

Patient Safety Protocols: Integral Components for Maximizing Outcomes & Minimizing Costs

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Three Main Topics

- ◉ Fundamentals for increased cost of healthcare
- ◉ W.H.O. Patient Safety Checklist as a way to improve care and cut costs
- ◉ Overview of Global Smile Foundation & our role as an NGO in enhancing quality of delivered care



International Medical Care

- ◉ World wide > 234 million major surgical cases
- ◉ Surgical safety is a universal concern
- ◉ No standardization of care
- ◉ Opportunities to provide international medical care is rapidly expanding



Fundamentals for Escalating Costs

- ⦿ “Cost of delivering patient care” (Ref: R. Kaplan & M. Porter: HBS 9/11)
- ⦿ “Cost of care when complications set in”
- ⦿ “Savings in cost of patient care when safety protocols are implemented”
- ⦿ “Instead of focusing on the costs of treating individual patients with specific medical conditions over their full cycle of care, providers aggregate and analyze costs at the specialty or service departmental level”

By: Robert Kaplan & Michael Porter (HBS 09/2011)



Fundamentals for Escalating Costs

- ⦿ “Poor cost measurement has also led to huge cross-subsidies across services” (Ref: R. Kaplan & M. Porter: HBS 9/11)
- ⦿ “Poor measurement of cost and outcomes also means that effective and efficient providers go unrewarded, while inefficient ones have little incentive to improve”

By: Robert Kaplan & Michael Porter (HBS 09/2011)





Fundamentals for Escalating Costs

- ① “Much of the rapid escalation in health care costs can be attributed to the fact that providers have an almost complete lack of understanding of how much it costs to deliver patient care” (Ref: R. Kaplan & M. Porter: HBS 9/11)
- ① “Thus they lack the knowledge necessary to improve resource utilization, reduce delays, and eliminate activities that don’t improve outcomes”

By: Robert Kaplan & Michael Porter (HBS 09/2011)



Fundamentals for Escalating Costs

- “Pilot projects under way at hospital systems in the U.S. and Europe demonstrate the transformative effect of a new approach that accurately measures costs—at the level of the individual patient with a given medical condition over a full cycle of care—and compares those costs to outcomes” (Ref: R. Kaplan & M. Porter: HBS 9/11)

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Fundamentals for Escalating Costs

- ④ “The remedy to the cost crisis does not require medical science breakthroughs or new governmental regulation. It simply requires a new way to accurately measure costs and compare them with outcomes” (Ref: R. Kaplan & M. Porter: HBS 9/11)

By: Robert Kaplan & Michael Porter (HBS 09/2011)





Fundamentals for Escalating Costs

- ⦿ “Outcomes for any medical condition or patient population should be measured along multiple dimensions, including” (Ref: R. Kaplan & M. Porter: HBS 9/11):
 - > Survival
 - > Ability to function
 - > Duration of care
 - > Discomfort
 - > Complications
 - > The sustainability of recovery

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Fundamentals for Escalating Costs

- “We increase the **VALUE** of health care delivered to patients by improving outcomes at similar costs or by reducing the total costs involved in patients’ care while maintaining the quality of outcomes” (Ref: R. Kaplan & M. Porter:

HBS 9/11)

By: Robert Kaplan & Michael Porter (HBS 09/2011)



Fundamentals for Escalating Costs

- “In the value framework, the relevant cost is the total cost of all resources—clinical and administrative personnel, drugs and other supplies, devices, space, and equipment used during a patient’s full cycle of care for a specific medical condition, including the treatment of associated complications and common comorbidities” (Ref: R. Kaplan & M. Porter: HBS 9/11)

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Creating a Cost Measurement System

- ⦿ “Select the medical condition and/or patient population to be examined” (Ref: R. Kaplan & M. Porter: HBS 9/11)
- ⦿ “Define the value care delivery chain”
- ⦿ “Develop process maps of each activity in patient care delivery”
- ⦿ “Identify the resources involved and any supplies used for the patient at each process”

By: Robert Kaplan & Michael Porter (HBS 09/2011)



W.H.O. Initiative

- Implementation of a surgical safety checklist: 2007-2008
- 8 hospitals participated:
 - Toronto, Canada; New Delhi, India; Amman, Jordan; Auckland, New Zealand; Manila, Philippines; Ifakara, Tanzania; London, England; Seattle, USA
- Death rate decreased: 1.5% → 0.8%
- Complication rate decreased: 11% → 7%
- The effect depended crucially upon checklist compliance

W.H.O. Initiative

- ◉ The cost of a major surgical complication from the literature was estimated at \$13,372 after adjusting for medical price inflation
- ◉ When compared to current practice in the base-case analysis, the implementation and use of the checklist would save \$103,829 annually for a hospital that performed 4,000 non-cardiac operations per year.

W.H.O. Initiative

- For every complication averted, there is a net savings of \$8,652
- If complications are reduced by 30 percent, as observed in high-income sites in the Safe Surgery Saves Lives Study,³ savings would increase to \$424,757/hospital/year
- If the baseline complication rate were as high as 17 percent,²⁰ savings would be \$2,671,253/hospital/year



W.H.O. Initiative

- ◉ If at least five major complications are prevented within the first year of using the checklist, a hospital will realize a return on its investment
- ◉ Even hospitals that do not prevent five major complications in the first year may still save money as the number of complications averted accumulates over a longer period of time within that same year

Overseas Surgical Outreach Programs

- ◉ Over 500 groups dedicated to short term medical mission trips
- ◉ No governing body overseeing the safety of these organizations
- ◉ Increased concern for patient safety



Global Smile Foundation Unique Features

- ◉ Our founding board members started providing humanitarian cleft care in Latin America 30 years ago
- ◉ From 1 mission/year, our teams now perform 6 full & 2-3 educational missions/year
- ◉ From caring for under 50 patients/year in 1987, we now:
 - > examine over 4000 patients annually
 - > perform over 800 surgical cleft repairs/year
 - > Up to 5000 dental procedures
 - > Over 250 speech consultations
 - > Over 250 psychosocial consultations

From Patients to Global Smile Foundation Volunteers

A Picture Is Worth
1000 Words



Comprehensive
Outreach Cleft
Care: 30 Year
Experience

Providing
Empowerment &
Sustainability in
Africa, Latin
America, Middle
East & India





From Patients to GSF Volunteers: 1996-2016

Global Smile Foundation Unique Features

- ◉ Developed Comprehensive Cleft Care Centers in Ecuador, Lebanon & one is in formation in Brazil
- ◉ GSF is a leader in medical-mission quality assurance, efficiency, and patient safety
- ◉ GSF-trained local health practitioners are staffing the centers throughout the year
- ◉ Launched the first Pre-surgical orthopedics dental care (NAM) fellowship in Ecuador in 2012



VELOPHARANGIAL INSUFFICIENCY (VPI) INITIATIVE

GSF launched its VPI initiative in 2015 to further assist our patients born with speech deficits. This initiative helps these patients obtain a proper diagnosis and treatment methods. GSF works in tandem with local speech pathologists to help deliver care.

Global Smile Foundation Unique Features

- Charter member of the first World Cleft Coalition whose goal is to establish & raise standards for cleft centers and cleft missions: GSF, Op Smile, Smile Train, European Cleft Foundation & Canadian Transforming Faces
- Comprehensive Cleft Care Fellowship was launched in 2015
- Comprehensive Cleft Care Workshop in Lebanon April 2018
- Comprehensive Cleft Care Workshop in Sao Paolo Oct 2017

Comprehensive Cleft Care Workshop

This is the first workshop of this caliber to be held in the Middle East and North Africa region. GSF is expecting 150 surgeons, nurses, and speech therapists to attend the 3 day conference that will include lectures, video training, and simulation labs.

GSF is hoping to be able to bring this workshop to other countries as well in the future.



www.cleftworkshop.org



**O projeto Santa Smile está
convocando pacientes com
fissuras labiopalatinas
para correção cirúrgica e
acompanhamento na
Santa Casa de São Paulo**

**Entre em contato conosco:
Telefone 2176-7000
Ramal 5851/ 5852/ 7235
e agende seu atendimento!**

**Santa
Smile**

 santasmile.gsf@gmail.com
 <https://m.facebook.com/santasmile.br/>

PROJECT SANTA SMILE

GSF is collaborating with Santa Casa Hospital in São Paulo, Brazil for a 3 day educational mission October 10-12th, 2017. Medical professionals and students from all over Brazil are expected to attend the conference focusing on comprehensive and multidisciplinary cleft care.



Augmented Reality

- GSF has pioneered international augmented reality surgical procedures since 2014
- Since then, the technology is used for medical training, telesurgery, training future surgeons in various specialties, follow up on patients postop, reduce number of revisional procedures, etc.
- Technology is currently employed at Yale Medical School, other U.S. sites, in U.K., Romania, Vietnam & Lebanon







GLOBAL SMILE FOUNDATION SITES



GSF Modified Surgical Safety Checklist

The Cleft Palate-Craniofacial Journal 51(5) pp. 597-604 September 2014
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IDEAS AND INNOVATIONS

Use of Safety Measures, Including the Modified World Health Organization Surgical Safety Checklist, During International Outreach Cleft Missions

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International surgical outreach missions have become increasingly common within the surgery community. Untoward events in this setting, although rare, can be prevented by careful planning and the use of quality assurance guidelines designed to prevent such complications. The surgical safety checklist is widely accepted in most developed health care practices, but is used variably by international mission groups. This article outlines the quality assurance guidelines used, including a modified World Health Organization safety checklist and illustrated patient instruction forms, to provide a standardized means of delivering sound surgical care in the setting of short-term international cleft lip and/or palate missions.

KEY WORDS: *cleft lip, cleft palate, international mission, safety checklist, WHO checklist*

The increasing need for quality medical care throughout the developing world, along with the increasing ability to

reported a significant decline in mortality from 1.5% to 0.8% and a decline in inpatient complications from 11.0%

Patient Surgical Safety Checklist

First name: _____

Last name: _____

Surgeon: _____ Anesthesia: _____

Date: _____ Medical Record: _____



To BE COMPLETED BY PERIOP PERSON

To BE COMPLETED BY OR NURSE

BEFORE PATIENT LEAVES ROOM

SIGN IN - NURSE AND ANESTHESIA

☐ PATIENT IDENTIFICATION VERIFIED

☐ ID Band Applied

☐ Consent Form Complete

NPO

☐ LAST FOOD/MILK AT _____

☐ LAST WATER AT _____

DOES THE PATIENT HAVE A:
KNOWN ALLERGY?

☐ NO
☐ YES

THE CHILD IS WELL TODAY

☐ YES
☐ NO
☐ HCG completed (12yo or menarche)

TIME OUT - TEAM

☐ INTRODUCE SELF BY NAME AND ROLE

☐ INTRODUCE LOCAL TEAM

☐ VERBALLY CONFIRM

- PATIENT
- SITE
- PROCEDURE

SURGEON VERIFIES

☐ WHAT ARE THE CRITICAL /UNEXPECTED STEPS

☐ OPERATION DURATION

ANESTHESIA VERIFIES

☐ ANTIBIOTICS GIVEN WITHIN 60 MINUTES OF INCISION

DIFFICULT AIRWAY/ASPIRATION RISK?

☐ NO
☐ YES, AND EQUIPMENT/ASSISTANCE AVAILABLE

RISK OF >500ML BLOOD LOSS (7ML/KG IN CHILDREN)?

☐ NO
☐ YES
WT_____X7 =_____

☐ Fire Risks Reviewed
PHOTOS/ IMAGES DISPLAYED?

☐ YES
☐ NOT APPLICABLE

ANY QUESTIONS/CONCERNS FROM TEAM?

SIGN OUT -TEAM

SURGEON VERIFIES

☐ NAME OF THE PROCEDURE

NURSE VERIFIES

☐ NEEDLES ARE ACCOUNTED FOR
☐ INSTRUMENT COUNT FOR INVENTORY
☐ Blood Loss:
☐ E.T. Tube size _____

TEAM VERIFIES

☐ THROAT PACK REMOVED
 ☐ YES
 ☐ NOT APPLICABLE
☐ KEY CONCERNS FOR RECOVERY AND MANAGEMENT OF THIS PATIENT

GSF Initiatives & Unique Features

Quality Assurance Guidelines for Surgical Outreach Programs: A 20-Year Experience

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Usama S. Hamdan, M.D., F.I.C.S.

Numerous American volunteer organizations travel throughout the developing world, providing surgical services to those in need. Medical staff who undertake such missions must contend with the realities inherent to providing healthcare abroad. Inadequate medical facilities and equipment, coupled with a short mission duration and the lack of substantial integration with the local medical community, greatly increase the risk of unnecessary medical complications. At present, there is no definitive set of quality assurance guidelines for the surgical outreach community. This report draws on 20 years of outreach experience to recommend a set of quality assurance guidelines for surgical outreach missions.

KEY WORDS: *medical missions, quality assurance, guidelines, cleft lip, cleft palate*

Global Smile Initiatives: Perioperative

- ⦿ Enforcement of the “Time Out” Safety Checklist
- ⦿ 3 checkpoints
 - > Sign In
 - > Intraoperative
 - > Immediately postoperative

GSF Initiatives & Unique Features

SPECIAL TOPIC

Implementation of an Emergency Response Protocol for Overseas Surgical Outreach Initiatives

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Background: Many health organizations sponsor overseas surgical outreach initiatives, yet none has published a standardized protocol to prevent and manage unforeseen emergencies. Surgeons, anesthesiologists, nurses, and administrators—working together on a brief overseas humanitarian initiative—benefit from education and training to maximize their collective emergency responsiveness. This article outlines the emergency response protocol instituted by the Global Smile Foundation, a 501(c)(3) nonprofit global outreach organization providing comprehensive cleft care for the past 25 years.

Methods: The Global Smile Foundation emergency response protocol was constructed to provide all team members resources and training needed to emulate the high emergency response standards of developed nations. In this article, the authors share their education/training strategy, emergency “crash” cart inventory, site-specific safety checklist, and team member roles and responsibilities during various emergencies.

Results: The authors’ protocol emphasizes equipment portability, location-specific adaptability, clear workflow/communication, and standardized team roles. On-site training is likewise portable, unencumbered, reproducible, efficient, and adaptive to each setting. These characteristics make the authors’ protocol widely adoptable.

Conclusions: Most morbidity and mortality during overseas surgical outreach initiatives result from unfamiliarity with the local hospital and other team members during operative (e.g., airway, bleeding, circulatory, anesthetic) or location-based (e.g., power outage, fire, oxygen shortage) emergencies. These complications are prevented and managed with aggressive team education and training. The Global Smile Foundation protocol adapts to the uncertainties of providing medical care in underresourced settings and reflects experience accumulated over the past quarter century. It is the authors’ hope that other humanitarian outreach groups will adopt, customize, and build on these basic tenets. (*Plast. Reconstr. Surg.* 131: 631e, 2013.)

An expanding number of global health organizations now sponsor overseas surgical outreach initiatives. Despite their overall humanitarian success, several experienced volunteer organizations have become concerned about the quality and safety of the care provided. Few data have been reported on the frequency of emergency scenarios, near-miss events, or adverse outcomes encountered by this multitude of providers. In 1999, Operation Smile reported 48

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Supplemental digital content is available for this article. Direct URL citations appear in the text; simply type the URL address into any Web browser to access this content. Clickable links to the material are provided in the HTML text of this article on the Journal's Web site (www.PRS-journal.com).

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Summary: Safety Protocols

- ⦿ Improved standardization & quality of patient care
- ⦿ Utilization of W.H.O. Patient Safety Checklist saves lives and cuts on cost of care
- ⦿ Always keep in mind the value gained in having healthy patient outcomes through safer care
- ⦿ Having healthy patient outcomes minimizes cost of treating unwarranted & avoidable complications

Preventative Measures that Saves Lives & Money

- Folic Acid Supplementation especially during pregnancy
 - For every cleft patient, 3-5 family members are needed for care
 - Once a cleft is repaired, this brings back to the workforce 1-5 potentially productive members of that family
- Fluoridation of water:
 - Healthier teeth & lower cost spent on dental care
 - Lower incidence of cardiac diseases associated with poor oral hygiene
- Avoid child growth stunting: peanut butter & other food supplements: A healthy society is dependent on healthy growth of its younger generations
- Smoking cessation



Hawraa
2014-2015



Samuel
2016-2017



Myra
2015-2016



Edwin
2009-2017



Josue
2012 - 2017



Dany Jabdiel
2015-2016



Nayela
2015-2016



JESUS
2014-2017



LADY
2015-2017



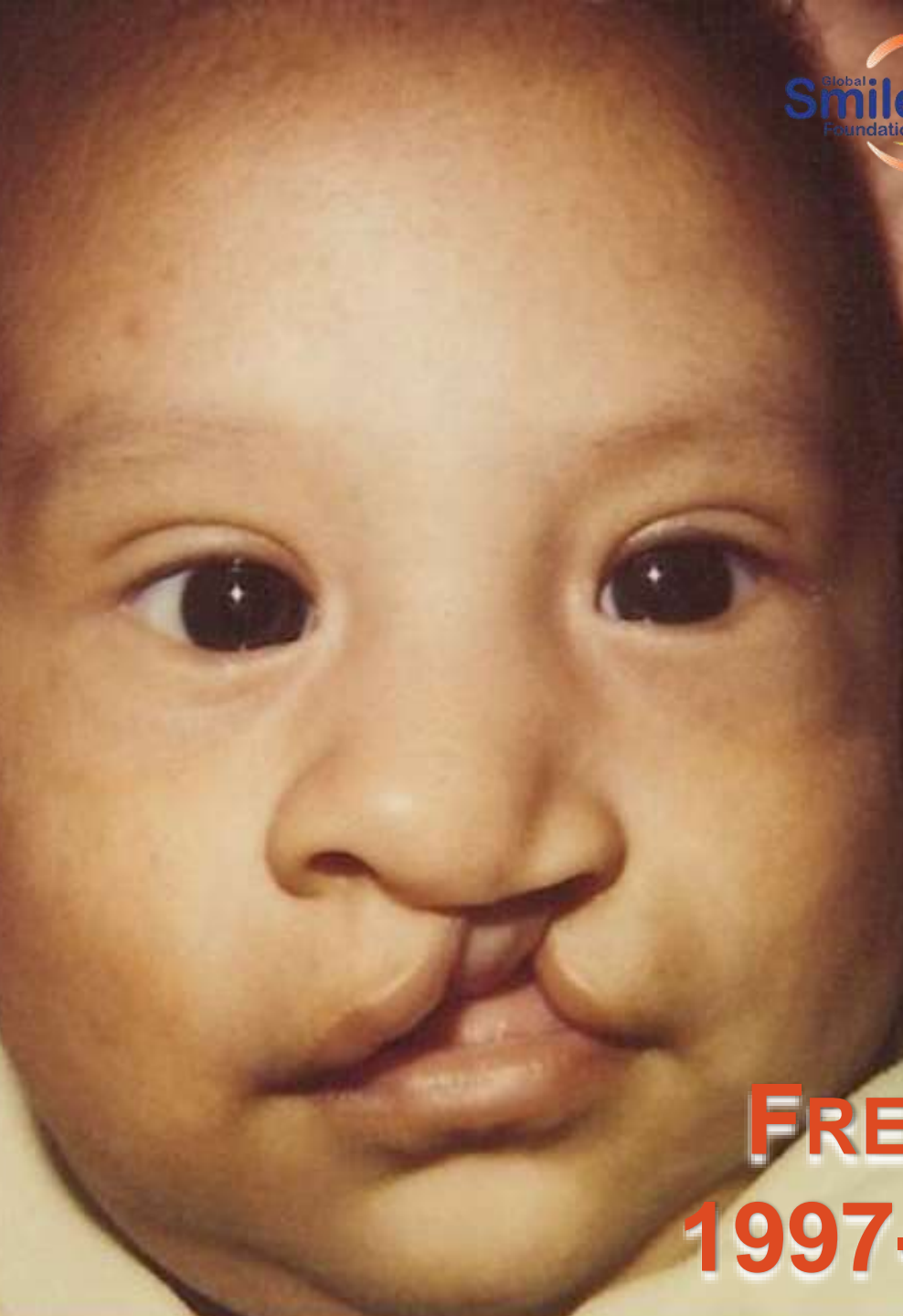
ROMEO
2013-2017



AYLEEN
2013-2017



SEBASTIAN
2016-2017



FREDDY
1997-2017





DIEGO
1997-2017





HUSSEIN
2013-2014



MARCIANO
2013-2014



MAIRA
2013



“In a Gentle Way
We Can
Shake the World”

