

# Risk Assessment and Quality of Life Management in Emergency Health-care System in a Rural Set Up: A Simulating Model in 2020 in IIMSAR and BCRHH, Haldia, West Bengal

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## Abstract

**Introduction:** Every aspect in the management of quality of life is dictated by the risk assessment. The mode of management is ill defined and not yet assessed with optimum satisfaction of the service provider as well as those of the beneficiaries. The art in science is a stretchable factor by which discord generation in the management of a patient in the form of emergency care is partially explained mimicking the tip of an iceberg.

**Materials and Methods:** The study is a preliminary observation in the College of Medicine and Jawaharlal Nehru Memorial Hospital (COM and JNMH), Kalyani. This was performed for a 24 h [from 8 am to 8 am]. All the patients attended the hospital emergency on the November 4, 2017, from 8 am to the next morning till 8 am were included and the patients of obstetrical emergencies were excluded from the study.

**Results:** There are arguably only two indications for medical management-improvement of symptoms (quality of life) and improvement of prognosis (quantity of life). The likelihood of achieving a meaningful improvement in symptoms or prognosis (the benefit) must be balanced against the risk of death or an outcome that results in a reduced quality of life (the cost). Sequential organ failure assessment score, Oxygen lack-alteration of mental state (Glasgow Coma Scale <14), volume decrease in systolic blood pressure <100 mmHg, respiration rate >22/min, urine output 0.5 ml/kg/h, and WBC count >[10 × 10<sup>12</sup>] goes high and lactic acidosis. Life-threatening organ dysfunction caused by a deregulated host response to infection integrated Human Blood Banking System.

**Conclusions:** Again it is said that success is not always a sign of good judgment, equally failure may result from factors you could not have anticipated. Observations in our ER [COM and JNMH] with a simulation in of rural set up in COMJNMH with discharged [D] and admission [A] of a random control [irrespective of time, disease and major assessment for risk].

**Key words:** Cost and benefit, Quality of life, Quantity of life, Risk and benefit

## INTRODUCTION

Every aspect in the management of quality of life is dictated by the risk assessment. The mode of management is ill defined and not yet assessed with optimum satisfaction of the service provider as well as those of the beneficiaries.

The art in science is a stretchable factor by which discord generation in the management of a patient in the form of emergency care is partially explained mimicking the tip of an iceberg. The whole act is a multidirectional approach which is not available in our model. Many decisions can be made purely on the basis of collective learning and personal experience while others require evidences in the process of risk management.

Emergency departments (EDs) are particularly stressful work environments. This can be explained by difficult work conditions including significant workload and psychological demands, lack of resources, and poor support.<sup>[1]</sup> In

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consequence, ED nurses and physicians showed moderate to high levels of burnout.<sup>[2]</sup> However, the majority of research on stress in EDs is conducted in urban settings.

Even so, in comparison to their urban counterparts, nurses, and physicians in rural settings face more challenging working conditions. In addition to the difficult working conditions common to urban settings, specific challenges to rural areas include limited access to specialized care, geographical distance from specialized centers, poor emergency transport capabilities,<sup>[3]</sup> and limited training.<sup>[4]</sup> Rural health-care facilities also face chronic problems with staff recruitment and retention.<sup>[4]</sup> In fact, almost every country reports shortages of health professionals in rural areas.<sup>[5]</sup> This shortage could increase the workload of regular staff, negatively affecting morale and making healthy lifestyles difficult to achieve. Working in such conditions is likely to contribute to burnout and to poor quality of work life (QWL) in rural ED nurses and physicians. Policy-makers need evidence that would allow them to identify which factors could increase the recruitment and retention of nurses and physicians practicing in rural areas.<sup>[5]</sup> It is important to assess their particular difficulties, as rural EDs constitute a safety net of sorts for the 20% of Canadians who live in rural areas. However, to the best of our knowledge, no studies to date have explored factors favoring recruitment and retention, QWL in rural ED nurses and physicians and the associations between these factors.

**Aims and Objectives**

*Primarily to assess risks of mortality and morbidity in ER in patients*

Patients are attended in the emergency and are managed and assessed as quick as possible following the model<sup>[6]</sup> [art in science] and modified sepsis-3 model of Sequential organ failure assessment [SOFA]<sup>[7,8]</sup> altered mental state, fast respiration rate, and low blood pressure (BP) (science in art).

**Secondary**

- a. To minimize the indoor admission by keeping close assessment in the observation room with the compact team<sup>[9]</sup> formed on that day schedule
- b. This is a preliminary assessment on the “cost versus benefit” in quality of life management.

**MATERIALS AND METHODS**

There is no cost assessed for the management of a costly human life particularly in the management of an emergency health-care system but still we are there to assess it in terms of a business. There are ways to think that what percentage of an infrastructure is really needed to keep a man in a safe zone, the art of science that dictate the life management akin to achieving a comfortable profit in a fare business.

A checklist for the safety measurement in life care system. The study is a preliminary observation in the College of Medicine and Jawaharlal Nehru Memorial Hospital [COM and JNMH], Kalyani. This was performed for a 24 h [from 8 am to 8 am].

**Inclusion Criteria**

All the patients attended the hospital emergency on the November 4, 2017, from 8 am to the next morning till 8 am.

**Exclusion Criteria**

The patients of obstetrical emergencies were excluded from the study.

The study design was based on the four steps as dictated by the well accepted mnemonics SWOT

- Strength of the study is by the immediate and late state of quality of life improvement through an organized approach
- Weakness of the study: Long-term follow-up is essential but our study is too short to be free from biasness
- Opportunity: The initial management in emergency is more suitable so that delay in the process of management may deteriorate the condition. So prognosis is altered
- Threats: In emergency is another event which hinders the scientific decision in the process of management. Human, bacterial, viral, fungal, and chemical threats are immediate and poorly assessed in the short time of management.

**Methodology**

Patient	Age, Sex, BMI, Functional status
Disease	Severity, previous investigations, complications
co morbidity	Cardiac, respiratory, renal, hepatic, neurological, endocrine, metabolic, hematological, pregnancies, preterm birth
Surgery	Open versus Laparoscopy, elective or emergency, one stage versus multiple,
Physiology	Temperature, blood gases, hematocrit, leukocyte count, urine output, conscious level, blood pressure, coagulation status

[B] The design of the study model has been modified to a form as below: Asking questions and assessing simultaneously the following parameters.

Patient	Age, Sex, BMI, Functional status
Disease	Severity, previous investigations, complications
comorbidity	Cardiac, respiratory, renal, hepatic, neurological, endocrine, metabolic, hematological, pregnancies, preterm birth
Surgery	Open versus Laparoscopy, elective or emergency, one stage versus multiple
Physiology	Pulse, Temperature, respiration, urine output, conscious level, blood pressure
Modalities	USG, CT, X-ray, MRI, random glucose, ECG [done according to the need]

The infrastructure means man, money, and materials when man is the corner stone for the sustainable act. They are the total team worked in this emergency room. This air-conditioned emergency has eight observation beds. The team members were primarily discussed within themselves about the strategic plan to work in a common group with a predefined home work to follow from the beginning to end. The team members are as below.<sup>[9]</sup>

Medical officer	1
House staff	1
Internee	1+(1)
Paramedical trainees (BSF and health assistants)	4
Group -D	2
Nursing staff	1
Medical student (final year)	1

The steps of management we followed with basic control in observation/ER room as below:

1. Attended the patient without delay and allowed to sit or rest on bed
2. Asked about the condition [in short]
3. Pulse, BP, in need pulse oximeter is applied for assessment
4. We took the help of electrocardiogram, X ray
5. We excluded computed tomography, magnetic resonance imaging in this emergency because they are rarely available in rural set up and mostly avoided in emergency life care procedure.

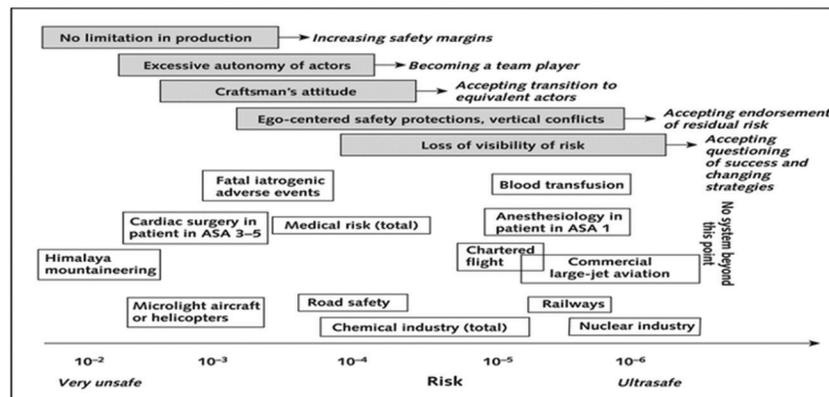
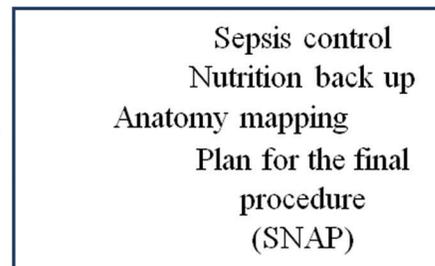
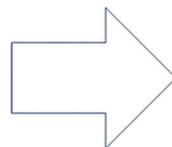
We followed the management procedure in the format:

Resuscitation

Restitution

Restoration 4R

Rehabilitation



## RESULTS AND DISCUSSION

There are arguably only two indications for medical management-improvement of symptoms (quality of life) and improvement of prognosis (quantity of life). The likelihood of achieving a meaningful improvement in symptoms or prognosis (the benefit) must be balanced against the risk of death or an outcome that results in a reduced quality of life (the cost).<sup>[7]</sup> SOFA score, oxygen lack-alteration of mental state (Glasgow Coma Scale <14), volume decrease in systolic BP <100 mmHg, respiration rate >22/min, and urine output 0.5 ml/kg/h, WBC count >[10 × 10<sup>12</sup>] goes high and lactic acidosis. Life-threatening organ dysfunction caused by a deregulated host response to infection Integrated Human Blood Banking System (IHBBS).

### IHBBS

The concept of Human Blood Banking system is not a newer device, but appears to be reviewed again and again. A group of people will be registered as an “individual living bank” to serve people as and when necessary. The system should be interconnected by the telephone or by mail. The recent mode of WhatsApp also goes as a powerful engine for area wise services. This is one way to minimize the load of stored blood in a bank.

In the text of the open truth, no one is immune from criticism or from comparison of their results with those of their peers. The act in terms of professionalism is on the other side of justification in the text of a critical

management. The object is one that is life is first and limb second. In a subject of an injury by a bullet the common and the important steps are followed that points toward the life-saving approach than to concentrate on the act of removal of bullet that may be more damaging to the system even with risks in life care. The common causes of professionalism in the subject to objective assessment are four Cs. Common sense, competence, commitment, and compassion. All that is true to its nature is to adhere to the legal side of the fact.<sup>[10]</sup>

Again it is said that success is not always a sign of good judgment, equally failure may result from factors you could not have anticipated.<sup>[11]</sup>

Observations in our ER [COM and JNMH] with a simulation in of rural set up in COMJNMH with discharged [D] and admission [A] of a random control [irrespective of time, disease, and major assessment for risk].

Age group (years)	Man [M]	Woman [F]	<1 hr [D]	<2 hrs [D]	[A] M/F
1–10	4	6	8	2	0/0
11–20	5	9	11	2	0/1
21–30	21	8	23	2	3/1
31–40	23	12	18	8	6/3
41–50	12	9	10	5	4/2
51–60	12	4	4	0	7/5
61–80	9	3	2	0	8/2
81+	3	1	0	1	2/1
Total [1–8 1+]	89	52	76	21	30/15

A: Admission, D: Discharge, F: Woman, M: Man

## CONCLUSIONS

The results allowed us to conclude that the ED nurses and physicians in our study had overall good QWL, and allowed

us to identify targets for potential interventions. However, the results also confirm that recruitment for this type of study is difficult and that a larger study will require strategies to improve recruitment. The results of the larger study will yield a greater understanding of the factors associated with work-related quality of life in ED professionals, and of the factors associated with recruitment and retention of ED personnel.

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