

Care of the Critically Ill in Resource Poor Settings Should WE Care?

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DISCLOSURES

- **None** relevant to this presentation
- **Potential bias!!!** course lead for Critical Care Masters stream
 - Collaboration between **University of Toronto** and **Addis Ababa University, Ethiopia**





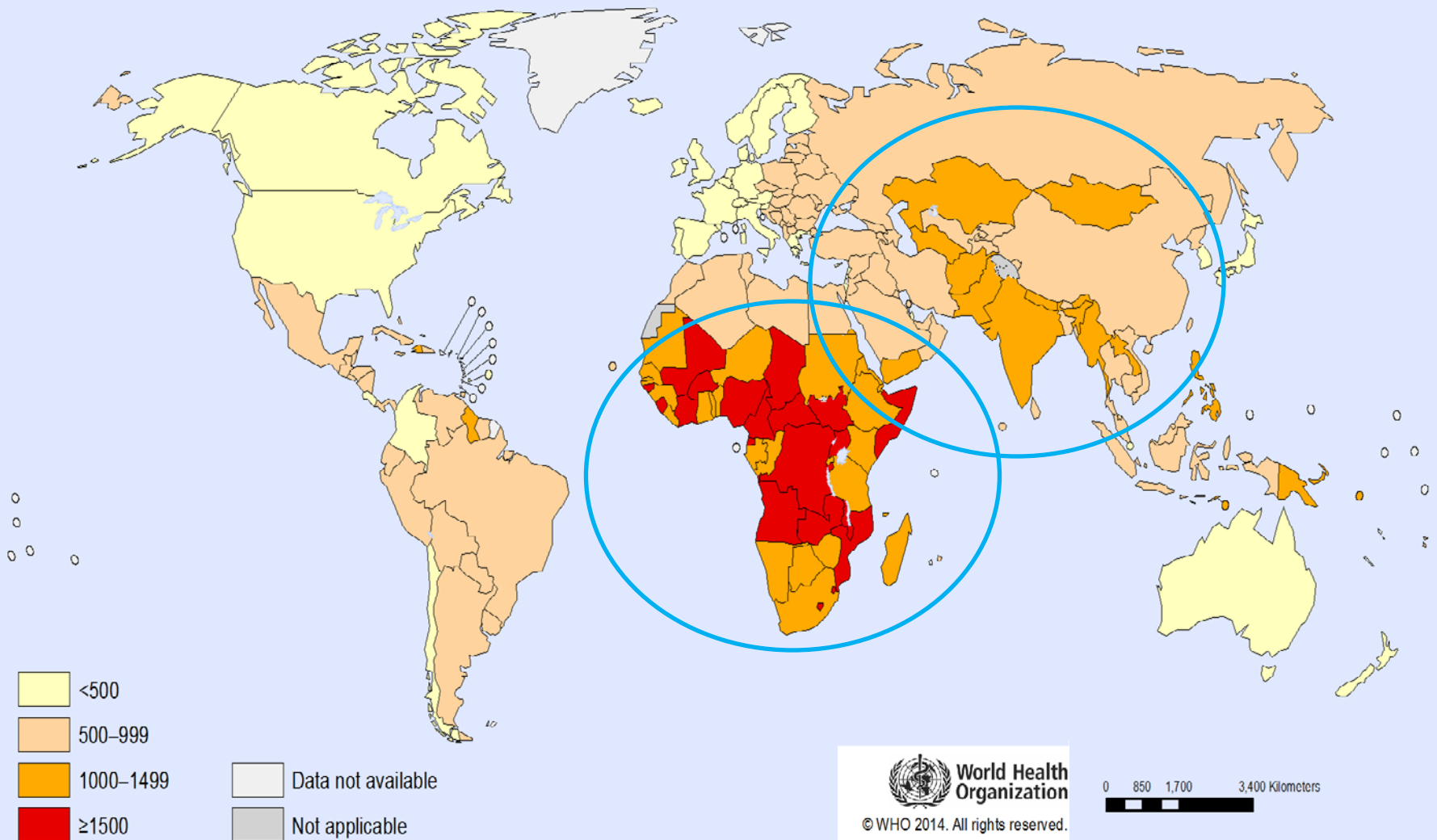




WHAT DO WE KNOW ABOUT
HEALTH AND HEALTHCARE FROM
AN INTERNATIONAL PERSPECTIVE?

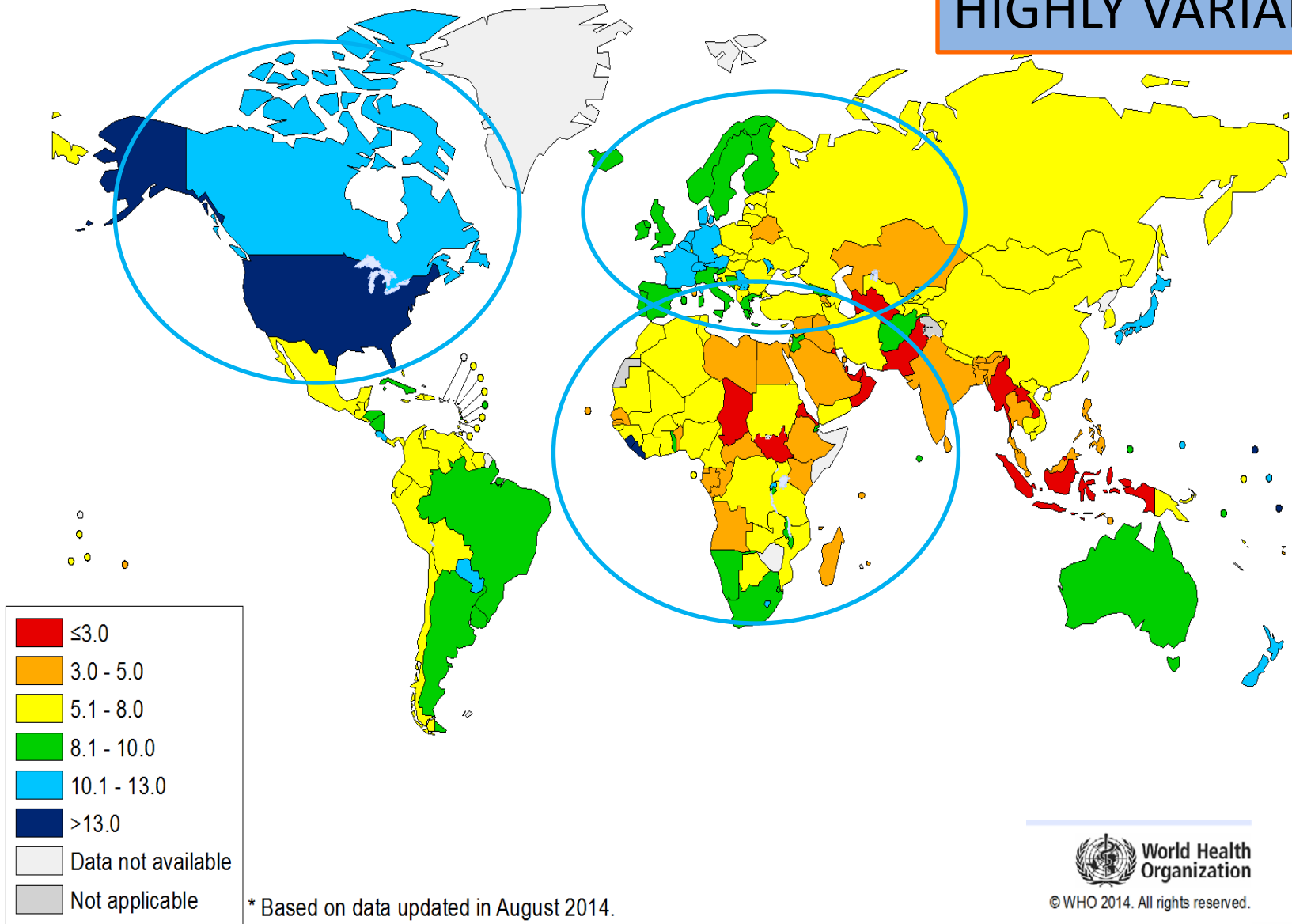
Age-standardized mortality rates (per 100 000 population), all causes, 2012

POTENTIALLY MODIFIABLE



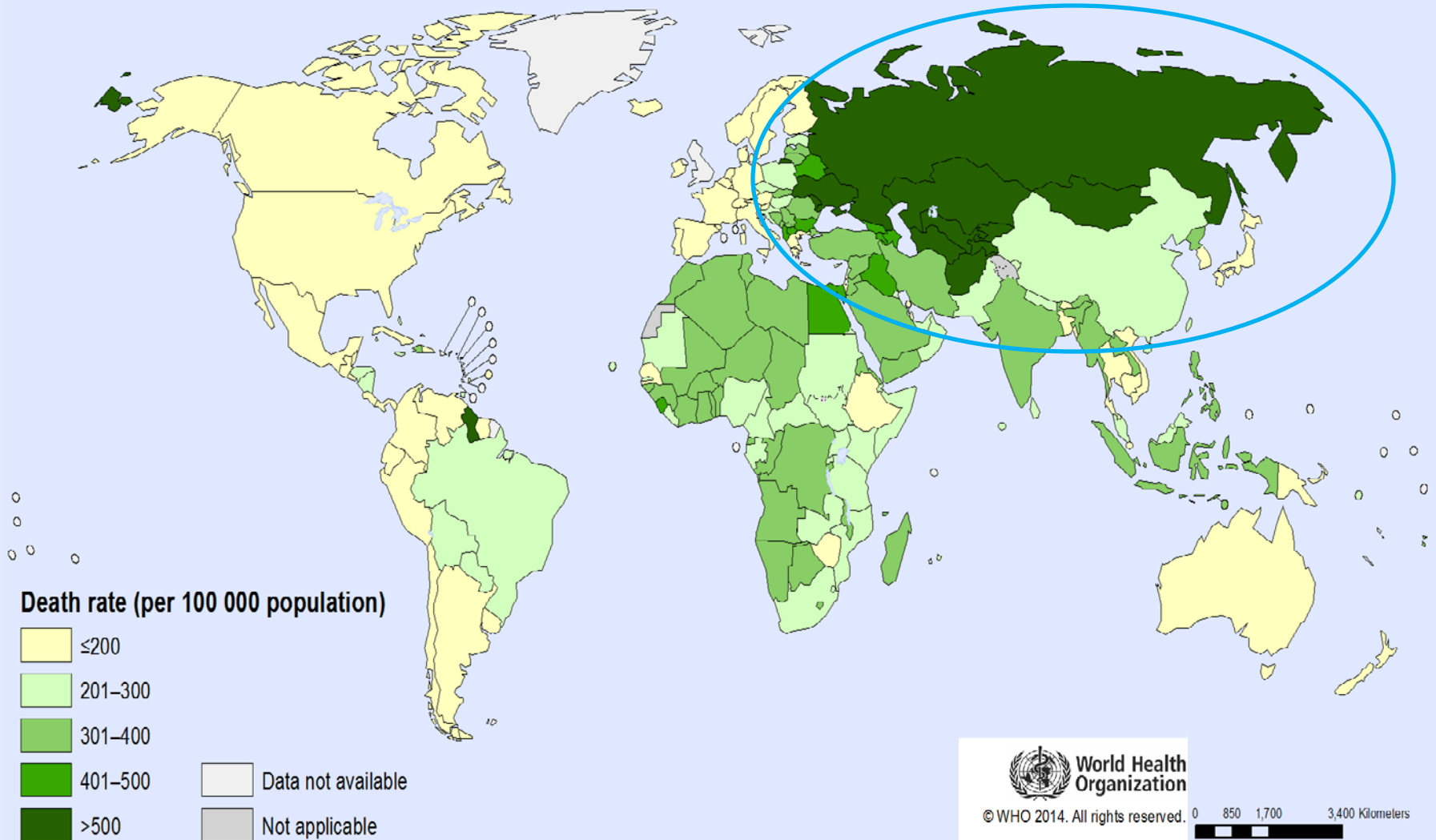
Total expenditure on health as a percentage of the gross domestic product, 2012 *

HIGHLY VARIABLE



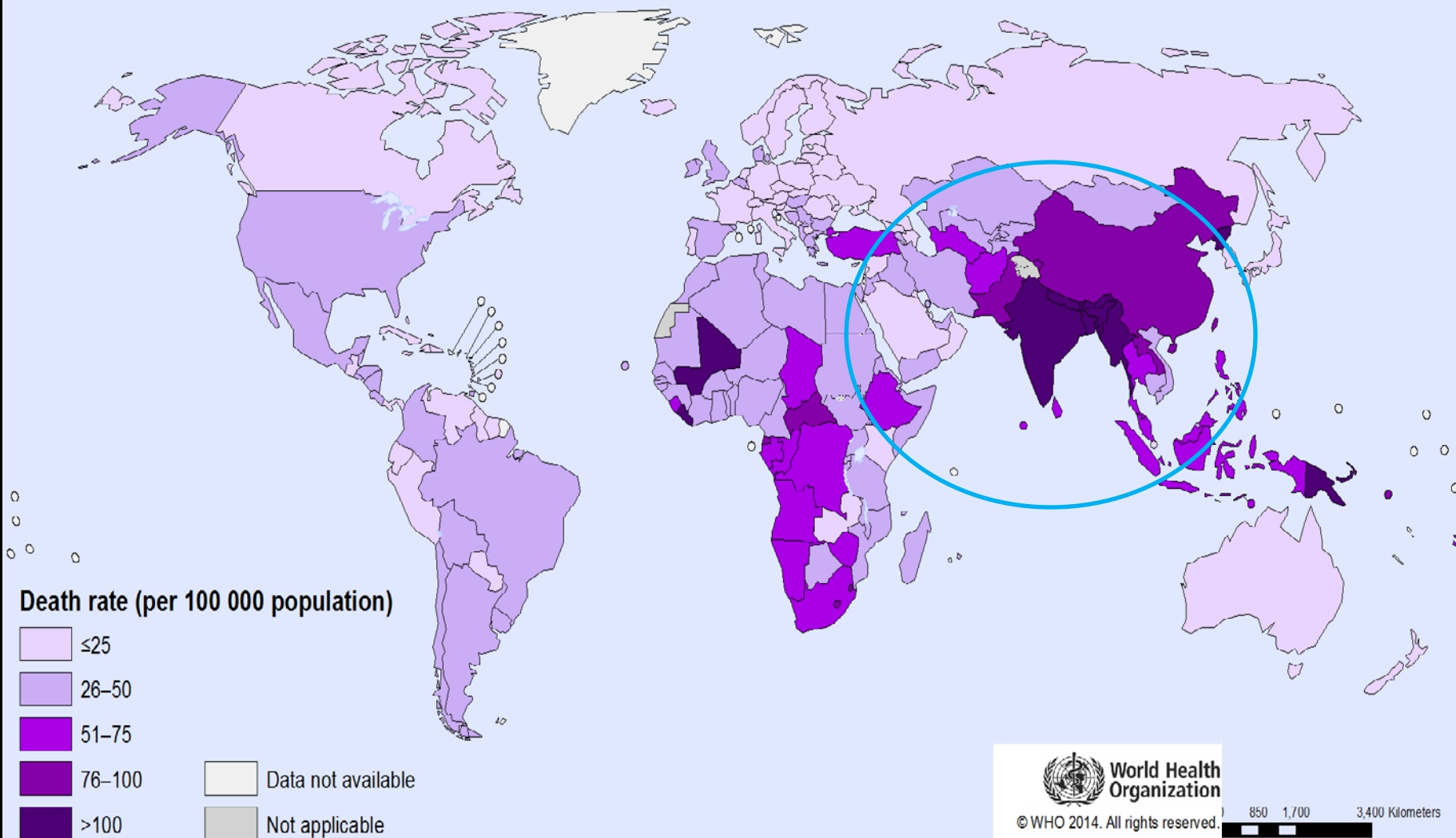
Cardiovascular diseases mortality: Age-standardized death rate per 100 000 population, both sexes, 2012

Cause of death depends on where you live



Chronic respiratory diseases mortality: Age-standardized death rate per 100 000 population, both sexes, 2012

Cause of death depends on where you live

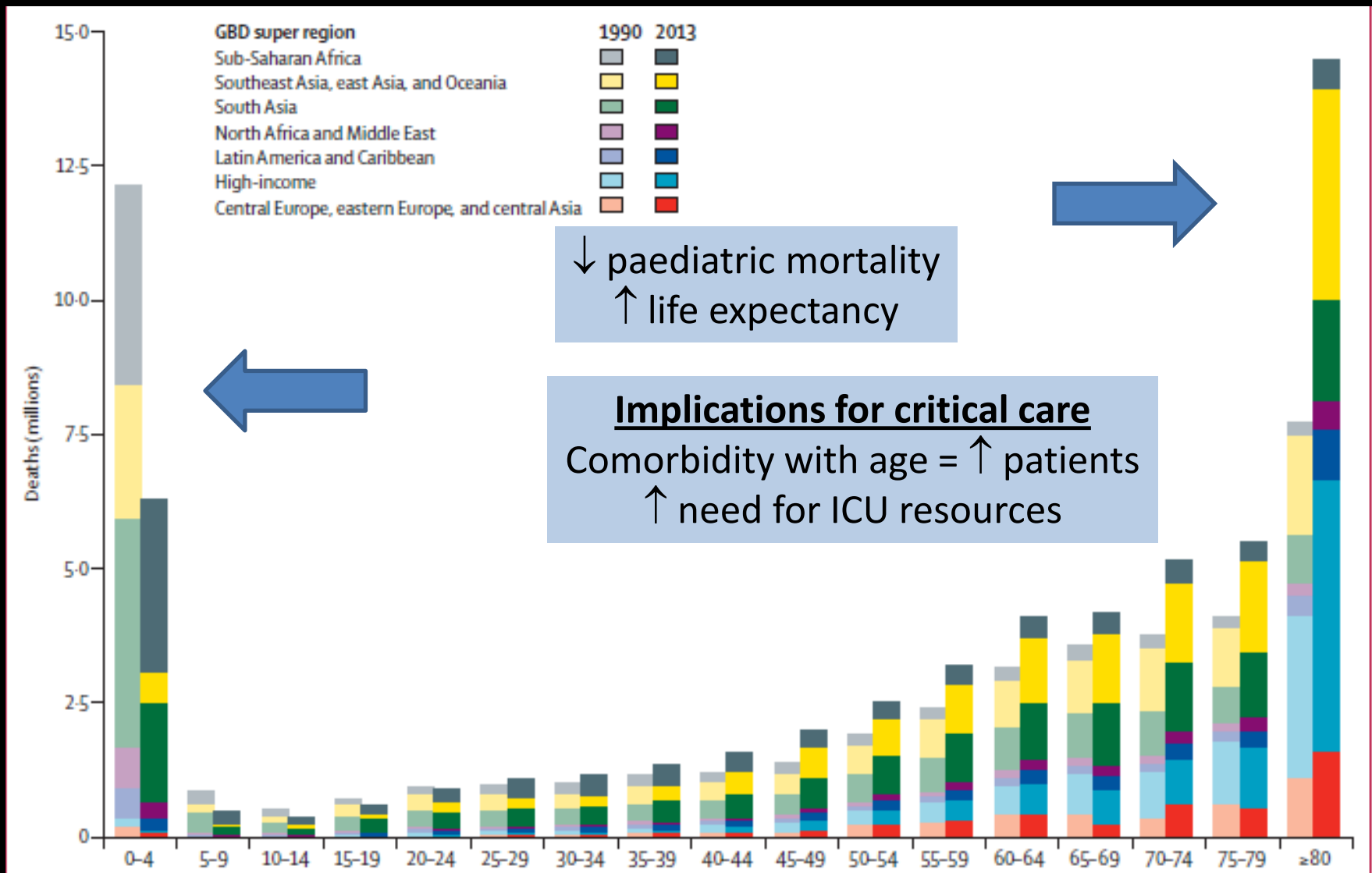


Road Traffic Fatalities

- 2010: **low** and **middle-income** countries had higher road traffic fatality rates (**18.3** and **20.1** per 100,000 population respectively)
 - compared to **high-income** countries (**8.7/100,000**)
- The **African region** had the highest road traffic fatality rate, at **24.1/100,000**
- The **European region** had the lowest rate, at **10.3/100,000**



Have things changed?



WHAT DO WE KNOW ABOUT CRITICAL
CARE?

What is Critical Care?

- Common location
 - ↑ nursing intensity
 - Specialist medical training
 - Interprofessional team
 - Technology for:
 - monitoring
 - organ support
 - Patients
 - at risk of imminent death
 - severity of illness
 - complexity of illness
- Resource intensive and high cost



Global Health

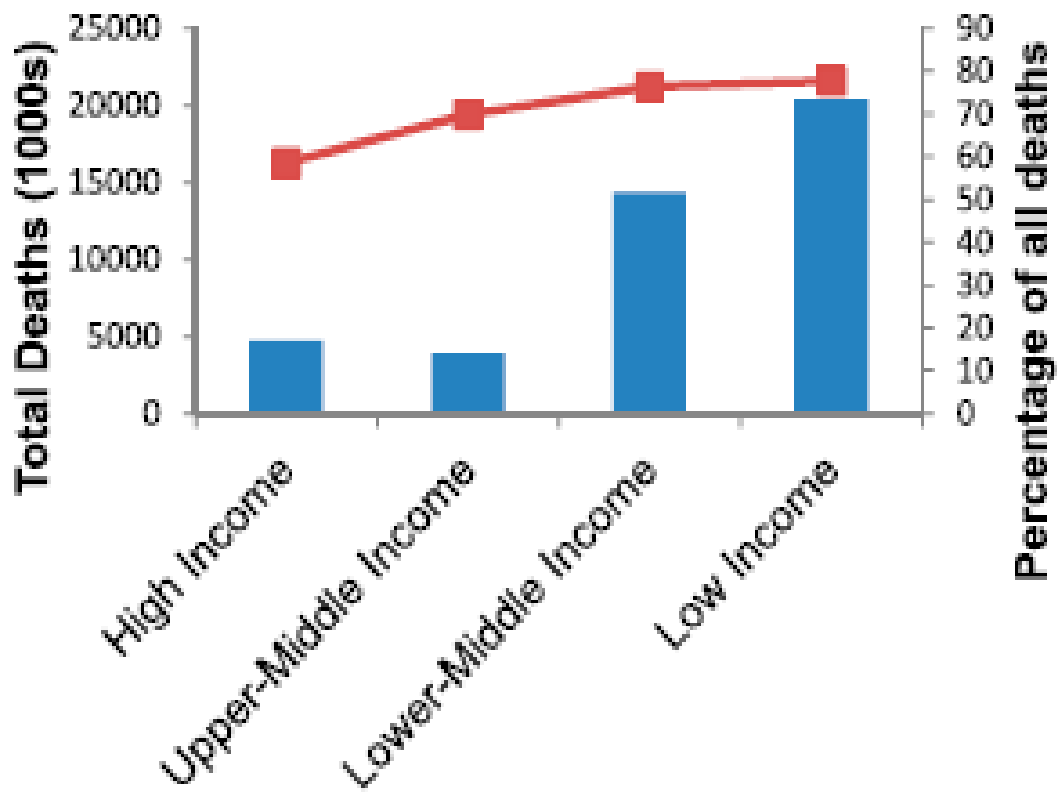
Series Editor: Gustavo Matute-Bello, M.D.


Global Health Care of the Critically Ill in Low-Resource Settings


Srinivas Murthy^{1,2} and Neill K. Adhikari^{1,3}

Annals ATS 2013 10: 509-13

SO WHY DO WE NEED CRITICAL CARE IN RESOURCE POOR SETTINGS?



 Total deaths from conditions that would potentially benefit from critical care

 % of all deaths that would potentially benefit from critical care

Potentially Preventable Deaths with Critical Care

Critical care and the global burden of critical illness in adults

Neill KJ Adhikari, Robert A Fowler, Satish Bhagwanjee, Gordon D Rubenfeld

Lancet 2010 375:1339-46

GLOBAL BURDEN

	Population in 2004 ($\times 10^3$)	Estimated potential burden of selected critical illnesses per year ($\times 10^3$) [‡]		
		Patients mechanically ventilated	Acute lung injury	Sepsis
High-income countries	949 818	2000-3000	170-820	2300-2800
East Asia and Pacific	1 892 113	3900-5900	340-1600	4500-5700
Europe and central Asia	476 096	990-1500	85-410	1100-1400
Latin America and Caribbean	549 187	1100-1700	98-470	1300-1600
Middle East and north Africa	324 542	680-1000	58-280	780-970
South Asia	1 493 430	3100-4700	270-1300	3600-4500
Sub-Saharan Africa	749 269	1600-2400	130-650	1800-2200
World	6 436 826	13 000-20 000	1150-5500	15 000-19 000

Based on an estimated capacity & population similar to North America

Critical care and the global burden of critical illness in adults

Neill KJ Adhikari, Robert A Fowler, Satish Bhagwanjee, Gordon D Rubenfeld

Lancet 2010 375:1339-46

	No. of ICUs	No of ICUs /100,000
Germany	-	24.6
Belgium	135	21.9
Croatia	123	20.3
France	550	9.3
Sweden	89	8.7
Netherlands	115	8.4
Spain	258	8.2
UK	268	3.5
South Africa	308	8.9
Columbia	89	-
Zambia	29	-
China	-	3.9
Sri Lanka	52	1.6

Lack of
epidemiological
data on ICU
availability

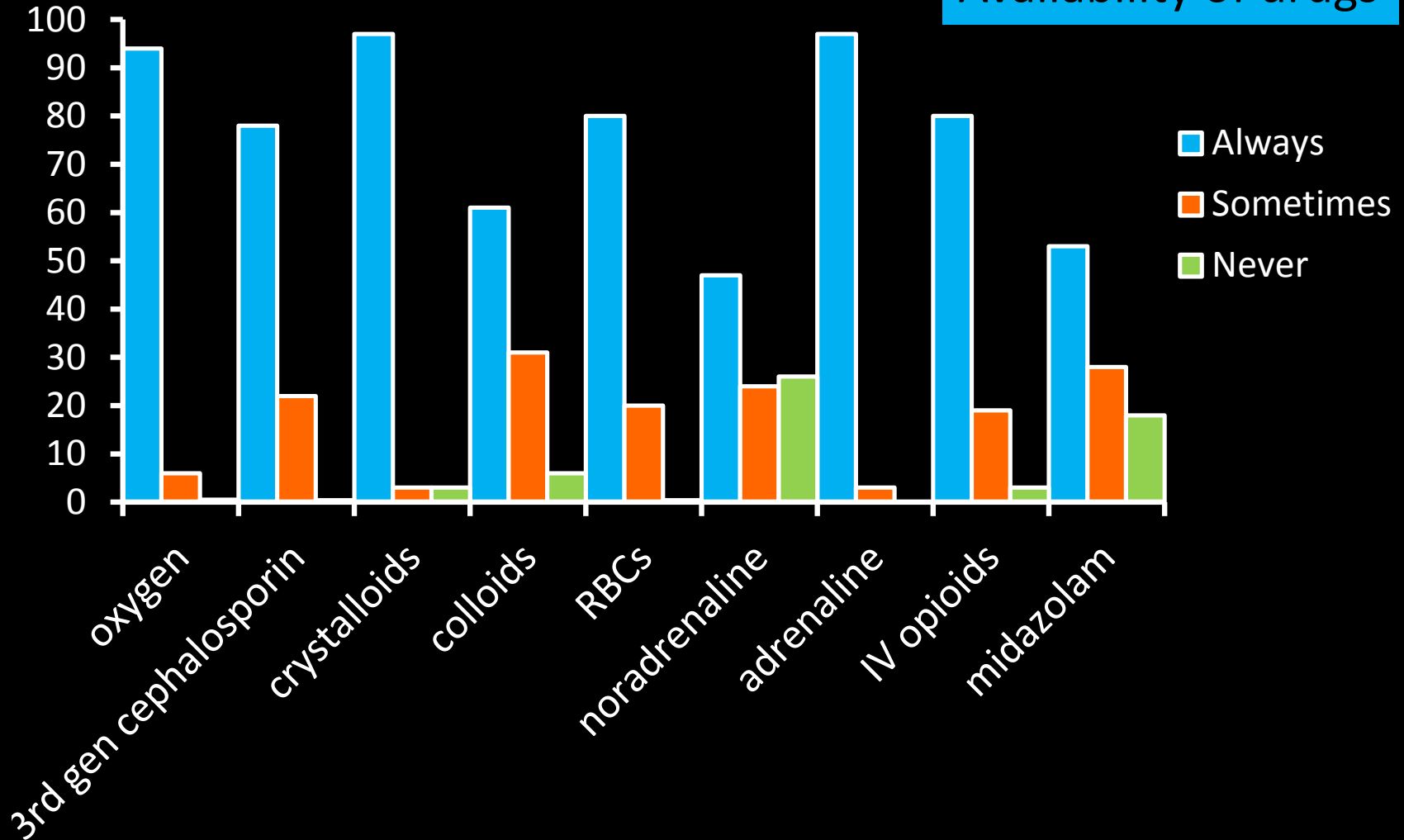
Available Resources

- Things we take for granted:
 - Running water
 - Electricity
 - Piped oxygen
 - Wall suction
 - Availability of resuscitation drugs and equipment
 - Availability of other drugs, fluids and equipment
 - Availability of SpO₂ and ECG monitoring as a minimum
 - Electrodes to attach monitoring
 - Access to diagnostic laboratory and radiology
 - Biomedical engineering to maintain equipment
 - Culture of safety
 - Documentation
 - Infection control
 - Blood bank
 - Family members may have to donate blood

Availability of critical care resources to treat patients with severe sepsis or septic shock in Africa: a self-reported, continent-wide survey of anaesthesia providers
2011 15:R10



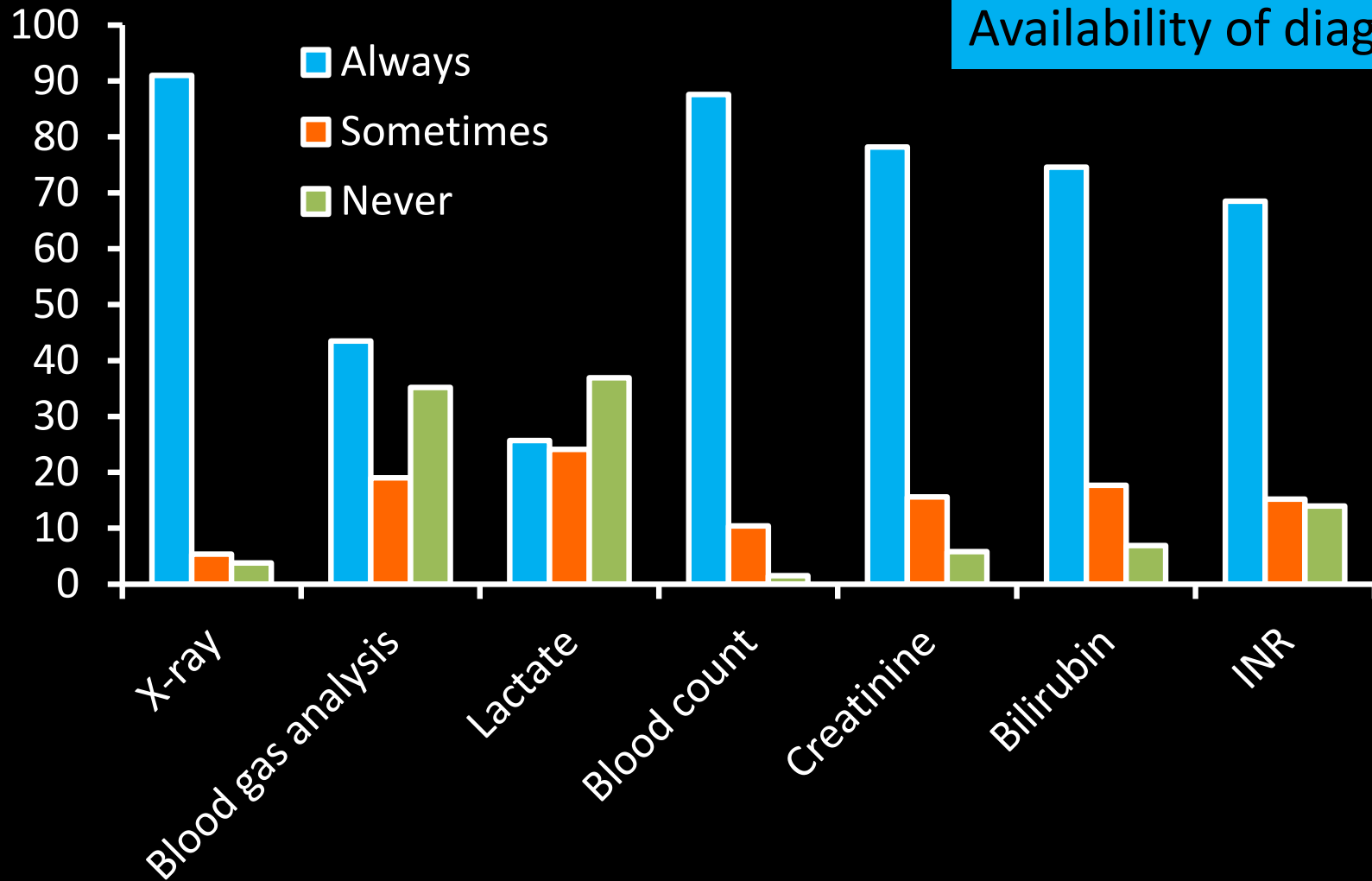
Availability of drugs



Availability of critical care resources to treat patients with severe sepsis or septic shock in Africa: a self-reported, continent-wide survey of anaesthesia providers



2011 15:R10

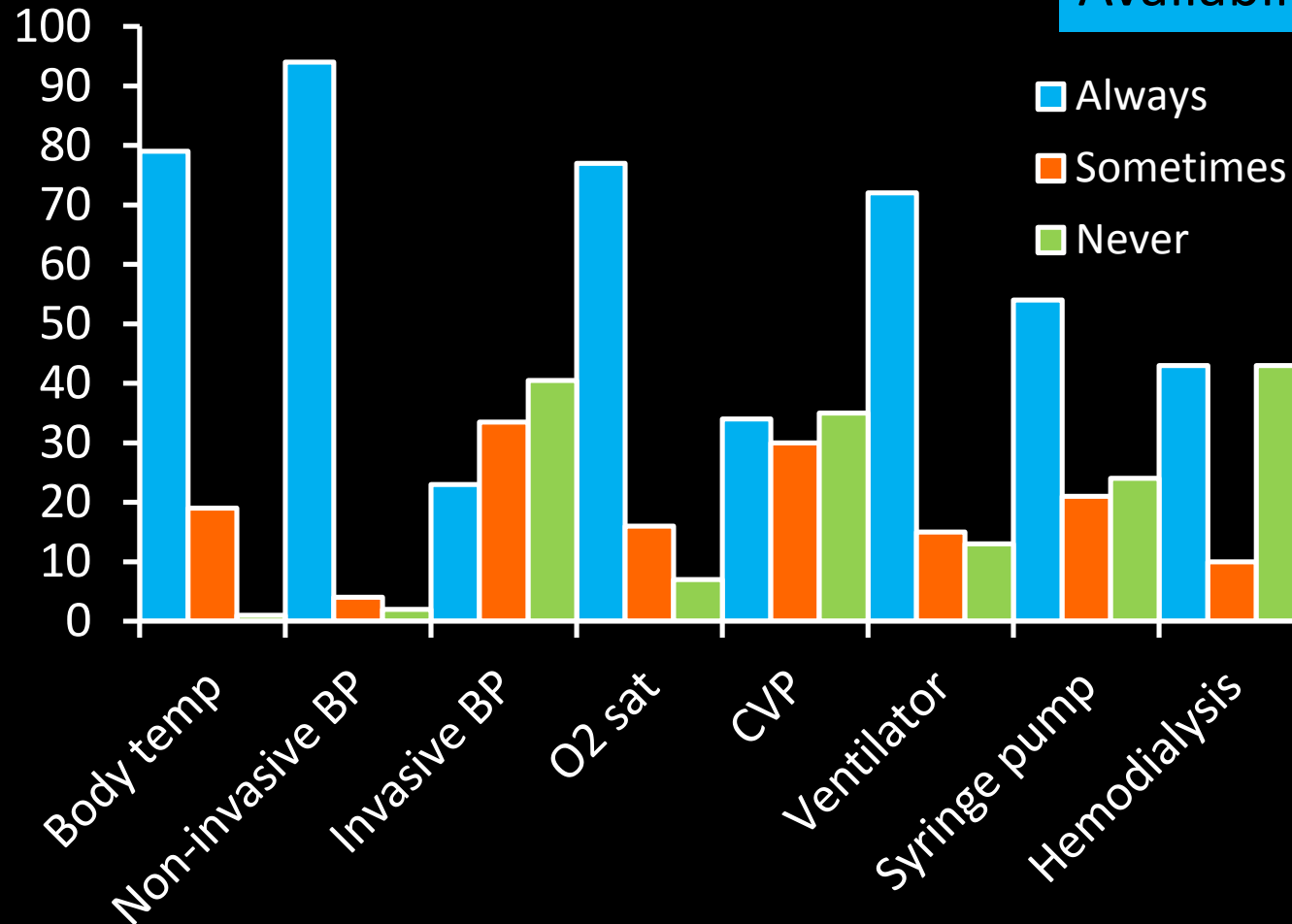


Availability of critical care resources to treat patients with severe sepsis or septic shock in Africa: a self-reported, continent-wide survey of anaesthesia providers



2011 15:R10

Availability of equipment



Disease patterns and clinical outcomes of patients admitted in intensive care units of tertiary referral hospitals of Tanzania

Hendry R Sawe^{1*}, Juma A Mfinanga¹, Salum J Lidenge², Boniventura CT Mpondo³, Silas Msangi⁴, Edwin Lugazia¹, Victor Mwafongo¹, Michael S Runyon^{1,6} and Teri A Reynolds^{1,5}

BMC Int Health Hum Rights 2014 14:26

A different population: mean age 34 yrs, mortality 41%

Top 10 diagnoses for adults and all ages (including age unknown)

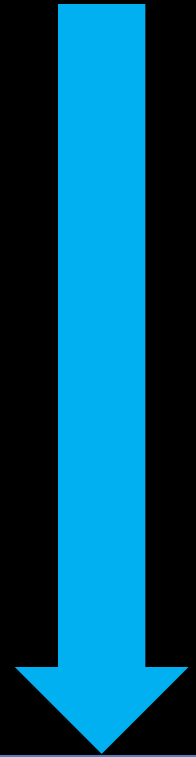
CCS category	As % of all patients N = 5627	As % of adult patients (≥18 years) N = 4277	Length of ICU stay in days median (Q1,Q3) (All ages)	In-ICU mortality (All ages)
Intracranial injury	703 (12.5%)	665 (15.5%)	5 (3,12)	280 (39.8%)
Post-operative observation*	597 (10.6%)	461 (10.8%)	1 (1,2)	73 (12.2%)
Injury and poisoning	400 (7.1%)	321 (7.5%)	4 (2,9)	189 (47.3%)
Other intestinal obstruction	360 (6.4%)	248 (5.8%)	3 (2,7)	141 (39.2%)
Acute but ill-defined cerebrovascular accident	360 (6.4%)	360 (8.4%)	6 (4,11)	247 (68.6%)
Complications of pregnancy; childbirth; and the puerperium	315 (5.6%)	253 (5.9%)	5 (2,9)	109 (34.6%)
Diabetes with ketoacidosis or uncontrolled diabetes	298 (5.3%)	259 (6.1%)	5 (2,7)	113 (37.9%)
Peritonitis and intestinal abscess	264 (4.7%)	221 (5.2%)	4 (2,9)	137 (51.9%)
Hypertension with complications and secondary hypertension	191 (3.4%)	191 (4.5%)	4 (2,7)	95 (49.7%)
Pneumonia (except that caused by TB)	174 (3.1%)	101 (2.4%)	3 (2,5)	130 (74.7%)

SEPSIS AS AN EXAMPLE

A **CRITICAL ILLNESS** SYNDROME

Sepsis Continuum

- **Systemic Inflammatory Response Syndrome (SIRS)**
 - Hyper/hypothermia
 - Leukocytosis/leukopenia
 - Tachycardia
 - Tachypnea (or elevated pCO₂)
- **Sepsis**
 - SIRS + suspected/confirmed infection
- **Severe Sepsis**
 - Sepsis + organ dysfunction or tissue hypoperfusion
- **Septic Shock**
 - Sepsis + cardiovascular failure (hypotension)



MOST SEVERE

Severe Sepsis in Perspective

Acute Condition	Mortality Rate in High income Countries
Severe sepsis	25 – 45% 28-day mortality
Acute myocardial infarction	2.7 – 9.6% 30-day in-hospital mortality
Stroke	9.3% 14-day mortality
Ruptured abdominal aortic aneurysm	50 – 73.3% Operative mortality

2.8 million cases of sepsis/yr in high income countries

Severe sepsis/septic shock

- Acute circulatory failure characterized by **persistent arterial hypotension** despite **adequate volume resuscitation** and **unexplained by other causes**
- Sepsis induced hypotension is defined as:
 - SBP **<90** mm Hg
 - mean arterial pressure **<70**
 - or reduction in SBP **>40**

ISSUE: how to **assess circulatory status** when **access to monitoring** is limited and **documentation** of input/output may be **inaccurate/not performed**

Definition: Severe Sepsis

1. Sepsis-induced hypoperfusion/hypotension (systolic <90)
2. Tissue hypoperfusion
3. ↓ cap refill or skin mottling
- ~~4. ↑ lactate~~ Peripheral cyanosis
5. Urine output <0.5 mL/kg/hr X 2 hrs despite fluid resus
- ~~6. PaO₂/FiO₂ ratio <300~~ SpO₂ <90%, central cyanosis, resp distress
- ~~7. Creatinine ↑ >0.5 mg/dl (44 μmol/L)~~
- ~~8. Bilirubin >4 mg/dl (70 μmol/L)~~ Jaundice
- ~~9. Platelets 100,000 μmol/L (<100 X 10⁹/L)~~
- ~~10. Coagulopathy (INR >1.5)~~ Petechiae or ecchymoses

RECOGNIZING SEPSIS

Inability to **measure** lactate, blood gases, even routine diagnostic labs may be difficult to access

Catheterization and **documentation** of output may not occur

Resuscitation Bundle

Complete within 3 hours

- | | | |
|---|---------------------------------------------------------------------|-----------|
| 1 | Measure serum lactate | NO |
| 2 | Obtain blood cultures prior to antibiotic administration | MAYBE |
| 3 | Administer broad-spectrum antibiotics | HOPEFULLY |
| 4 | Deliver 30 ml/kg of crystalloid for hypotension or lactate ≥ 4 | CAUTION |

Complete within 6 hours

- | | | |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 5 | Administer vasopressors to keep MAP ≥ 65 mmHg | DEPENDS ON AVAILABILITY |
| 6 | In the event of persistent hypotension despite fluid resuscitation and/or lactate >4 mmol/L: <ul style="list-style-type: none">• Achieve CVP ≥ 8 mmHg• Achieve a ScvO₂ $\geq 70\%$ or SvO₂ $\geq 65\%$ | CAN'T MEASURE |
| 7 | Remeasure lactate if initial lactate was elevated | |



Feasibility of Modified Surviving Sepsis Campaign Guidelines in a Resource-Restricted Setting Based on a Cohort Study of Severe *S. Aureus* Sepsis

PLoS One 2012 7:e29858

Provincial Northeast Thailand

Institutional characteristics

1100 bed hospital for **2 million** people

Wards are open plan – **30 to 60 beds**

13 (4 kid/9 adult) separate ICUs: **8-14 beds** (full occupancy)

Piped O₂ and **SpO₂** monitoring in ICU

Nurse: patient ratio **1:2.5** or **1:3.5**

Attendance of Drs to patients is prioritized based on **assessment of severity of illness** by **health care attendants** including medical students and interns

Feasibility of Modified Surviving Sepsis Campaign Guidelines in a Resource-Restricted Setting Based on a Cohort Study of Severe *S. Aureus* Sepsis

Identified 72 patients with severe sepsis

Management	%
ICU	39
Wards	61
Crystalloids	100
Documented fluid bolus	26
Recorded fluid balance	72
Urinary catheterization	
Central venous access	17
CVP recorded	8
Broad spectrum antibiotic	94
Chest X-ray	76

Management	%
Supplemental O ₂ (SpO ₂ < 94%)	55
Mechanical ventilation	50
Spontaneous breathing trial	36
Arterial blood gas	21
Vasoactive drugs	54
Blood when Hb < 7	70
Sc insulin for hyperglycaemia	11

Outcome	%
28 day mortality (all)	53
28 day mortality (ICU admits)	61

Remember mortality in resource rich countries ranges from 25 to 50%

Simplified Severe Sepsis Protocol: A Randomized Controlled Trial of Modified Early Goal-Directed Therapy in Zambia*

Ben Andrews, MD^{1,2,3}; Levy Muchemwa, MBChB³; Paul Kelly, MD, FRCPC¹; Shabir Lakhi, MBChB, MMed, MPH^{3,5}; Douglas C. Heimburger, MD, FRCPC¹; Gordon R. Bernard, MD⁶ *CCM* 2014 42: 2315-24

342 patients sample size to achieve 80% power for 15% ↓ in mortality

112 patients randomized

54 patients in the intervention group
Initial 2L bolus within 1 hour
JVP monitoring
2nd 2L bolus over 4 hrs if JVP <3cm above sternal angle
Dopamine if MAP <65
whole blood if hb <7gm/dl

58 patients in the usual care group

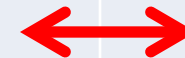
1:1 nursing care for 6 hrs
Hourly vital signs
Blood cultures
Antibiotics within 1 hour

STOPPED EARLY FOR HARM

Simplified Severe Sepsis Protocol: A Randomized Controlled Trial of Modified Early Goal-Directed Therapy in Zambia*

CCM 2014 42: 2315-24

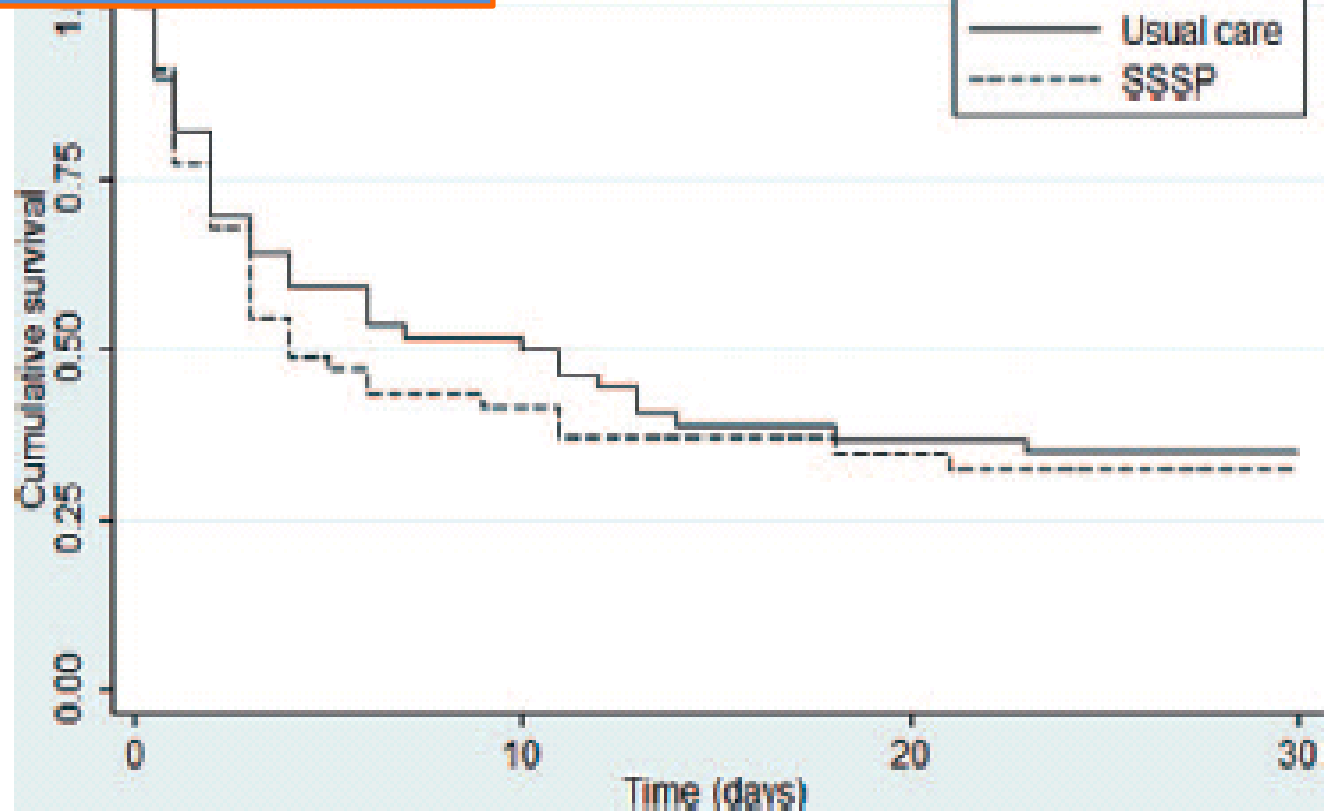
	Intervention	Control
Age, yr	35 (1.3)	35 (1.4)
male	53%	54%
MAP	76 (15)	77 (19)
Resp rate	38 (11)	38 (11)
APACHE II	18	18
HIV+	79%	82%
Time to antibiotics	1.5 (0.5-3.7)	1.3 (0.4-3.0)
Received ≥ 3 L fluid	57%	20%
Blood	30%	20%
Dopamine	2%	6%
\uparrow In RR or in SpO ₂ in 6 hrs	34%	29%



Simplified Severe Sepsis Protocol: A Randomized Controlled Trial of Modified Early Goal-Directed Therapy in Zambia*

CCM 2014 42: 2315-2

Hospital mortality
64% intervention vs 61% control
P value = ns



Simplified Severe Sepsis Protocol: A Randomized Controlled Trial of Modified Early Goal-Directed Therapy in Zambia*

CCM 2014 42: 2315-24

WHY STOPPED EARLY?

In pts with baseline RR of >40
and $SpO_2 <90\%$

Intervention: 100% mortality vs
70% in control

Only 2/109 (2%) pts tx to ICU
for ventilation
10 ICU beds in 1500 bed hospital

Simplified Severe Sepsis Protocol: A Randomized Controlled Trial of Modified Early Goal-Directed Therapy in Zambia*

CCM 2014 42: 2315-24

- Lessons learnt
 - Need to **understand existing models of care**
 - Reluctance to transfer to ICU for septic patients with acute respiratory failure
 - Need for **caution** with fluid resuscitation
 - Use of **simplified criteria** problematic
 - Need more **reliable measures** of hypoperfusion
 - **Hyperacute interventions** not appropriate for subacute/chronic infections
 - **Know your pt population**

THERE ARE **MANY INITIATIVES**
ADDRESSING **IMPROVING CARE AND**
EDUCATION



“Education is the most powerful weapon you can use to change the world.”

Nelson Mandela

The purpose of the Toronto Addis Ababa Academic Collaboration (TAAAC) is to assist Addis Ababa University (AAU) Ethiopia, build and strengthen capacity and sustainability in medical -specialities and other health and non-health professional programs. TAAAC is the umbrella organization housing all the new educational partnerships between Departments and Divisions in six Faculties at the University of Toronto (UofT) in Canada and AAU. TAAAC facilitates each of the partnerships who work closely with their sister department at AAU to understand the educational needs and objectives and sends small, well organized groups of volunteer faculty and an accompanying senior student, who travel to AAU for a month to teach, co-teach, mentor and collaborate. The programs build on the work of each group of outgoing faculty so that together we accumulate and learn from our collective experience and expertise, and stay current with an ever progressing educational landscape at AAU. TAAAC partnerships work to enhance and expand medical residencies and subspecialty training in medicine, and to strengthen Masters and PhD programming in other post graduate academic programs

Recent News

- **FIRST CLASS OF EMERGENCY MEDICINE RESIDENTS GRADUATE**

Click [here](#) to read the graduation speech by Dr. James Maskalyk

- **LOVE WITHOUT BOUNDARIES**

[Read](#) about Dr. Korosh Khalili's work with TAAAC and how he is co-organizing fellowship training curriculum for radiologists at the Black Lion Hospital

- **NURSING EDUCATION CROSSES CONTINENTS AS BLOOMBERG LECTURER RETURNS TO ETHIOPIA**

Click here to [read](#) about Dr. Amy Bender's collaboration between Bloomberg Nursing and Addis Ababa University's Department of Nursing

- **TAAAC IN THE NEWS! ARTICLE DISCUSSING GRAND CHALLENGE CANADA RECIPIENTS FEATURING DR. CLARE PAIN**

Click [here](#) to read the Toronto Star article entitled "Mental health programs in developing countries get boost from Canada"

- **TAAAC RECEIVES GRAND CHALLENGE CANADA GRANT**

TAAAC is proud to announce being chosen as a recipient of the Grand Challenge Canada Grant 2012. Check back shortly for more information on this exciting development for the program.



Postgraduate Training



To date, the School of Nursing - MUHAS is the sole institution that provides Masters programmes in Nursing in East Africa; these are MSc N in Critical care & Trauma and MSc in Mental health & Psychiatric Nursing.

Master of Science in Nursing (MSc Nursing Mental Health) Degree Programme

This programme aims at producing a competent mental health nurse working in general and specialized mental health care facilities, teaching institutions, community organizations, as well as different levels of policy development and implementation in the country.

Entry requirements

- (i) Applicants with a BSc Nursing degree and a minimum GPA of 2.7 of this University and who complies with the regulations set out hereunder
- (ii) A graduate of a recognized University who has been admitted to the status of BSc Nursing or Equivalent with a minimum GPA of 2.7 and who complies with the regulations set out in the [MUHAS Prospectus](#).
- (iii) Each applicant must satisfy all the general requirements set out in the general guidelines and regulations for Master degree courses of the University and in Chapter

Master of Science in Nursing (MSc Nursing Critical Care and Trauma) Degree Programme

Entry requirements

- (i) Applicants with a BSc Nursing degree and a GPA of 2.7 of this University and who complies with the regulations set out hereunder

Short Courses

Short Course on Foundations of Entrepreneurship in Healthcare

The Department of Nursing Management at the School of Nursing in collaborations with the *Cambridge Development Initiative of the Cambridge University* will be running a 2 week short course at MUHAS from **11th to 22nd August 2014**. The closing date for application is **8th August, 2014**. Download the Advert and Application Form.

Useful Links

Tanzania National Nurses Association (TANNA)

TANNA — Founded 29 November 1979, TANNA is the national professional organization of Enrolled and Registered nurses in Tanzania.

Tanzanian Journal of Nursing

Tanzanian Journal of Nursing (TJN) is a peer-reviewed scientific journal covering nursing research, issues in nursing practice and nursing education in Tanzania.

Tanzanian Nursing and Midwifery Council (TNMC)

The Tanzania Nursing and Midwifery Council (TNMC) is the regulator for registered and enrolled nurses and midwives.



? **NICS App Help**

☎ **NICS App Contact**

👤 **NICS App Forum**

UPCOMING EVENTS

TWITTER

[Tweets by @nicsslk](#)

AIMING FOR THE HIGHEST QUALITY IN INTENSIVE CARE IN A DEVELOPING COUNTRY

National Intensive Care Surveillance is an ICU bed availability system and a critical care clinical registry for Sri Lanka.

It is one of the first such systems in a developing country and functions as a national and international collaboration led by the Ministry of Health, Sri Lanka with core partners and collaborators.

Our mission is to contribute to the improvement of critical care services in Sri Lanka. We hope that the methodology of NICS will be applicable to other countries and settings, especially where resources are limited to improve critical care services.

Please join us in working to improve the care of critically ill patients.



Doctors ▾

Nursing ▾

Physiotherapy ▾

Research ▾

Team ▾

Courses ▾

Gallery ▾

Training moodle

Upcoming courses ▾

Our Mission!

Critical care training in resource-limited settings is often limited. This can adversely impact patient outcomes and lead to poor quality of services. **NICS Training** hopes to make a difference to the care of the seriously ill patient in developing countries with an initial focus on Sri Lanka.

NICS Training is a collaboration between National Intensive Care Surveillance (NICS), The Directorate of Education Training & Research (ET&R) of the Ministry of Health, the Post Basic College of Nursing, Faculty Of Medicine, University Of Colombo, Mahidol Oxford Tropical Medicine Research Unit (Bangkok, Thailand) and International Acute & Critical Care Training (*interACCT*).

Our collaboration is dedicated to the training of staff in resource poor settings to improve outcomes for patients needing acute and intensive care.

The mission of **NICS Training** is contributing to the improvement of critical care services in Sri Lanka. We recognize that improving the knowledge and skills of staff is an integral part to this. We also hope that this low-cost adaptable training program will be replicable elsewhere in the developing world. We proud to announce that our NICS Training ICU course endorsed by **Global Intensive Care Working Group of the European Society of Intensive Care Medicine**.

Read about our activities in the allied pages and share your thoughts about how we can join to make a small difference to patients in their hour of need. We welcome comments, suggestions and criticisms to improve this process. We would like to thank all the organisations and individuals who tirelessly contribute to making this process a reality.

Please feel free to contact us at training@nicsslk.com or through our social media pages on this website. We would like to collaborate with like minded people to help improve outcomes of the unwell patient in resource limited settings. Visit our National Intensive Care Surveillance website at <http://nicsslk.com> to read our NICS activities.

We need your suggestions to improve this site. Please provide your feedback at [here](#)

Latest News!

[Intensive Care Skills Training for nurses in private sector!](#)

[Ward course November-feedback out!](#)

[IT Training feedback out!](#)

[IT Training for nurses completed sucessfully!](#)

[NICS ICU Training in November- Feedback out!](#)

[IT Training for nurses!](#)

New milestone!

Our NICS Training ICU course endorsed by Global Intensive Care Working Group of the European Society of Intensive Care Medicine. Our thanks to all on working to reach this milestone!

Nursing intensive care skills training: A nurse led, short, structured, and practical training program, developed and tested in a resource-limited setting[☆]

A. Pubudu De Silva, MSc, MD^{a,b}, Tim Stephens, BA, MSc^c, John Welch, BSc, MSc^d, Chathurani Sigera, BSc^a, Sunil De Alwis, MSc, MBA, MD^e, Priyantha Athapattu, MSc^{a,f}, Dilantha Dharmagunawardene, MSc, MD^e, Asela Olupeliyawa, PhD^g, Ashwini de Abrew, MBBS, PG Dip^g, Lalitha Peiris, BSc, PG Dip^h, Somalatha Siriwardana, BSc, PG Dip^e, Indika Karunathilake, MMedEd, FHEA, FCGP^g, Arjen Dondorp, MD, PhDⁱ, Rshan Haniffa, MRCP, FRCA^{a,i,j,*}

J Crit Care 2014 in press

117 nurses trained in Sri Lanka

Short course format and train the trainer model

Table 1
Training program outline

Day 1	Day 2	Day 3
Introduction/D/30	Circulation assessment and management/D/40	SOEs (ABG and 3-lead ECG analysis)/A/120
Pre-test (MCQ)/A/30	Circulation assessment and management (Shock)/SS/50	Nursing and interdisciplinary teamwork/Workshop/60
Patient assessment/D/30	Circulation assessment and management (ECG)/SS/50	Psychology/D/30
Patient assessment/Demo/20	Disability (Neurological assessment)/D/30	OSCA (A-E patient assessment)/A/80
Airway assessment and management/D/40	Disability assessment (GCS scoring)/SS/30	Post-test (MCQ)/A/30
Breathing assessment and management/D/40	Exposure (head to toe assessment)/D/30	Results and close
Airway and breathing assessment and management/SS/60	Fluid and electrolyte balance/D/30	
ABG analysis/SS/60	Gastrointestinal function/D/30	
Sepsis/D/30	Infection control/SS/30	
	Lines, catheters, drains/D/10	



- About us
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- Get involved
- Become a Healthcare Education Partner
- Blog
- Special Thanks
- Donate

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Mission, Vision & Culture

Mission

Improve respiratory health through educational advancement of local healthcare providers worldwide.

Vision

Create a Respiratory Therapy Culture synonymous with 'giving back'.

Culture

RTWB/ISF is rooted in the skills, knowledge and expertise respiratory therapists have to offer the world. Together respiratory therapists from around the globe stand proudly as allied health professionals with a culture of **giving back** to the global community.



RTWB/ISF is a collaborative project to educate and empower health care practitioners initiated by concerned Respiratory Therapists around the globe. The primary drive is you - the experts in airway, ventilatory and oxygen management. Respiratory therapy is at the infancy stage of our profession. As such, the time is now to set precedence and establish ourselves in the global marketplace. This is our chance to advocate for our profession worldwide. [Join us](#) in sharing our skills/knowledge/expertise with a hungry world!



Values

Compassion: we are in healthCARE because we CARE. Together with your contribution, RTWB/ISF boasts a 100% volunteer staff while still providing quality respiratory therapy services from the heart. The RT culture is one of **giving back** - realizing that there is no monetary equivalent for the life-saving services we are privileged to provide.

Integrity: While there is no global regulation on the role of respiratory therapists. Representatives exercise skills, knowledge and judgement in critical situations to CARE best for the patient. With an emphasis on sustainable developments through education, RTWB/ISF representatives believe in teaching the proverbial art of fishing vs catching fish for locals.

Innovation: Many of the deployment sites at RTWB/ISF will be severely resource limited and require creative



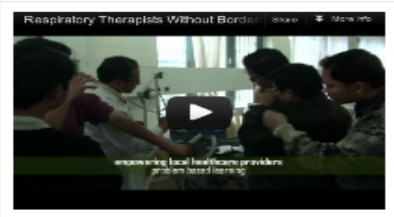
[Learn about us](#)
[Join the Professional Network](#)



RTs around the world

Mission

Improve respiratory health through educational advancement of local healthcare providers worldwide.



ideas@rtwb.ca

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The Dept of Anaesthesia & Intensive Care, CUHK thanks

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BASIC for Developing Healthcare Systems

Level 1

This course has been revised in collaboration with Medecins sans Frontieres. It is designed to teach acute medicine to doctors practising in healthcare systems with limited resources. It assumes haemoglobin, white cell count, urea, creatinine, electrolytes and glucose only. Radiology is restricted to plain films and ultrasound. Oxygen therapy is limited to 10L/min and mechanical ventilation to dopamine.

Like other "BASIC" courses the course material has been designed to be disseminated using a train-the-trainer model. The material consists of course manual, slides, skill station material and patient cases.

Topics include:

- ❑ Assessment of the seriously ill patient
- ❑ Applied respiratory physiology
- ❑ Airway management
- ❑ Acute respiratory failure
- ❑ Fluids
- ❑ Chest X-ray interpretation
- ❑ Applied cardiovascular physiology
- ❑ Shock
- ❑ Oliguria and acute renal failure
- ❑ Metabolic and electrolyte disturbance
- ❑ Sepsis
- ❑ Severe acute heart failure
- ❑ Severe asthma
- ❑ Anaphylaxis
- ❑ Tetanus
- ❑ Snakebite
- ❑ Severe hypertension
- ❑ Patient safety



MSF is an international, independent, medical humanitarian organization.

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Gaza: Intensive care training for doctors

27 June 2013



Photo: Frederic Sautereau

Médecins Sans Frontières (MSF), working with the Ministry of Health, is organising intensive care training for local doctors in Gaza from 25 to 27 June 2013. The course will be run at the Al Shifa hospital. Owing to the Israeli blockade in place since 2007, **Palestinian doctors find it very difficult to leave Gaza to receive specialist training.**


The blockade, set up when Hamas came to power in Gaza in June 2007, imposes tight restrictions on people's movement and access to goods. In addition to its economic impact, the rise in unemployment and poverty, the blockade also affects the health sector. Patients who cannot be treated in Gaza have to ask for authorisation to leave the territory to travel to foreign hospitals, or Palestinian hospitals in the West Bank.

An MSF doctor plays with one-year-old Hala, who suffers burns on her body, next to her mother.



SHAMELESS PLUG!!!!



 **BASIC DHS for Nurses: A Delphi Study to Generate Recommendations for Course Learning Goals**
Department of Anaesthesia & Intensive Care - CUHK

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Conclusions

- Efforts to **improve** critical care in resource poor areas have the potential to **greatly impact mortality**
- Many **resources** considered **ubiquitous** to ICU are **not available consistently**
- Delivery of critical care **interventions** need to be **modified** to the **context**
- Access to and delivery of **education** to critical care **nurses** is an **imperative**

Thank you for your attention
Questions?



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