number of children with late presentations and complicated cases by 20%
- Decrease in the number of pediatric amputations due to initial mismanagement and/or late presentation by 20%
Pediatric fractures are common in Cameroon, and however simple the treatment in children may be, many complications occur due to inappropriate or untimely care. The project aims to create a reference center for pediatric fractures so that children can receive early care following trauma, and give an opportunity to medical staff to receive training in pediatric fracture care.

The project allows for three types of pediatric patients to be treated:

1. **Children with acute pediatric fractures that require treatment with cast immobilization**
   - 70 injured children were enrolled in the program for the treatment of closed fractures

2. **Children with acute fractures that need surgical treatment (open fractures, tendo-ligamentous lesions)**
   - 120 healthcare professionals were educated in the treatment of pediatric fractures

3. **Children with chronic post-traumatic complications that need surgical treatment such as osteomyelitis**
   - 35 injured children were enrolled for the treatment of open fractures
The significance of this course could not be overstated. Often, trauma and orthopedic surgeons are trained to treat adult patients, but appropriate fracture management for growing patients requires a different set of knowledge and skills. Fractures in children are often neglected for various reasons, of which one is the lack of specialized knowledge from those providing care.
“Even in Germany, for example, 80% of kids are treated by adult-trauma surgeons, which is a problem,” said Dr Theddy Slongo, international faculty.
Capacity building through education and training
In 2017, the AO Alliance fracture care development programs and activities reached a total of 24 countries in Africa and 10 in Asia. Three countries in Africa benefitted from support through specific country initiatives – Malawi, Ethiopia and Ghana.
This program targets healthcare professionals with face-to-face and hands-on education to impact clinical fracture care in 24 countries in Sub-Saharan Africa. All courses and workshops are led by a network of National and Regional Faculty.

Regional Faculty
122

International Faculty
29

Sponsorships for AOTrauma courses
16

Course Participants
2,416

Faculty Exchanges
2

Faculty Education Programs
2

Capacity Building
Fracture Solutions for Africa
50 Educational Events

373 National Faculty

25 Fellowships
AO Alliance continues to advance and offer state-of-the-art fracture care education in 10 LMICs in Asia. As an integral part of this program, a Faculty Development Initiative is cultivating the development of a fraternity to advance the care of the injured.

Educational Events

- 40

Faculty Education Program

- 320
  National Faculty

Africa to Asia Faculty Exchanges

- 2

Course Participants

- 1,906

Regional Faculty

- 52

Faculty Education Program

- 1
27 Fellowships

13 Sponsorships for AOTrauma courses

19 International Faculty
In poor parts of China, operative treatment costs can often be prohibitively high and surgeons serving those regions often lack adequate training on conservative treatment. This leads to conservative treatment becoming no treatment at all, as many surgeons are unaware that patients with fractures can regain good function without surgery. With few resources dedicated to continuing medical education, nonoperative and operative treatment tends to be subpar, leading to high rates of post-treatment complications.

The AO Alliance China Education Program achieved the following milestones in 2017:

4 courses in the provinces of Yunnan (Lincang and Xishuangbanna), Tibet (Shigatse), Guizhou (Liping)

290 participants trained
Country Initiatives and Needs Assessments
Country initiatives represent the biggest commitment and major thrust in AO Alliance programs. Using tailored national needs assessments, country-specific capacity building programs are deployed aiming to improve the care of the injured. Each program is established with a plan of activities in education, fellowships, clinical research and infrastructure development.
A young Malawian surgeon completed a spine fellowship and returned to Malawi.

The Orthopedic Clinical Officers' (OCOs) mentoring program saw 6 district hospitals visited in the Southern region, 3 times each. Three senior OCOs from the Central and Northern regions were trained as mentors.

Outcomes and impact

ORP activities: 4 mini courses, 2 fellowships, 4 ORP hospital visitations and one theatre assistants course

2 trainees joined the orthopedic program in Lilongwe

2 trainees joined the orthopedic program in Blantyre

Capacity Building
Malawi Country Initiative
Ghana Country Initiative

Outcomes and impact

A Nonoperative Fracture Management course was organized in Kumasi. This course consisted of 10 National Faculty, 2 Regional Faculty and 117 participants.

The 2nd Nonoperative Fracture Management course was organized in Tamale. It attracted 47 participants, 10 National Faculty, 2 Regional Faculty and 1 International Faculty.

A Flap course was organized at MSSI-Korle-Bu Teaching Hospital. 14 participants were sponsored by the Ghana Country Initiative.

An AOA Mini Course on the Basics of Fracture Management for ORP in Koforidua took place.

An AOA Course on Nonoperative Fracture Treatment in Cape Coast was organized.
Capacity Building

Ethiopia Country Initiative

Outcomes and impact

Bahir Dar was added as a Regional Reference Centre

Reverse fellowships in Hawassa were carried out with the UK

50 first and second year residents from all the training T&O programs in the country were trained in basic operative principles of fracture management
Pacific Islands Orthopaedic Association Collaboration
This program establishes AO Alliance as an NGO that collaborates with other like-minded NGOs. This is a unique program in the Pacific Islands that looks at local capacity building to provide orthopedic trauma care. The Pacific Islands Orthopaedic Association (PIOA) was founded in 2012 with the aim of promoting and developing modern orthopedic care in the Pacific Island countries. PIOA runs a modular training program three times a year. Lecturers from Australia, New Zealand and Switzerland come and help teach.

PIOA completed 15 modules. Their first exams were run by independent examiners from Australia and New Zealand

They have 17 trainees (1 completed, 1 in their final year, 5 in their third year and 2 in their second year and 8 in their first year). In 2017 they welcomed their first trainees from Papua New Guinea, American Samoa and the Federated states of Micronesia and Vanuatu

They held their first module in Samoa (foot and ankle). They also ran 2 Ponseti workshops in Honiara and Samoa in cooperation with Orthopaedic Outreach (Australian Orthopaedic Association).

In February 2017, they held their introductory module in Lautoka, Fiji. Their first trainee sat his final exams under external examiners in June 2017 in Apia.

Papua New Guinea has the greatest need for trauma and orthopedic services in the Pacific. With a population of 7 million and most of the trauma dealt with in the smaller district hospitals, there is a need for orthopedic training for up to 50 rural generalist doctors. The modules work well and provide an opportunity for learning away from distractions.
Acknowledging that a collaborative approach works best to empower healthcare providers in LMICs to care for musculoskeletal injuries, we supported very early on in 2014 AO Foundation surgeons who engage in capacity building and patient care activities that directly benefit patients in LMICs. We used this window of opportunity to improve existing structures and help increase the impact local surgeons and institutions can have on patient care.

We initially funded seven projects that started in 2015. Three of them continued to be active in 2017. The two that have contributed significantly to pursue our mission have been the Pediatric Fracture Care program in Cameroon and the East African Orthopedic Trauma Care Program in Uganda (USTOP). Dr Lekina in Yaoundé hopes that, after three years of operation, the center will help more than 700 children return to the playground happier than ever. With only half the patients admitted for surgical care receiving it, support from AO Alliance is allowing USTOP to expand the training, clinical support and research required to meet the region’s burden of orthopedic trauma with the newly designed East Africa Orthopedic Trauma Program. Dr Peter O’Brien from Vancouver wants to prove, once again, that good ideas trump the lack of equipment anytime.
Our work is to select and support the projects likely to have a powerful and sustainable impact on fracture management, and help patients, train healthcare workers, and empower communities.
While data on the burden, epidemiology, effectiveness and cost-effectiveness of many diseases and interventions in LMICs are available and fairly reliable, particularly for infectious diseases or nutrition, such information is sorely lacking for injuries, fractures and other orthopedic ailments, as well as their management.

In 2017, AO Alliance continued to enhance and expand our data collection to support advocacy and build evidence to make the case for better fracture care.
Trauma and fracture registries in Malawi

In the developing world, data about the burden of injury, injury outcomes, and complications from care are limited. Hospital-based trauma registries are a data source that can help define this burden.

Under the trauma care component of certain country initiatives, fracture and trauma registries have been implemented at four sites in Malawi:

- Nkhata Bay District Hospital
- Mangochi District Hospital
- Queen Elisabeth Central Hospital
- Kamuzu Central Hospital

Trauma registries in Ghana

12 Research Assistants were trained

Data collection sites:
- Komfo Anokye Teaching Hospital
- Tamale Teaching Hospital
- Cape Coast Teaching Hospital
- Korle-Bu Teaching Hospital

Good Clinical Practice Research Program (AOPEER)

Clinical and translational research takes a lot of hard work and dedication, and many surgeons receive little to no training in this area. The AO Foundation’s Program for Education and Excellence in Research (AOPEER) held its first face-to-face Principles in Clinical Research course. The educational program, which helps surgeons to improve their clinical research skills, was hosted in Myanmar by AO Alliance, and in Hong Kong by AOSpine Asia Pacific. The course curriculum was developed by the AOPEER Taskforce, in close collaboration with Clinical Investigation and Documentation (AOCID) and the AO Education Institute.
Africa Emerging Market Forum
At the 5th Africa EMF, AO Alliance revealed the realities of injuries in the region

AO Alliance (AOA) was given the opportunity to expose the silent epidemic that is severely affecting Africa: road traffic accidents, at the Fifth Africa Emerging Markets Forum in Abidjan in March 2017. The event was co-hosted by the Government of Côte d’Ivoire and the Emerging Markets Forum (EMF). The Co-chairs of the Africa EMF, President Alassane Ouattara of Côte d’Ivoire and Michel Camdessus, former Managing Director of the International Monetary Fund (IMF) and Honorary Chairman of Banque de France, led the major sessions. The Forum was attended by leading statesmen and policymakers, business leaders, academics and thought leaders from across Africa and other regions.

Dr Rolf Jeker, AOA Board Chair, led the panel session titled A Private Initiative to Help Curb a Silent Epidemic.
SICOT World Orthopedic Congress

SICOT, Société Internationale de Chirurgie Orthopédique et de Traumatologie, is an international non-profit association with the aim of promoting the advancement of the science and art of orthopedics and traumatology at the international level for the improvement of patient care, and to foster and develop teaching, research and education.

AO Alliance held a symposium titled Orthopedics/Trauma in Low-Income Countries during the 2017 Annual Meeting in Cape Town, South Africa in November 2017. A panel of African orthopedic and trauma surgeons presented their views on the advancement of fracture care in low-income countries in Africa.

SICOT has representation from over 110 countries and through its Bridge the Gap program, collaborates with AO Alliance to further develop the care of the injured in LMICs.
Worldwide, the pattern of diseases is changing. Chronic diseases and cancer are taking over from infectious and childhood diseases. Five million people die each year from injuries, especially from road traffic accidents, which is 32% more than those who die from TB, malaria and HIV/AIDS combined. As a result, there is greater reliance on ambulance, emergency and hospital-based care. This is especially important in Asia, where the number of motor vehicles is increasing rapidly, and where access to needed emergency and surgical care is a critical issue in many countries.

**Roadmap for Trauma Care in Myanmar**

Injuries account for 10% of the global burden of disease. While there has been a decline in rates of injury across the world, the risks are generally higher in developing countries such as Myanmar. In Myanmar, there has been an increase in injury cases over the period 2010-2013 of about one third, with the most rapid growth in motor vehicle related injury.

The aim of this project is to bring together stakeholders in Myanmar to identify potential strategies for the future development of trauma care and injury prevention. A series of workshops were conducted to identify current issues and options for further development. The needs have been identified and groups formed, to scope out potential solutions in three broad areas: injury prevention, emergency care, facility care and rehabilitation. A comprehensive and cohesive reform is proposed, built around the WHO framework for the evaluation of trauma systems, reflecting a strategic approach to enabling reform.

The project is supported financially by AO Alliance with the full support of the Ministry of Health and Sports in Myanmar.

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**Policy**

*Shaping policy for sustainable trauma systems in LMICs*
Roadmap for Trauma Care in Nepal

Nepal is home to 29 million people, and has one of the highest rates of road traffic injury in Asia. Government estimates are that 2,000 people died in 2016, and 4,000 were seriously injured. That’s about 10 every day, but it is likely to be a significant underestimate. Nepal has a limited network of hospitals, with only one National Trauma Centre in Kathmandu. With harsh landscapes, a large rural population and decades of natural disasters, the infrastructure of many roads and hospitals are in disrepair, and there are nowhere near enough clinicians. To meet its surgical needs, Nepal must train many more specialist surgeons and anesthetists, and do 500,000 more operations. That means a five-fold increase by 2030. More emergency medicine and rehabilitation specialists are also needed. But things are changing rapidly. For example, the Nepal Ambulance Service dispatch system has used satellite navigation technology to co-ordinate transport and manage pre-hospital care.

In June 2017, the Ministry of Health hosted trauma care experts from around the world at a workshop with over 40 of the country’s medical leaders.

Supported by AO Alliance, in collaboration with the Orthopaedic Trauma Foundation, the participants learned how some countries had successfully reduced road deaths. The participants also worked to propose local solutions for Nepal. It was a watershed event for the country, kick-starting the development of locally-relevant solutions to the road trauma epidemic. Nepal is committed to strengthening its pre-hospital and hospital-based emergency care systems to meet this need. In the years ahead there will likely be thousands of people who owe their lives to it.

The Roadmap for Trauma Care in Nepal aims to be an inclusive report that will address trauma care from injury to rehabilitation inclusively. It will change the landscape of trauma management.
As we conclude 2017, the AO Alliance Board and management are looking at the immediate and long-term future. Our marquee programs, Fracture Solutions for Africa and Asia, will come to the end of their initial three-year cycle and will require funding for another tranche of three years. Lessons learned during that time will be integrated into the new proposal, and weaknesses will be addressed and corrected. We continue to strengthen efforts to increase and diversify our funding streams to permit prudent growth of our core activities, the country initiatives. We realize that so much more could be done on the ground with education on caring for the injured. Therefore, AO Alliance will also continue to explore how to make a difference through advocacy and awareness building, as well as policy advice, either on its own or with like-minded collaborators.
The financial statements have been prepared on the historical cost basis in accordance with Swiss GAAP FER, Swiss GAAP FER 21, and comply with the requirements of Swiss law. The principle of individual valuation has been applied to assets and liabilities.

We continue to ensure that our financial and organizational foundation is sufficient to support the programs and activities we provide. The priority in 2017 was to maintain the financial health and to develop sustainable and increasing sources of funding.

**Looking ahead**

As we embark towards refinancing some of our key programs, our financial base is solid for the current programs, and resources have been strategically placed both externally (local regional administrative support) and internally (towards fundraising efforts).

However, there continues to be challenges in attracting funding for injuries and fracture care. Research in this area is grossly underfunded and insufficient resources have been allocated for strengthening the delivery of services. Better treatment of injuries will help achieve three of the United Nation’s Millennium Development Goals, namely the reduction of child mortality, improving maternal health and promoting gender equality with respect to access to healthcare services.

With so many people having little or no access to fracture care in LMICs, we must continue to put our funds to work for the benefit of this neglected population of patients. While recognizing that strategies aimed at prevention must be developed and supported, we consider that there is an urgent need to strengthen the delivery of treatment of the injured.
Report of the statutory auditor on the limited statutory examination

To the Board of Foundation of

AO Alliance Foundation, Davos

As statutory auditor, we have examined the financial statements (balance sheet, income statement, cash flow statement, statement of changes in equity and notes) of AO Alliance Foundation for the financial year ended 31 December 2017. The limited statutory examination of the prior year financial statements was performed by another auditor, who expressed an unmodified examination conclusion on those financial statements.

These financial statements in accordance with Swiss GAAP FER and the requirements of Swiss law and the articles of foundation, foundation deed and regulations are the responsibility of the Board of Foundation. Our responsibility is to perform a limited statutory examination on these financial statements. We confirm that we meet the licensing and independence requirements as stipulated by Swiss law.

We conducted our examination in accordance with the Swiss Standard on the Limited Statutory Examination. This standard requires that we plan and perform a limited statutory examination to identify material misstatements in the financial statements. A limited statutory examination consists primarily of inquiries of company personnel and analytical procedures as well as detailed tests of company documents as considered necessary in the circumstances. However, the testing of operational processes and the internal control system, as well as inquiries and further testing procedures to detect fraud or other legal violations, are not within the scope of this examination.

Based on our limited statutory examination, nothing has come to our attention that causes us to believe that the financial statements do not give a true and fair view of the financial position, the results of operations and the cash flows in accordance with Swiss GAAP FER and do not comply with Swiss law and the articles of foundation, foundation deed and regulations.

Chur, 16 March 2018

BDO

Paul Kümin
Auditor in Charge
Licensed Audit Expert

Angela Fischli
Licensed Audit Expert

Enclosure
Financial statements
## Balance Sheet

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<td>TOTAL LIABILITIES</td>
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<td>767’263</td>
<td>36.6</td>
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<td>2’094’682</td>
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## Profit & loss

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<td>Other</td>
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<td>1’514’605</td>
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<td>93.6</td>
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<td>126’751</td>
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<td>Administration expenses</td>
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<td><strong>OPERATIONAL RESULT</strong></td>
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<td>Other financial expense</td>
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<td>-0.4</td>
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<td><strong>RESULT FOR THE YEAR</strong></td>
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<td>-4.8</td>
<td>-297’087</td>
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## Cash flow statement

**in CHF**

<table>
<thead>
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<tr>
<td>Profit for the year</td>
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<td>-297’087</td>
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<td>Variance of provisions</td>
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<td>Variance of deferred tax liabilities</td>
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<td>Depreciation and amortization</td>
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<td><strong>CASH FLOW</strong></td>
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<td>-297’087</td>
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<tr>
<td>Increase / decrease of receivables</td>
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<td>91’642</td>
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<tr>
<td>Increase / decrease of prepaid expenses &amp; accrued income</td>
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<tr>
<td>Increase / decrease of accounts payable</td>
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<td>141’369</td>
</tr>
<tr>
<td>Increase / decrease of other short term liabilities</td>
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<td>9104</td>
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<tr>
<td>Increase / decrease of accrued liabilities</td>
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<td>115’419</td>
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<tr>
<td><strong>CASH FLOW FROM OPERATING ACTIVITIES</strong></td>
<td>1’274’580</td>
<td>-847’668</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Investments in financial assets</td>
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<td>0</td>
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<tr>
<td>Disposal of financial assets</td>
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<td>0</td>
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<tr>
<td>Investments in subsidiaries</td>
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<tr>
<td>Disposal of subsidiaries</td>
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</tr>
<tr>
<td>Investments in property, plant &amp; equipment</td>
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<tr>
<td>Disposal of property, plant &amp; equipment</td>
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<td><strong>CASH FLOW FROM INVESTING ACTIVITIES</strong></td>
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<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Foundation capital</td>
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<tr>
<td><strong>CASH FLOW FROM FINANCING ACTIVITIES</strong></td>
<td>0</td>
<td>0</td>
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</table>

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td><strong>NET INCREASE / DECREASE</strong></td>
<td>1’274’580</td>
<td>-847’668</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Cash &amp; cash equivalents per 1.1.</td>
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<tr>
<td>Cash &amp; cash equivalents per 31.12.</td>
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<td><strong>NET INCREASE / DECREASE</strong></td>
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Statement of changes in equity

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<th>As of 1.1.</th>
<th>Allocation</th>
<th>Distributions</th>
<th>Result for the year</th>
<th>As of 31.12.</th>
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<td><strong>Total equity 01.01.2016</strong></td>
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<tr>
<td>Foundation capital</td>
<td>55'000</td>
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<td>55'000</td>
</tr>
<tr>
<td>Earnings carried forward</td>
<td>1'569'506</td>
<td></td>
<td>-297'087</td>
<td>1'272'419</td>
<td></td>
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<tr>
<td><strong>Total equity 31.12.2016</strong></td>
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<td>0</td>
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<td>Foundation capital</td>
<td>55'000</td>
<td></td>
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<td>55'000</td>
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<tr>
<td>Earnings carried forward</td>
<td>1'272'419</td>
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<td></td>
<td>986'462</td>
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<tr>
<td><strong>Total equity 31.12.2017</strong></td>
<td>1'327'419</td>
<td>0</td>
<td>0</td>
<td>-285'957</td>
<td>1'041'462</td>
</tr>
</tbody>
</table>

Notes to the financial statements

1. **General information**
   AO Alliance Foundation has its registered and principal offices at Clavadelerstrasse 8, 7270 Davos Platz, Switzerland.

2. **Basis of preparation**
The financial statements have been prepared on the historical cost basis in accordance with Swiss GAAP FER, Swiss GAAP FER 21, and comply with the requirements of the Swiss law. The principle of individual valuation has been applied to assets and liabilities.

   The financial statements were authorized for issue by the Board of Directors in its spring 2018 meeting.

3. **Accounting policies**
The financial statements are presented in Swiss Francs (CHF), which is the functional currency of AO Alliance Foundation.

3.1 **Foreign currency**
Transactions in foreign currencies are translated to Swiss Francs (CHF) at exchange rates at the dates of the transactions. At year-end, monetary assets and liabilities in foreign currency are measured using the exchange rate valid at the balance sheet date. Exchange differences from such valuation are recognized in profit or loss. The following year-end exchange rates were applied:
- EUR / CHF 1.170
- USD / CHF 0.975

3.2 **Impairment of assets**
Assets are reviewed at each reporting date to determine whether there is any indication of impairment. An impairment loss is recognized if the carrying amount of an asset exceeds its recoverable amount. The recoverable amount of an asset is the greater of its value in use and its fair value less costs to sell. No impairments are recognized per 31.12.2017.

3.3 **Cash**
Cash and cash equivalents comprise cash in bank and post accounts and petty cash. These positions are valued at nominal value.

3.4 **Receivables**
Accounts receivables are carried at nominal value less allowance for doubtful receivables. The allowance is based on the aging of trade receivables, specific risks and historical loss experience. No provision for doubtful receivables is recognized per 31.12.2017.

3.5 **Prepaid expenses & accrued income**
Short term accruals are liabilities that are due but not yet billed at the balance sheet date and that arise due to goods and services already received. They are assessed individually based on quotations, offers or past experience. Short term accruals also contain accrued income on projects and studies.

3.6 **Revenue**
Revenue is recognized at the fair value of the consideration received or receivable, net of discounts. The source of revenue of AO Alliance Foundation is based on donations. All income is in cash.
Details to positions of the financial statement

6.1 Cash
Cash consists of bank accounts in CHF. The increase from last year is primarily due to the payment of prior year's outstanding granted donations.

6.2 Receivables
This category includes prepaid expenses for educational courses that will be held in the following financial year. The increase from the prior year is due to the course calendar that has been slightly changed from the prior year.

6.3 Prepaid expenses and accrued income
This position reflects part of the revenue where donors have committed to specific projects but not yet paid. The decrease from the prior year is reflected in the cash position as the accrued income from last year has been paid by donors.

6.4 Accounts payable
The increase on accounts payables compared to the prior year is due to several educational courses that have been taken place during the month of December 2017 and were only billed at year end.

6.5 Other short-term payables
This position includes prepayments from donors for the following financial year. These donors' prepayments are restricted and dedicated to specific projects. The increase from prior year is due to pre-defined payment terms and conditions.

6.6 Accrued liabilities
The main driver of the year to year variance is an accrual over CHF 500K for the participation on the construction of a hospital in Malawi. The project has a duration over 2 years and the total cost participation of AO Alliance is CHF 1 Mio., half of which was recognized in 2017.

6.7 Grants
The source of revenue of AO Alliance is based on donations. As of 31 December 2017, 58% of the donation were restricted to specific projects and 42% unrestricted (2016: 66% restricted; 34% unrestricted). As of 31 December 2017, CHF 532k were recorded as short-term accrual (2016: CHF 1'439k).

6.8 Operational expenses
This position covers the costs for 96 educational courses (2016: 71 courses) throughout Africa and Asia, Fellowships, Clinical Services Support as well as grants for in-kind support of hospitals and costs for local personnel where we have substantial projects (country initiatives) that need an onsite presence in order to oversee all the activities.

6.9 Administration expenses
All expenses are recorded under the accrual principle. The personnel expenses increased compared to prior year due to the increase in activities and due to the need of having in-house marketing and communication experts instead of outsourcing those activities to third party providers. This increase in FTE will allow to decrease the marketing and communication costs from a long-term perspective.

- The total amount of remunerations to the Board was CHF 55k (2016: CHF 61k)
- The total amount of remunerations to the management was CHF 357k (2016: 280K) and is allocated between project expenses and general administration expenses.

6.10 Financial result
The financial result is due to foreign exchange fluctuations as we are paying most of our costs in USD and EUR.

Further information
in accordance with Swiss GAAP FER / Swiss Code of Obligations

Employee benefits (FER 16)
The employees of the AO Alliance Foundation are included in a collective pension plan in accordance with the Swiss federal Law on occupational retirement, survivors' and disability pension plan (BVC). The pension arrangement contractually excludes any deficit to be transferrable to AO Alliance and the pension plan institution is fully reinsured concerning the arising liability from the arrangement. Any surplus of the pension plan is immediately credited to the pension plan of the insured employees. The pension contribution for the financial year 2017 was CHF 41K (2016: CHF 38K).

Number of employees (full time equivalents)
Per 31 December 2017, the weighted average full time equivalents are between 1 and 10. Compared to the prior year there is an increase of 1.3 FTE.

Liabilities towards social security and pension plans
None.

Subsequent events
At the date of issue of the financial statements no subsequent events have occurred.
AO Alliance Board of Directors

We rely on the AO Alliance Board of Directors, AO Alliance staff, and committed volunteers to help bring our shared vision to life.

Board Members

**Dr Rolf Jeker PhD**  
Chair

**Dr Joachim Prein**  
Vice-Chair

**Dr Suthorn Bavonratanavech**  
AO Foundation delegate

**Jean-Daniel Gerber**  
Economic Development and Audit Committee as of July 2017

**Dr Manjul Joshipura**  
Asia

**Abdoulie Janneh**  
Africa
Expert Contributors

Michel Orsinger
Chair, Funding and Audit Committee until June 2017

Dr Florent Anicet Lekina
Coordinator, French-speaking Africa

Dr Jim Harrison
Regional Director, Africa

Dr Ram K. Shah
Regional Director, Asia

Dr Wilfred Addo
Coordinator, English-speaking Africa

Dr Florent Anicet Lekina
Coordinator, French-speaking Africa
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired immune deficiency syndrome</td>
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<tr>
<td>AO</td>
<td>Arbeitsgemeinschaft für Osteosynthesefragen (Association for the Study of Internal Fixation)</td>
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<tr>
<td>AOA</td>
<td>AO Alliance</td>
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<tr>
<td>GCPS</td>
<td>Ghana College of Physicians and Surgeons</td>
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<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<td>Low-income country</td>
</tr>
<tr>
<td>LMIC</td>
<td>Low- and middle-income country</td>
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<td>Non-governmental organization</td>
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<td>Orthopedic clinical officer</td>
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<tr>
<td>ORP</td>
<td>Operating room personnel</td>
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<tr>
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