

In Memory of Dr. M. Samuel Noordhoff: Leadership, Vision, and Contributions in Pursuing Excellence in Plastic Surgery and Cleft–Craniofacial Care

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“In a gentle way, you can shake the world.”
Mahatma Gandhi

Dr. M. Samuel Noordhoff (1927–2018) (► **Fig. 1**) came to Taiwan in 1959 as an Iowa-born missionary surgeon, and his humanitarian lifestyle drastically and definitively modified the face of medical care in this country. He and his family have dedicated their lives to improving the lives of the Taiwanese people. Dr. Noordhoff wrote a few years ago, “It is the people in the medical field of Taiwan that have worked hard to develop Taiwan’s medical community into the world-renowned community it is today.” This quote demonstrates the seminal teamwork-centered value he has spread over the decades providing and improving health care in Taiwan.



Fig. 1 Dr. M. Samuel Noordhoff, photo taken in 2011.

Dr. Noordhoff was a true pioneer who recognized the need for the treatment and rehabilitation of patients with different conditions and started several programs in Taiwan:

- First polio rehabilitation center.
- First suicide prevention center.
- First burn center.
- First intensive care unit.
- First plastic and reconstructive training program.
- First cleft lip and palate team and center.
- First craniofacial treatment center.

The now-legendary Chang Gung Memorial Hospital (delivering comprehensive health care services, employing over 5,000 health care professionals, having over 10,000 beds, managing over 1.1 million inpatients and 3.5 million outpatients a year, treating over 167,000 surgical patients a year, and receiving around 10,000 international patients a year) was established in 1976, with Dr. Noordhoff named the first superintendent. The evolving history of this hospital is based on a true friendship and lifelong collaboration between Noordhoff and Kimma Chang, a man who came from a family of fishermen and was strongly influenced by Noordhoff, who sent him to the University of Michigan in the mid-1960s and subsequently received a degree in hospital administration.

Dr. Noordhoff is unquestionably the father of plastic surgery in Taiwan and certainly a giant of the specialty worldwide. He was inspiring and a true visionary for establishment and evolving of this specialty as well as all other subspecialties at Chang Gung Memorial Hospital. He constantly acted as a standard of leadership and a core role model at this hospital from the origin of the plastic surgery program, even after his retirement and retuning to Michigan in 1999. Through his leadership, innovation and vision, the now world-renowned Chang Gung Plastic Surgery Department was established in mid-1970, with the cleft–craniofacial and microsurgery fields becoming one of the largest such programs worldwide (► **Fig. 2**). The Chang Gung Craniofacial Center, for example, has treated more than 40,000 patients with clefts over the

past four decades. His principles and values have guided the evolving care in these fields of plastic surgery practice, including constantly improving patient-centered outcomes and creating a culture of safety by mitigating problems that might cause harm to patients and their families.

Standing on the shoulders of a giant, all technical details which could assist the treatment planning and execution, improve the results, and alleviate the burden of care have been meticulously compiled to compose the current management protocols at Chang Gung Plastic Surgery Department. The surgical-related outcomes that matter for patients, their families, and treating surgeons have been systematically measured over the years, with modifications provided accordingly. Dr. Noordhoff was permanently strict with himself and to all those under his supervision, especially in terms of patient treatment by continually putting the patient first. He called the junior surgeon once when he found a dehiscence after cleft palate repair in his clinic and asked him to review and improve the technique. He demanded perfect results from each of the surgeons but also listened to them, if they had evidence to show that some particular procedure or maneuver was not useful in their hands or experience. For example, the soft palate repair was performed together with primary cleft lip repair, with the full palate repair being performed later on at 18 months of age. Based on the measurement and later-published study showing that this combined soft palate

and lip repair did not result in narrowing of the hard palate in our patients, Dr. Noordhoff was convinced and abandoned the practice of the combined posterior palatoplasty.

Dr. Noordhoff wrote, "Be a teacher. Never be afraid that your student will be better than you." He truly ensured and encouraged that the younger generation of Taiwanese plastic surgeons rose to provide high-quality care in accordance with the evolution worldwide. Many current leaders in different fields of plastic surgery were formally stimulated by him to travel overseas to acquire new skills and return to expand plastic surgical activities and delivery of care in Taiwan. It was based on his conviction in human beings as the major transforming factor of society and medical care; his model was to invest in young surgeons, send them to receive training under leaders in their fields of practice, and support them personally and financially while doing so. He also expected the multidisciplinary team members and trainees to regularly attend and present at local and international meetings, encouraging them to publish in best peer-reviewed journals as well as organizing international meetings in Taiwan. The Taiwanese Chinese name of Dr. Noordhoff (Luo Hwei-Fu-羅慧夫, which means "man of wisdom") absolutely represents his legacy among the many subspecialties of the Chang Gung Plastic Surgery Department.

Over more than five decades, Dr. Noordhoff was a surgeon, researcher, teacher, and advocate in the field of cleft surgery,



Fig. 2 Dr. Noordhoff with all the members and alumni of Plastic and Reconstructive Surgery, Chang Gung Memorial Hospital. In the left side of bottom row were Dr. Fu-Chan Wei and Dr. Yu-Ray Chen, first students and now masters in microsurgery and craniofacial surgery.

with tremendous contributions and many ideas that were revolutionary at the time. Many of his seminal articles in peer-reviewed journals contributed significantly to the scientific body of knowledge, to enhance the discussion needed for evolving of care and research, to support the expansion of patient care facilities and research initiatives, and to spread surgical technical details and health care delivery particularities across the frontiers of Taiwan. To name just a few groundbreaking surgical advancements and contributions, in mid-1990, Dr. Noordhoff produced an outstanding cleft-specific book and video to spread primary cleft lip repair by using key anatomical landmarks, turbinate flap, vermilion triangular flap, and primary rhinoplasty with meticulous dissection and without a perialar incision.

Dr. Noordhoff received many civilian and governmental honors for his humanitarian services:

- “Maliniac Lecturer,” American Society of Plastic Surgeons.
- “The Honors of the Association,” American Cleft Palate–Craniofacial Association.
- “Sir Harold Gilles Lecture Award,” British Association of Plastic, Reconstructive and Aesthetic Surgeons.
- “Outstanding Medical Contribution Award,” Taiwan.
- The “Order of Brilliant Star with Violet Grand Cordon” Presidential decoration of Taiwan.
- “9th Presidential Cultural Award,” Taiwan.

Dr. Noordhoff’s assistance and influences were definitively not restricted to Taiwan; his attention was continuously

to provide care for all the regions where cleft–craniofacial care was needed. The Chang Gung Craniofacial Center acted as a truly cleft-specific high-level “training camp,” receiving hundreds of international visitors, observers, and long-term fellows from many countries. Dr. Noordhoff was also founding member of Medical Board for the Smile Train, actively assisting the Smile Train to establish guidelines for providing cleft care as well as to recognize and establish cleft centers worldwide. Based on his personal donation, the Noordhoff Craniofacial Foundation was established in 1989 to help patients with cleft–craniofacial abnormalities receiving holistic, high-quality care, to sponsor training and research, and to improve public awareness and social acceptance of patients. The founding of the Noordhoff Craniofacial Foundation deeply transformed the craniofacial–cleft care in Asia as well as in many other countries around the globe. Based on the motto “nurturing local seed physicians,” the Noordhoff Craniofacial Foundation and Chang Gung Craniofacial Center have been essential in establishing many multidisciplinary cleft teams in different countries, with a positive impact on the life of thousands of patients with craniofacial and cleft deformities over the past three decades of missionary actions (→ Fig. 3). The slogan of the Noordhoff Craniofacial Foundation, that is, “Love makes whole,” truly symbolizes a life dedicated to treat and teach how to treat patients with cleft–craniofacial abnormalities who require not only advanced surgical care but also love, compassion, kindness, and affection. In fact, this slogan is not a simple



Fig. 3 Dr. Noordhoff was actively involved and participated in providing the service and training in cleft care. The photo taken in 2000 showed a cleft mission in Manila with the local team, the seed surgeons trained in Chang Gung Craniofacial Center.

tokenism, as people genuinely love Dr. Noordhoff because he genuinely loved them.

Dr. Noordhoff's core values, attitudes, beliefs, and aspirations certainly facilitated and culminated in the establishment and development of cleft–craniofacial care around the world. He patiently and sensibly guided different generations of young surgeons to overcome obstacles to provide multidisciplinary care in economically underprivileged regions, exactly what was the beginning of history in Taiwan compared with its current modern high-technological advances. Not only the treatment of physical component was regularly highlighted during Dr. Noordhoff-led teaching sessions, but also the psychosocial element was consistently emphasized as paramount in achieving the complete rehabilitation of patients with cleft and craniofacial deformities into society. He continuously motivated our as well as other teams to reach optimal performance in terms of efficiency, safety, and

positive outcomes for the patient, pursuing the excellence in plastic surgery and cleft–craniofacial care.

Dr. Noordhoff's charming simplicity, truthfulness, talent, honesty, and ethics alongside his understanding of human being, social responsibility, organizational skills, and leadership made him an amazing force in the development of plastic surgery in its broad field of practice. He is clearly a hero in Taiwanese plastic surgery and an archetype for achievement for all to emulate. He will be remembered as a dedicated teacher for the hundreds of surgeons he trained. He was obviously happiest in the operating room and loved teaching young surgeons. His enthusiasm, passion, and devotion for plastic surgery has crossed generations of surgeons, as multiplied in several centers worldwide. His philosophies are constantly "flourishing" in different parts of the world. His legacy will certainly be forever "blooming" and active in the minds, hearts, and attitudes of all plastic surgeons



Fig. 4 The students visited Dr. Noordhoff and Lucy in Grand Rapids, Michigan, in 2017. Last row from the left were Lun-Jou Lo, Jui-Pin Lai, Pan-Yun Chou, and Fen-Hwa Wong.

who trained directly or indirectly under his core values and principles. His students, residents, fellows, and admirers are sure to thank Dr. Noordhoff for initiating and disseminating this philosophy of life based on truly helping others without thinking of any reward for it (► **Fig. 4**). The reward, no doubt, is in the sincere smile of each patient treated.

May our dearest teacher, mentor, and role model for life rest in peace. He absolutely shook the plastic surgery world. His life is unquestionably a message for the next generation

of plastic surgeons. The future directed by Dr. Noordhoff's legacy will definitely be valuable for patients with congenital and acquired abnormalities around the world.

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