Thinking Critically About:

“Did God Raise Dr. Sean George from the Dead?”

What does "miracle" mean?

THREE POSSIBLE DEFINITIONS:

A. An event that is contrary to natural law (too broad)

B. An event that is contrary to natural law AND that was caused by God (just about right)

C. An event that is contrary to natural law AND that was caused by God *in order to* reveal something about himself to humans (too narrow)

The alleged Resurrection of Dr. Sean George on Oct. 24, 2008

HEART ATTACK:

- He experienced chest pain while driving to Kalgoorlie, Australia
- 13:25: He stopped at a medical clinic in Kambalda, Australia
- 13:34 : ECG indicated a serious heart attack was occurring (*myocardial infarction)*

CARDIAC ARREST & RESUSCITATION EFFORTS (70 minutes):

- 13:42: Patient went into cardiac arrest
- Initial ECG rhythm was shockable (*Ventricular Fibrillation)*
- 13:44-14:30: Patient was treated with shocks and CPR
- 14:30-14:52: Patient was flatlining (asystole). Patient was treated with more CPR, but no more shocks
- 14:52: CPR was halted

RETURN OF HEART BEAT (15 minutes after CPR was halted):

- 15:02: Dr. Sean George's wife Sherry arrived at the clinic (about ten minutes after CPR was halted)
- Sherry prayed for her husband to be healed
- 15:07 His heart started to beat again (1 hour and 25 minutes after his cardiac arrest began)
- Dr. Sean George survived with no neurological impairment

Did God raise Dr. Sean George from the dead?

Argument for GRS

1. Dr. Sean George rose from the dead.
2. Only GOD can raise someone from the dead.

THEREFORE:

3. God raised Dr. Sean George from the dead.

What does
"rose from the dead"
mean?

Two Possible Definitions*

A. Person X was *clinically dead* for over an hour and then came back to life.

B. Person X was *brain dead* for over an hour and then came back to life.

* possible sufficient conditions

What does
"rose from the dead"
mean?

A Third Possible Definition

C. X was *clinically dead* for over an hour and then came back to life without having any neurological problems.

Did God raise Dr. Sean George from the dead?

CLARIFIED Argument for GRS

1. Dr. Sean George was clinically dead for over an hour and then he came back to life without having any neurological problems.

2. Only GOD can cause someone to come back to life without any neurological problems after a person has been clinically dead for over an hour.

THEREFORE:

3. God caused Dr. Sean George to come back to life without any neurological problems after Dr. Sean George was clinically dead for over an hour.

Support for Premise (2)

2. Only GOD can cause someone to come back to life without any neurological problems after a person has been clinically dead for over an hour.

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"When the blood supply is interrupted to the brain for 3 minutes the brain cells begin to die, after 20 minutes the organ is completely dead – this is why CPR is rarely performed for more than 20-30 minutes." - Dr. Sean George

"There aren't many well documented cases of patients being clinically dead for so long, returning to life with their memory perfectly intact and without any neurological problems at all. Medically this is impossible; it could only be done by God." - Dr. Sean George

A Puzzling Logical Inconsistency

BRAIN DEATH OCCURS IN JUST 20 MINUTES

"When the blood supply is interrupted to the brain for 3 minutes the brain cells begin to die, after 20 minutes the organ is completely dead – this is why CPR is rarely performed for more than 20-30 minutes."

- Dr. Sean George

MEDICAL TEAM DID CPR FOR 70 MINUTES

"Just 11 minutes after the ECG, with the pain in my chest becoming unbearable and no analgesics providing relief, my heart completely stopped. Over the following 70 minutes the team in Kambalda worked with paramedics and emergency physicians from Kalgoorlie who fought bravely to save my life."

- Dr. Sean George

Key Questions for Dr. Sean George

Did the doctors who worked to resuscitate you BELIEVE that your brain was *completely dead* after your cardiac arrest had gone on for 20 minutes?

- **IF SO: Why did they continue to try to resuscitate you for 70 minutes?** Isn't brain death *irreversible*?
- **IF NOT: Why didn't they BELIEVE that your brain was *completely dead* after your cardiac arrest had gone on for 20 minutes?** Do you now possess some *medical knowledge* about cardiac arrests that those doctors lacked?

Do you now BELIEVE that your brain was *completely dead* at the point that your cardiac arrest had gone on for 20 minutes? Why? What is the evidence for this?

Recent Medical Research Contradicts Dr. Sean George's Key Claims

Longer CPR Improves Survival in Both Children and Adults

January 22, 2013 — Experts from The Children's Hospital of Philadelphia were among the leaders of two large national studies showing that extending CPR longer than previously thought useful saves lives in both children and adults. The research teams analyzed impact of duration of cardiopulmonary resuscitation in patients who suffered cardiac arrest while hospitalized.

"These findings about the duration of CPR are game-changing, and we hope these results will rapidly affect hospital practice," said Robert A. Berg, MD, chief of Critical Care Medicine at The Children's Hospital of Philadelphia. …

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Longer CPR Improves Survival in Both Children and Adults

Berg was a co-author of the pediatric study, appearing online today in *Circulation*, which analyzed hospital records of 3,419 children in the U.S. and Canada from 2000 through 2009. This study…found that among children who suffered in-hospital cardiac arrest, more children than expected survived after prolonged CPR—defined as CPR lasting longer than 35 minutes. Of those children who survived prolonged CPR, over 60 percent had good neurologic outcomes.

The conventional thinking has been that CPR is futile after 20 minutes, but Berg said these results challenge that assumption.

Recent Medical Research Contradicts Dr. Sean George's Key Claims

Longer CPR Improves Survival in Both Children and Adults

The overall pediatric results paralleled those found in the adult study of 64,000 patients with in-hospital cardiac arrests between 2000 and 2008. Berg also was a co-author of that GWTG-R study, published in *The Lancet* on Oct. 27, and led by Brahmajee K. Nallamothu, MPH, MD, of the University of Michigan. Patients at hospitals in the top quartile of median CPR duration (25 minutes), had a 12 percent higher chance of surviving cardiac arrest, compared to patients at hospitals in the bottom quartile of median CPR duration (16 minutes). Survivors of prolonged CPR had similar neurological outcomes to those who survived after shorter CPR efforts.

The American Heart Association and American Stroke Association designated the adult study as the top finding of the year in heart disease and stroke research in its annual list of major advances.

A Significant % of Successful Resuscitations result from Prolonged CPR

Although most successful resuscitations of cardiac arrest patients occur with 30 minutes of CPR or less, about 12% of successful resuscitations occur because of Prolonged CPR (i.e. CPR lasting for over 30 minutes).

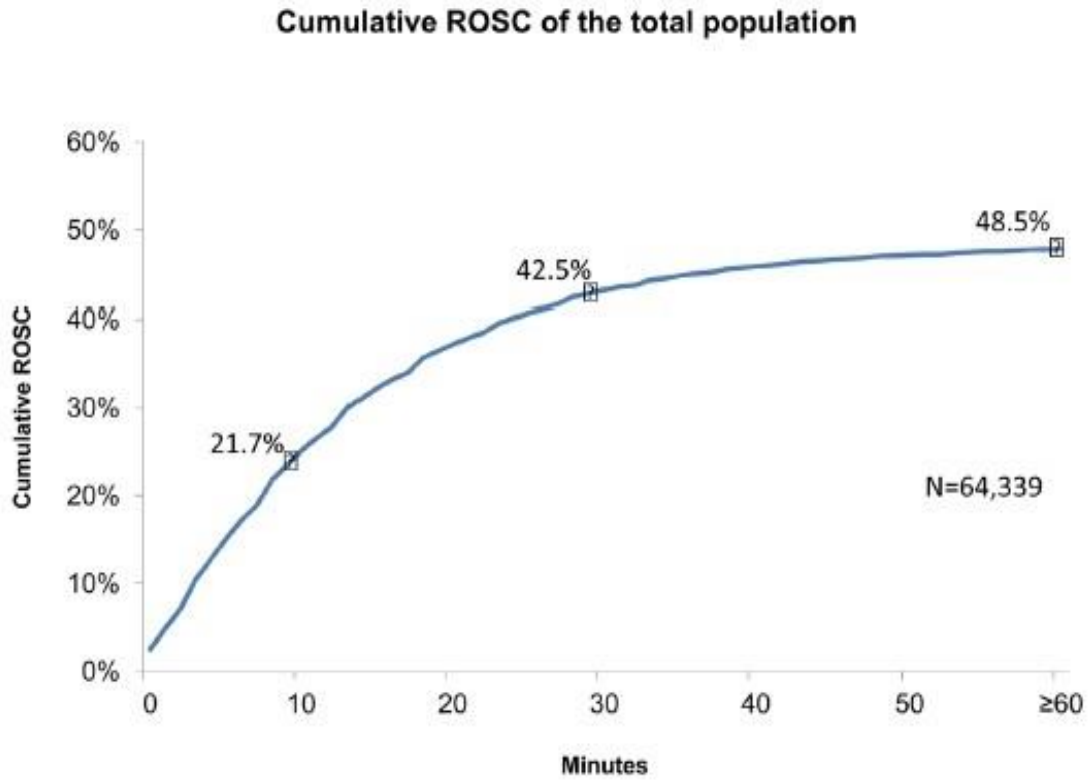


Figure 1.
Shown is the cumulative percentage of patients achieving ROSC. Overall, 48·5% of the total population achieved ROSC. By 30 minutes, 42·5% achieved ROSC.

A LARGE % of CA Survivors who had Prolonged CPR have "Good" Neurological Function (CPC1 or CPC2)

Among those who achieved ROSC, mean hospital length of stay (truncated at death or hospital discharge) was 8·3 days (standard deviation [SD]: 15·0). By comparison, 9,912 (15·4%) patients ultimately survived to discharge with mean hospital length of stay from ROSC to discharge of 16·6 days (SD: 18·0). Among 8,724 patients who survived to discharge and who also had CPC assessments, 7,034 (80·6%) had a favourable neurological status (CPC ≤ 2). The rate of a favourable neurological status among survivors to discharge did not significantly differ based on resuscitation duration (4,738 of 5,838 [81·2%] for those with resuscitation durations of <15 minutes versus 1,724 of 2,156 [80·0%] for ≥15 minutes to ≤30 minutes, and 572 of 730 [78·4%] for those with resuscitation durations >30 minutes; p for comparison, 0·131). However, mean and median CPC assessments were modestly higher among patients with longer resuscitation durations. A complete breakdown of CPC assessments by resuscitation duration for the entire cohort overall, and stratified by rhythm type, is shown in Appendix Table 1.

78.4% of CA patients who survived to discharge *as a result of prolonged CPR* (lasting over 30 minutes) had a *favorable neurological status.*

Cerebral Function:

CPC1 vs. CPC2

... A cerebral-performance category (CPC) of 1 indicates good cerebral performance (the patient is alert and has normal cerebral function). CPC 2 indicates moderate disability (the patient is alert and has sufficient cerebral function to live independently and work part-time). Such patients might have hemiplegia, seizures, ataxia, dysarthria, dysphasia, or permanent memory loss or other mental changes. CPC 3 indicates severe cerebral disability (the patient is conscious but dependent on others for daily support because of impaired brain function). CPC 4 indicates a vegetative state.

Patients who have Prolonged CPR for Cardiac Arrest can have good outcomes

The maximal duration of cardiopulmonary resuscitation (CPR) is unknown. We report a case of prolonged CPR. We have then reviewed all published cases with CPR duration equal to or more than 20 minutes. The objective was to determine the survival rate, the neurological outcome, and the characteristics of the survivors.

***Measurements and Main Results*.** The CPR data for 82 patients was reviewed. The median duration of CPR was 75 minutes. Patients mean age was 43 ± 21 years with no significant comorbidities. The main causes of the cardiac arrests were myocardial infarction (29%), hypothermia (21%), and pulmonary emboli (12%). … Adjunct therapy included extracorporeal membrane oxygenation (18%), thrombolysis (15.8%), and rewarming for hypothermia (19.5%). 83% were alive at 1 year, with full neurological recovery reported in 63 patients.

***Conclusion*.** Patients undergoing prolonged CPR can survive with good outcome. Young age, myocardial infarction, and potentially reversible causes of cardiac arrest such as hypothermia and pulmonary emboli predict a favorable result, especially when the arrest is witnessed and followed by prompt and good resuscitative efforts.

Prolonged CPR for Cardiac Arrest

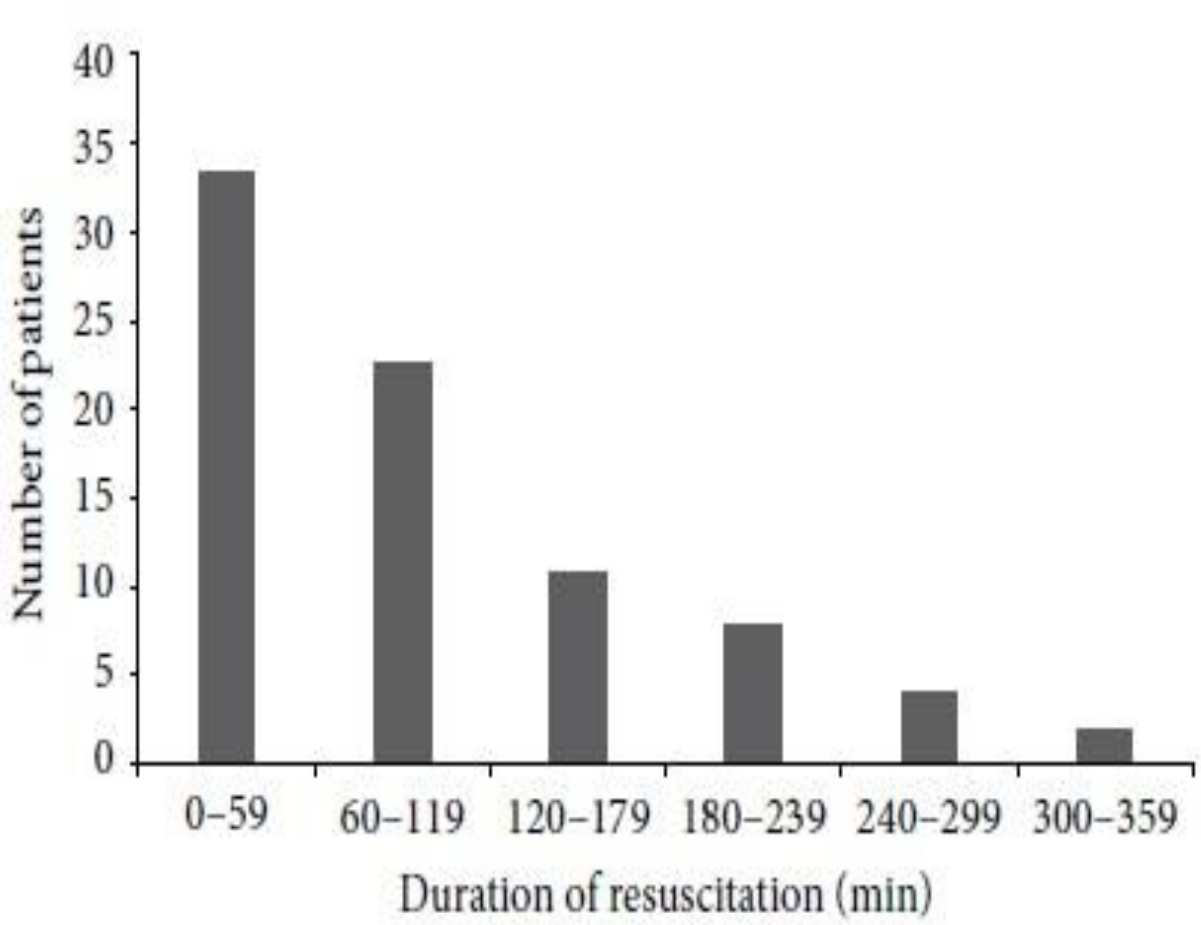


FIGURE 1: Duration of the cardiopulmonary resuscitation in the 82 patients.

A 2nd Purpose of CPR

Although the primary purpose of Cardiopulmonary Resuscitation (CPR) is to achieve Return Of Spontaneous Circulation (ROSC) in the patient, it also has another purpose: to help keep oxygen flowing to vital organs, like the brain, thus preventing or delaying brain death.

The complete absence of oxygen in a human brain might well result in brain death after just 20 to 30 minutes, but CPR was performed on Dr. Sean George for 70 minutes, and that could have caused some blood and oxygen to flow into his brain during that period of time.

Did God raise Dr. Sean George from the dead?

Failure of the Argument for GRS

In order for an event to be a *miracle* it must (a) involve a violation of a natural law, and (b) be caused by God.

There is no good reason to believe that (a) Dr. Sean George's coming back to life involved a violation of a natural law.

There is also no good reason to believe that (b) God caused this event to happen (even granting the questionable assumption that God exists).

Littlewood's Law

- We each experience about one million events each month. So, we should expect to experience a *highly improbable* event about ten to twelve times a year.
- Dr. Sean George's case is NOT *highly improbable*, but even if it were a one-in-a-million event, that would not show it to be a miracle because such events happen all the time.

A Large Number of Cardiac Arrests occur each Year

- **Out-Of-Hospital Cardiac Arrest incidence in the USA (adults): about 347,000 each year.**
- **In-Hospital Cardiac Arrest incidence in the USA (adults): about 209,000 each year.**
- **Total Cardiac Arrest incidence in the USA (adults): over 550,000 each year!**
- **The population of the USA is only about 4 % of the World's population.**

The Survival Rate for In-Hospital CA is significantly higher than for Out-Of-Hospital CA

As an adult Dr. Sean George experienced an In-Hospital Cardiac Arrest (IHCA).

- **10.4% of EMS-treated adult out-of-hospital cardiac arrest (OHCA) patients survive to hospital discharge in the USA.**
- **25.6% of adult in-hospital cardiac arrest (IHCA) patients survive to hospital discharge in the USA.**

The above statistics are from the American Heart Association 2019 annual report.

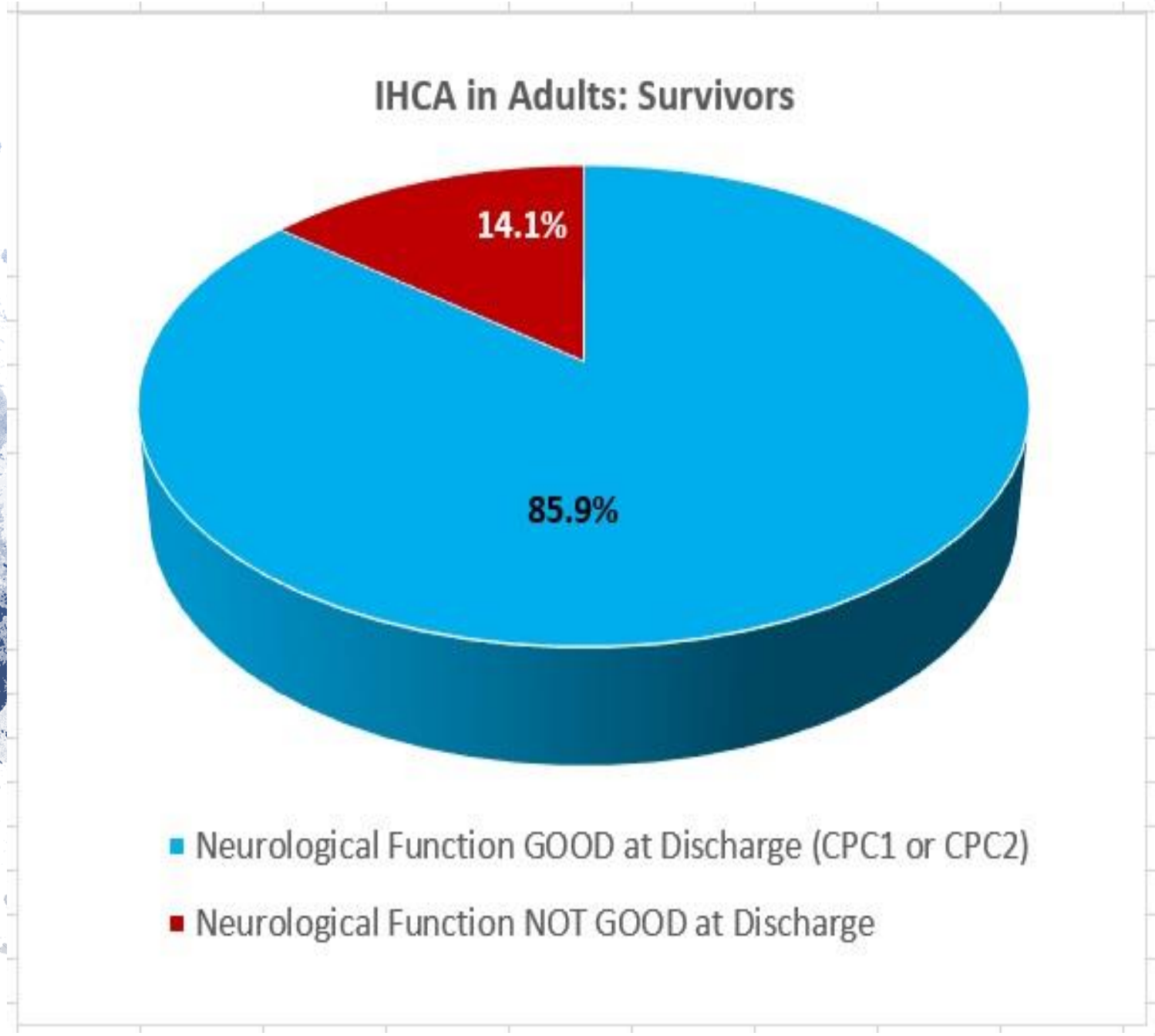
The Survival Rate for In-Hospital CA with a Shockable Rhythm is significantly higher than for with Non-shockable Rhythm

As an adult Dr. Sean George experienced an in-hospital cardiac arrest (IHCA) *with an initially shockable rhythm* (i.e. Ventricular Fibrillation).

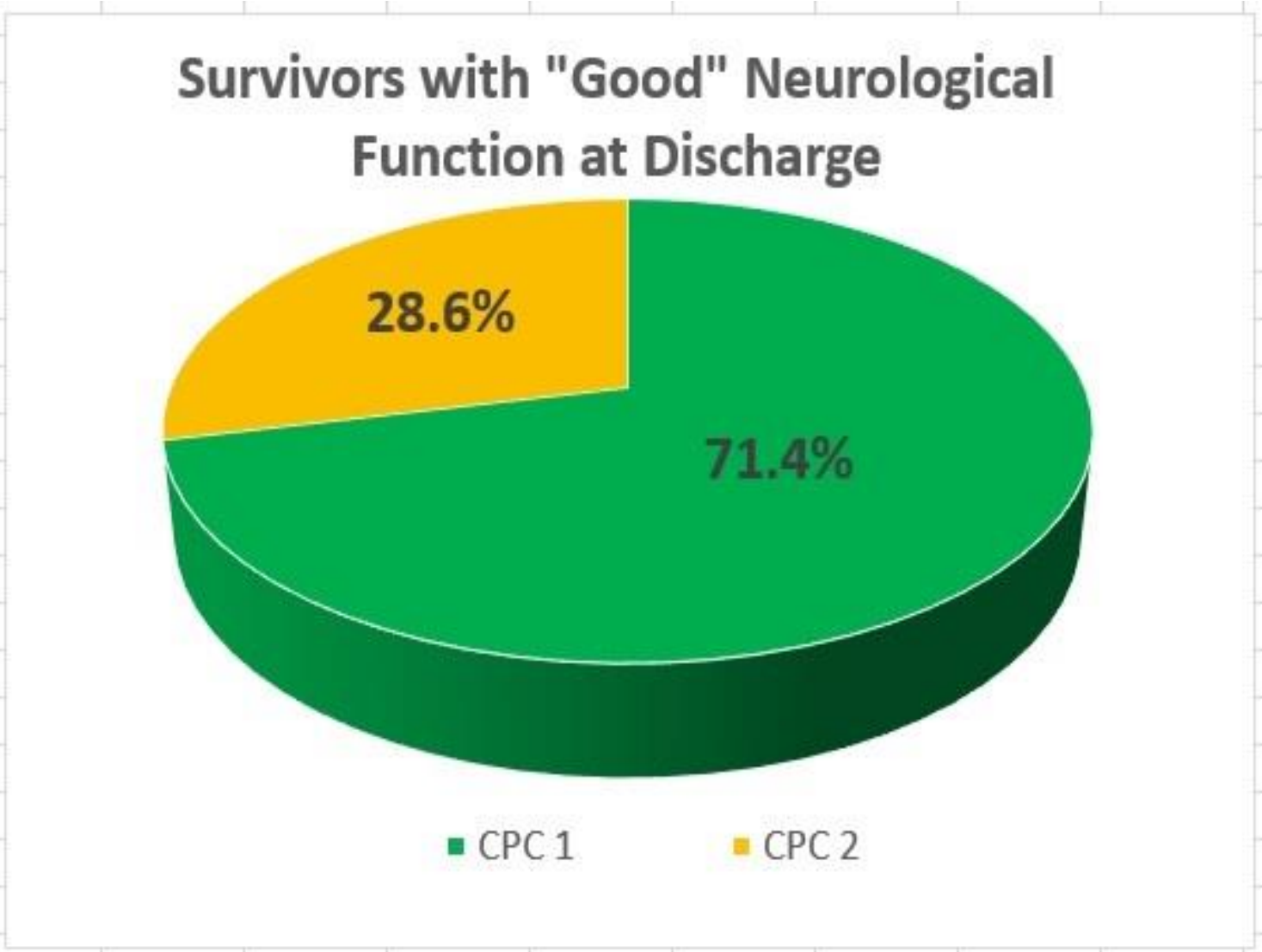
- **25.6% of adult in-hospital cardiac arrest (IHCA) patients survive to hospital discharge in the USA.**
- **44% of adult in-hospital cardiac arrest (IHCA) patients *with an initially shockable rhythm* (such as Ventricular Fibrillation) survive to hospital discharge in the USA.**

The above statistics are from the American Heart Association 2019 annual report.

A LARGE % of IHCA Survivors have "Good" Neurological Function



A LARGE % of Cardiac Arrest Survivors with "Good" Neurological Function have NORMAL Cerebral Function (CPC1)



Many Cardiac Arrest Patients are Treated by Prolonged CPR

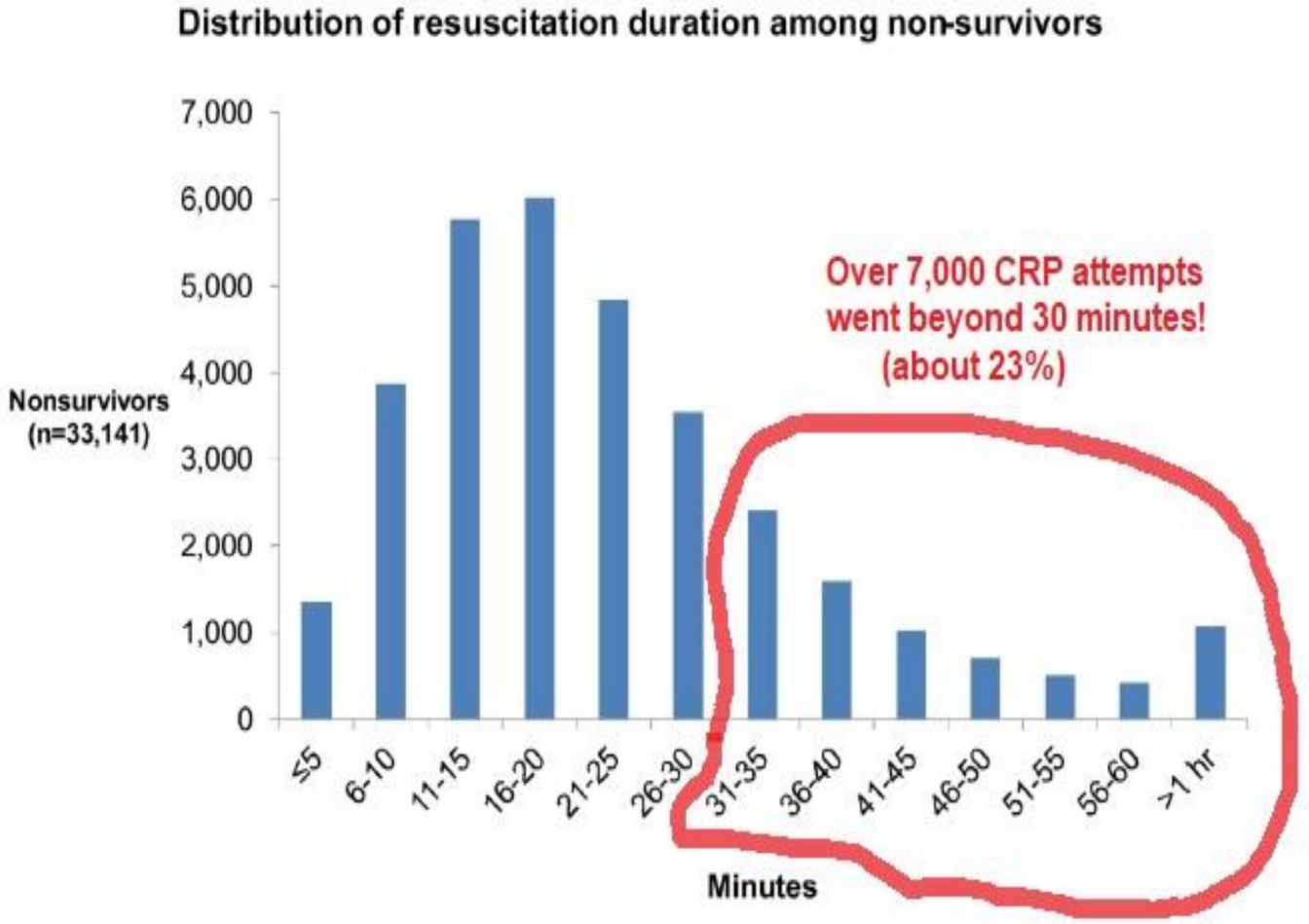


Figure 2.
Shown is the distribution of resuscitation duration among non-survivors; efforts were terminated within 10 minutes in 15·8% and within 30 minutes in 76·6%.

A Significant % of IHCA Survivors Have NORMAL Cerebral Function (CPC1)

- 85.9% of adult IHCA survivors have “good” neurological function (CPC1 or CPC2).
- About 70% of adult survivors of CA who have “good” neurological function (CPC1 or CPC2) have NORMAL Cerebral Function (CPC1).
- THUS: About 60% of adult survivors of IHCA have NORMAL Cerebral Function (CPC1). (85.9% x 70% = 60.1%)

A Significant # of IHCA Survivors Have NORMAL Cerebral Function (CPC1)

- There are about 209,000 In-Hospital Cardiac Arrests each year in the USA.
- 25.6% of adults who experience an IHCA survive to discharge from the hospital.
- THUS: about 53,504 adults survive IHCA each year in the USA.
- About 60% of adult survivors of IHCA have NORMAL Cerebral Function (CPC1).
- THUS: about 32,000 adults survive IHCA and have NORMAL Cerebral Function (CPC1) when they are discharged from the hospital each year in the USA.

SUMMARY

- Because *hundreds of thousands* of cases of CA occur each year in just the USA, and the USA is only a small fraction of the world's population, even one-in-a-million cases are bound to happen *every year* somewhere in the world.
- There is a high survival rate for IHCA when the initial rhythm is shockable, and Dr. Sean George had an IHCA with an initial rhythm that was shockable (Ventricular Fibrillation).
- There are tens of thousands of cases of CA that are treated with PROLONGED CPR (CPR for over 30 minutes) every year in the USA.
- A large % of survivors of IHCA have good neurological outcomes.
- Although the chances of survival of CA do decline as duration of CPR increases, there is a significant % of survivors produced by PROLONGED CPR (CPR for over 30 minutes).
- A large % of those adults who survive IHCA as a result of PROLONGED CPR (CPR for over 30 minutes) have good neurological function.
- One purpose of CPR is to provide a flow of oxygen to prevent or delay brain death.

Did God raise Dr. Sean George from the dead?

CLARIFIED Argument for GRS

1A. Dr. Sean George was clinically dead for more than an hour and then he came back to life.

2A. Only GOD can cause someone to come back to life after a person was clinically dead for more than an hour.

THEREFORE:

3A. God caused Dr. Sean George to come back to life after Dr. Sean George was clinically dead for more than an hour.

Did God raise Dr. Sean George from the dead?

CLARIFIED Argument for GRS

1B. Dr. Sean George was brain dead for over an hour and then he came back to life.

2B. Only GOD can cause someone to come back to life after a person was brain dead for over an hour.

THEREFORE:

3B. God caused Dr. Sean George to come back to life after Dr. Sean George was brain dead for over an an hour.

Definition of “Brain Death”

The term *brain death* is defined as "irreversible unconsciousness with complete loss of brain function," including the brain stem, although the heartbeat may continue. Demonstration of brain death is the accepted criterion for establishing the fact and time of death.

Factors in diagnosing brain death include irreversible cessation of brain function as demonstrated by fixed and dilated pupils, lack of eye movement, absence of respiratory reflexes (apnea), and unresponsiveness to painful stimuli. In addition, there should be evidence that the patient has experienced a disease or injury that could cause brain death. A final determination of brain death must involve demonstration of the total lack of electrical activity in the brain by two electroencephalographs (EEGs) taken twelve to twenty-four hours apart. Finally, the physician must rule out the possibilities of hypothermia or drug toxicities, the symptoms of which may mimic brain death.

Did God raise Jesus from the dead?

Argument for GRJ

1. Jesus rose from the dead.
2. Only GOD can raise someone from the dead.

THEREFORE:

3. God raised Jesus from the dead.