Introduction to CURE Hydrocephalus Surgeon Training Program

CURE Hydrocephalus (CH) is a division of CURE International. CH’s goal is to eliminate untreated hydrocephalus and its preventable causes. To that end the CH Surgeon Training Program is designed to utilize the expertise derived from continuing research from the efforts at CURE International Children’s Hospital of Uganda (CURE Uganda) and its sister facilities, including the Beit CURE International Children’s Hospital of Zambia (CURE Zambia). The CURE Hydrocephalus Surgeon Training Program (CHSTP) is partnering/cooperating with the International Federation for Spina Bifida and Hydrocephalus (IF), and the Karl Storz Company (Storz). The program trains and equips surgeons responsible for treating Hydrocephalus in developing countries. In that practice context, shunt-dependence is far more dangerous for children with Hydrocephalus because of the high probability of shunt malfunctions that require urgent attention and emergency treatment. Unlike more developed countries where the existing economy, infrastructure, and health care system can more readily support the emergency maintenance required for patients who are shunt-dependent, the lives of such children in less developed countries are threatened because of the lack of prompt access to proper neurosurgical care.

Since its opening in 2000, the CURE Uganda hospital in Mbale, Uganda, has demonstrated that in the setting of an emerging country, more than half of all children with hydrocephalus can be adequately treated using endoscopic methods, and the likelihood of success can be determined in advance. In young infants, our experience was similar to that of others, in that ETV alone was not effective in avoiding shunt dependency for the majority. But we demonstrated that choroid plexus cauterization in combination with endoscopic third ventriculostomy (ETV/CPC) was significantly more effective than ETV alone. The ETV/CPC technique requires the use of a flexible fiberoptic endoscope in order to access the choroid plexus throughout both lateral ventricles.

The CURE International facilities in Uganda and Zambia (and soon elsewhere) provide the high volume of patients necessary to master these techniques in a relatively short time. Over a twelve week training period, a trainee can expect hands-on training in 50 to 100 ETV/CPC procedures. Serving as Senior Medical Director for CURE Hydrocephalus, Professor Dr. Benjamin C. Warf, M.D. directs the training and research efforts. Dr. Warf developed the ETV/CPC technique and the methodology for its most effective use while serving as medical director for CURE Uganda for over six years. For surgeons from less developed countries, CURE International, IF and
Storz will work with the trainee to acquire the funding to sponsor their training as well as to help provide the necessary endoscopy equipment for their home institution.

The goal of the CURE Hydrocephalus Surgeon Training Program is to develop a network of surgeons and hospitals throughout the world that are competent to offer this treatment option and thus avoid as much as possible the dangerous problem of shunt-dependence, especially for children in economically depressed regions. As part of this effort, each CH trained surgeon participates in supplying information to the CH database in order to expand the body of knowledge to improve on our ability to treat and prevent this common condition.

**CURE Hydrocephalus Surgeon Training Program (CHSTP) Description**
The CURE Hydrocephalus Surgeon Training Program consists of 2 phases:
- **phase 1**: training phase at CH designated training facility
- **phase 2**: home institution becomes a CH Treatment Center

**Phase 1: Surgeon training phase in CH designed training facility**
Intensive hands-on instructions and surgical training of selected surgeon by CH Medical Faculty Director (12 weeks), including:
1) Lectures on hydrocephalus, ventricular anatomy, ETV/CPC techniques and outcomes
2) As possible, hands-on workshop to learn equipment and setup as well as practicing flexible endoscope manipulation in a simulator model (in cooperation with Storz)
3) Live operations performed with CH Medical Faculty Director on a minimum of 50 cases selected
4) Introduction and training for patient database
5) Discussion of plan for continued communication and support
6) Review and conclusions

**Phase 2: home institution becomes CURE Hydrocephalus Treatment Center**
1) As possible, set up and training visit by CH Medical Faculty Director or designee to CH Treatment center site (1 week). Onsite setup of equipment (Storz, 1 week)
2) Selection operating theatre staff (by selected site)
3) Training operating theatre staff by technical advisor; instruction nursing staff on proper care of instruments and correct setup of units (Storz)
4) Installation and training for patient database
5) Selection local hydrocephalus/spina bifida nurse coordinator (by selected site)
6) Training local hydrocephalus/spina bifida nurse coordinator (IF)
7) Set up cooperation with local partners involved in patient and parent education and follow up (selected site, other organizations and NGO's, IF)
8) Development parent support groups (IF, )
9) Development public education package (IF)
10) Development prevention package (IF)
11) As possible, evaluation phase neurosurgery (1 week, after 1 year)
12) As possible, evaluation phase nurse training (1 week, after 1 year)

**Eligibility Requirements**
The eligibility requirements for the selected partner institution are:

A) A surgeon who is committed to the training and to treating hydrocephalus in children
B) High volume of infant hydrocephalus (minimum of 100 new cases annually)
C) Adequate operating theatre, means of sterilization, and anesthesia
D) Dedicated operating room time, space, and anesthesia support for neuroendoscopic treatment of hydrocephalus (minimum of 4 hours/week)
E) Teaching institutions preferred but not required
F) A mechanism for funding the care of poor patients (e.g. government funding, cooperation of an NGO, ...)
G) Patients will not be refused based on gender, race, religion, economic status or any other reason
H) Administrative support by CH and its partners for translation of training materials, local accommodation, selection of partners, and temporary licenses for the CH Surgeon Training Program trainers
I) Commitment to select and let train local hydrocephalus/spina bifida nurse coordinator
J) Sufficient competence in English for the staff involved (neurosurgeon plus staff involved in training)
K) Commitment of facility, neurosurgeon and nurse coordinator to continue collaboration for a minimum of 3 years

The procedure for site selection and program implementation is:

A) Identification of potential site via distance communication
B) Site visit by experts to evaluate the institution and staff for appropriateness of implementing the program, and engage introductory contacts for parent support groups (1 week, if required and feasible)
C) Obtain funding for neuroendoscopy equipment package (precondition for start of training program)
D) Signing of Memo of Understanding (MOU) between CURE International, the surgeon, and the surgeon’s home institution(s)
E) Phase one: surgeon training phase at the CURE Uganda hospital in Mbale (or other designated CH Training Centre) for twelve weeks
F) Phase two: home institution becomes CH Treatment center locations
G) Evaluation CH Training Centre site after 1 year

The Goals and Key Success factors for CH are:
1) A surgeon who is competent in patient evaluation, ETV/CPC and shunt placement surgeries, and patient follow up
2) An adequately equipped and trained operating theater and staff for performing these techniques
3) A mechanism for referral, evaluation, and funding of infants requiring treatment for Hydrocephalus
4) Minimum of 100 infants and young children treated for Hydrocephalus per year
5) Full participation and compliance by CH trained surgeons in supplying data to CH database
6) A mechanism for patient follow up (postoperative and lifelong) and data reporting
7) <1% infection and mortality rates for ETV/CPC and <10% infection rates for shunt placement
8) Successful avoidance of shunt dependency in at least 2/3 of all children
9) A functioning Spina Bifida/Hydrocephalus clinic service run by a nurse coordinator who is trained by IF in neurogenic bladder management, prevention counseling, etc.
10) The institution evolves into a regional center for training others in the management of hydrocephalus, including neuroendoscopy training
11) The partner gains competence in the development of parent groups in civil society and organizational development; the development of a regional SBH parents’ support group
12) The partner becomes part of the IF network for follow up and further training and support

Selection and Certification of Trainee
CURE International reserves the rights to select and approve the trainee recommended by “the Healthcare Facility”. This will be done under the direction of Dr Warf, Senior Medical Director of CH, and with the advice of the CH Medical Advisory Board (MAB). Once accepted into the training program, CURE International retains the right to certify any and all trainees in the program.

Training candidates must pass competency milestones (periodic evaluation of cognitive and technical progress defined by a designated CH Training Centre director). CURE International or IF reserves the right to terminate the training (neurosurgeon or nurse coordinator resp.) at any point without financial liabilities for the trainee or ‘the Healthcare Facility” for training expenses incurred to date.

The candidate must complete the training to the satisfaction of the designated CH Medical Faculty Director (a minimum of twelve (12) weeks
with right of the designated CH Medical Faculty Director to require extension of the training if necessary). Only certified CH Surgeon Training Program graduates will be eligible for neuro-endoscopy support.

**How to apply and get into the trainee reserves?**
Surgeons interested in the CH Surgeon Training Program can complete the following downloadable CH Surgeon Training Program application form.

**Additional Application Documents Required:**

Please make sure all the documents listed below are attached with your application. These documents are required for completing the application to the CURE Hydrocephalus Surgeon Training Program. They are also required by the Uganda Medical And Dental Practitioners Council in order to receive a temporary Registration to practice medicine in Uganda during the training program. All documents written in a language other than English must also include a corresponding translation of each document in English.

1. Completed Application to the **CURE Hydrocephalus Surgeon Training Program** (this form)
2. Memorandum of Understanding (MOU) signed by the director of your Healthcare Facility and by the trainee applying for the training program
3. Completed Application to the **Uganda Medical and Dental Practitioners Council** for a Temporary Registration to practice medicine during the training program (additional registration form attached)
4. University Degree/Professional Medical Qualification Certificates
5. Academic Transcripts or official list of University academic courses/curriculum taken to earn your medical degree
6. Proof of Surgical Training (minimum of one year of surgery internship, copy of certificate required)
7. Current License to Practice Medicine / Certificate of Registration in your Country of Origin
8. Certificate of Good Standing
9. Curriculum Vitae
10. Three (3) Letters of Recommendation from the following sources: 1 letter from the Director of your “Healthcare Facility” and letters from 2 Professional Colleagues
11. Letter or evidence confirming your current/intended Employer/Place of work in your Country of Origin
12. Two (2) recent Passport size photographs

**Please Note:** The **CURE Hydrocephalus Surgeon Training Program** is conducted in English and thus a reasonable level of competency in English (written and oral) is required.
Please send the completed and signed forms with the necessary official documents (in English) scanned to:  jac@cure.org,
Jim Cohick, Senior Vice President, CURE Hydrocephalus Surgeon Training Program

* Digital applications sent by email are preferred, otherwise you can send your application materials to:

CURE Children’s Hospital of Uganda
(c/o AVSI)
Plot 1119 Ggaba Road
P.O. Box 6785
Kampala, Uganda

Contact person: Godfrey Kateete +256 772 349 847
godfrey.kateete@avsi.org