

21st Century Public Health Outcomes in America and Other Western Nations in Search of Social Justice “what America might thou do, that honour, would have thee do?” between Rhetoric and Action.

Professor Colin Pritchard, Ph.D.,MA., AAPSW; F.AcSS; FRSA

Research Professor in Psychiatric Social Work
National Centre for Post-Qualifying Social Work & Professional Practice;
Faculty off Health & Social Sciences, Bournemouth University, United Kingdom

Richard Williams

Senior Lecturer, Bournemouth University, United Kingdom

Dr. Anne Silk

Senior Research Fellow, Bournemouth University, United Kingdom

Emily Rosenorn-Lann

Senior Fellow Faculty of Health & Social Sciences, Bournemouth University, United Kingdom

Dr. Lars Hansen

Consultant Psychiatrist, University of Southampton, United Kingdom

Professor Emeritus

School of Medicine, University of Southampton, United Kingdom

Abstract

*To examine how well has America has improved social justice based upon its constitutional ideals, compared between rhetoric and current activity. By measuring USA Public Health results during the 21st Century compared to the twenty Other Western Nations (OWN) we aim to determine” what America might thou do, what honour, would have thee do?” Methodology: Data from the many studies draws upon sources from WHO, World Bank, National Vital Statistics and OECD health and socio-economic outcomes, which is the widest range ever of so many comparative series of international research on mortality rates, including suicides, cardiovascular, cancer, neurological, sepsis, child mortality, violence and environmental impacts and ethnic differentials, to juxtapose against American historical ideals, all measured by population controlled international mortality studies. **Results:** America had highest Western child and adult mortality; child-abuse-related-deaths; sepsis; heart disease, civilian violence rates; widest income inequality, second highest neurological deaths, disproportional Africa-American mortality - indicative of multi-interactive environmental factors. If America had matched average Western death rates, fewer 561,837 American had died. If Africa-American mortality averaged other ethnicities, there would have 94,422 fewer deaths, 26% less. USA %GDP health expenditure is West’ highest, so when juxtaposed against American mortality rates, clearly the US health system is the least effective. **Conclusion:** Public health, policy, and practice, must challenge the structural socio-economic and environmental problems related to social injustice. If true to be itself America must narrow the gap between rhetoric idealism and action, then the USA “thou do, that honour, would have thee do?”*

Keywords: international comparative, inter-disciplinary, health, mortality

Introduction.

This study is the culmination of 30 years of comparative international Public Health studies [1-4], that provides a new inter-disciplinary integration of recent comparative studies during the 21st Century. Indeed, this might be the widest range of Public Health comparative studies on the USA with the other Western countries. All public health mortality outcomes are related to psycho-socio-economic aetiological factors, found across research studies on cardio-vascular, poverty, neuro-degenerative, cancer, sepsis, ethnicity, violence, suicide, child-abuse-related-deaths, and, environmental impacting on human health [5-19]. The original sources of authoritative data are drawn from the WHO (2020) [20], World Bank (2021) [21], US National Vital Statistics (2020) [22] and OECD (2021) [23] and, which enables us to compare American mortality and inequalities with the twenty Other Western Nations (OWN) during the 21st Century.

Our theoretical base is drawn from the founder of social science, Emil Durkheim, who showed that examining patterns of a nation's mortality, we can learn much about that society [24]. It is appreciated that results might create tension, as there are relative winners and losers. Nonetheless, in the search for social justice, we recall Rustin's dictum we must "not be afraid to dare speak truth to power" [25].

American Ideals: To understand how America sees itself, we start with Thomas Jefferson's, in the Declaration of Independence was clarion call to social justice, "We hold these truths be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are life, liberty, and the pursuit of happiness".

This American ideal, bringing together peoples from across the world repeated in Lincoln's Gettysburg Address, with its demand for social justice.

"Fourscore and seven years ago our fathers brought forth, on this continent, a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal.that this nation, under God, shall have a new birth of freedom, and that government of the people, by the people, for the people, shall not perish from the earth."

Whilst Eleanor Roosevelt, the virtually author of UN Declaration of Human Rights 1948, first articles are pure Americana:

Article I] All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Article 2] Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status [26].

John F. Kennedy, inspired his vision of America, "Proud of our ancient heritage and unwilling to witness the slow undoing of those Human Rights to which this nation has Always been committedso my fellow Americans, ask not what can your country do for you, but what can you do for your country".

As well as his world appeal:

"My fellow citizens of the world, ask not what America will do for you, but what **Together**, We can do for the freedom of man" .

Whilst Dr. Martin Luther King, in the shadow of the Lincoln Memorial, reminded America's great ideals,

"Five score years ago, a great American, in whose symbolic shadow we stand today, signed the Emancipation Proclamation.. I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self-evident, that all men are created equal....."

I have a dream that my four little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.....".

Annually, on Martin Luther King day, America rededicates itself to that aspiration, as Shakespeare might have been speaking of America, being true to itself "**with a mighty heart what might thou do, that honour, would have thee do?**" (Henry V), whose core objective is the pursuit of social justice.

The twenty comparable Other Western Nations (OWN) are: - Australia, Austria, Belgium, Canada, Denmark, Finland, France Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the UK, to test between America's ideals and current comparative activity.

Methodology: All these comparative mortality international studies use data from WHO, US National Vital Statistics, World Bank and OECD , during the 21st century [20-23]. Mortality rates are reported as per million (pm) and confidence interval tests had been used to determine any statistically significant differences between OWN and the USA from Public Health international comparative studies how well is America pursuing social justice.

Child-Abuse-Related-Deaths, Child Mortality and Relative Poverty.

In 1962 Kempe alerted the world to the problem of Child-Abuse-Related-Deaths (CARD) but it was not until the 1970’s that the rest of the West awoke to the problem [27]. We provide data from the various studies in tables that reported the four highest and four lowest country’s position.

The first international, 1968-1990, found that the USA topped CARD rates per million (pm), although most countries had reductions in CARD rates from the high 1970’s [2]. In later studies tracing CARD, based on the ICD 10th edition, from 1989 to 2015, American remains the highest in the West, having little change over the period [7.13.14]. Whereas most OWN had reduced CARD substantially (>50%). For example, the UK in the 1970 was fourth highest, is now joint lowest, indicating change is possible. Table [1] presents 0-4year old rates and OWN and USA results over the period [13,14].

America CARD (0-4) rate of 31per million (pm) was more than double the next highest rate, New Zealand at 12pm. The OWN average rate fell 50% over the period and by 2013-15 averaged 7pm, yielding an OWN to USA odds ratio of 1:4.43 [14]. Thus, the USA is relatively failing its most vulnerable children as four times higher the OWN average.

Table [1] Child-Abuse-Related-Deaths (CARD) Infants & Child 0-4years rates per million 1979-81 v 2013-2015. Other Western Countries (OWC) v USA 0-4 Card Ratios.

Country & Ranks Child 0-4years	<1 CARD	0-4 CARD	Child % change	OWC:USA 0-4 Ratio
1 .USA 2013-15	57 70	32 31	-3%	1.00
2.N. Zealand 2011-13	53 38	18 12	-35%	2.58
3.Belgium 2013-15	22 29	16 12	-25%	2.58
4. Germany 1990-2013-15	39 24	12 8	-34%	3.88
18.Ireland 2012-14	9 0	6 4	-34%	7.75
19.Switzerland 2013-15	13 17	12 3	-75%	10.3
20=. Denmark 1994 – 2+013-15	15 12	14 2	-86%	15.5
20=.UK 2013-15	28 2	14 2	-86%	15.5
Average [-USA]	28 20	14 7	-50%	4.43

In 2000 the United Nations recognising that poverty and child-mortality-rate (CMR 0-4) two were unquestionably linked and challenged the world to red cue CMR by 2% p.a. ²⁸. The four highest and lowest countries total CMR rates pm are shown in table [2].

The USA was highest at 1249pm, to OWN, whose average rate of 803pm, thus American child mortality was on average 56% higher than OWN. Only Belgium, Canada and the USA had reductions of less than 50% over the period 1989-2015 and thus failed to meet the UN Millennium goals [13,14.19].

Table [2] Child Mortality Rates (CMR) per million 1989-91 v 2013-15, percentage of change; Comparing Other Western Nations (OWN) v USA Ratios of Change

Country, Current Rank 2013-15	0-4 CMR 1989 - 2015	% of Change	OWN: USA Ratios
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1. USA	2420 - 1249	-48%	1.00
2. New Zealand 2011-13	2361 - 1160	-51%	1.08
3. Canada. 2011-13	1740 - 1094	-37%	1.14
4. Belgium	2013 - 1091	-46%	1.14
18.Spain	1790 - 627	-65%	1.99
19. Sweden	1520 - 577	-62%	2.16
20.Norway	2005 - 552	-72%	2.26
21.Finland	1463 - 451	-69%	2.77
Average West Countries (-USA)	1866 - 803	-57%	1.56

Child mortality correlated with poverty, measured by Income Inequality families, from recent OECD data. This is based upon Gini scores, as complete equality would be Zero and One as total inequality [23].

The USA tops the table at 0.390, followed by UK 0.366 and Japan 0.334, whilst the four least unequal countries, had half American child mortality, average score 0.261, yielding a ratio to the USA of 1.1.49. Confirming the UN report of the association between child poverty and child mortality [28] whilst CMR and income inequality correlated for all 21 Western countries ($Rho=+0.5763$ $p<0.005$) [19].

Table [3] Inequality Proportions of Income Families (0 = total equality v 1 inequality, Comparing Other Countries to UK Inequality ratio. [OECD,2021]

Country	Income Inequality Gini	OWN v USA Ratios
1.USA	0.390	1:1.00
2.UK	0.366	1:1.07
3.Japan	0.334	1:1.17
4=. Italy	0.330	1:1.18
4=. Spain	0.330	1:1.18
17.Denmark	0.264	1:1.48
18.Netherlands	0.262	1:1.49
19.Norway	0.262	1:1.49
20.Belgium	0.258	1:1.51

President Trump's criticism of the Affordable Care Act said was like the British "socialised NHS", saying that he "would not have the NHS if you gave it me on plate". Hence, the challenge was accepted and compared American and Britain's latest mortality rates 2013-15. Out of the 32 major mortality causes, the UK had significantly bigger reductions than the USA on 22 categories, but America did significantly better on five, including cancer [18]. However, if the USA total Age-Standardised-Death-Rates (ASDR) of 4703pm had matched Britain's "socialised NHS" rate 3847pm, there would have been 488,354 fewer American deaths in 2015. Whilst if America matched OWN average, there would have been 561,837 fewer American deaths [18,29].

Table [4] Age-Standardized-Deaths (ASD) per million in USA & Other Western Nations (OWN) 1989-91 v 2013-15: % of Change. OWN: USA- Ratios

Country, 1989-91 v Final Year	1989-91	2012-14	%Change	OWN:USA Odds Ratios
1. USA	6203	4772	-23%	1.1.00
2. Germany	6456	4173	-35%	1.1.14
3. Portugal	7086	4136	-42%	1.1.15
4. Denmark	6512	4124	-37%	1.1.16
18. Spain	5670	3422	-40	1.139
19. Australia	5641	3420	-39%	1.1.40

20. Switzerland	4930	3326	-33%	1.1.43
21. Japan	4675	3084	-34%	1.1.55
OWN (-USA) Average	5735	3784	-35%	1:1.26

Based on World Bank data (2020) [22], the USA %GDP-Health-Expenditure (%GDPHE) is the Western highest, when in 2016 was 17.07% compared to the Western average of 9.97%. In effect 71% higher in real national wealth terms [18,29,30]. Over the period 1980-2016, total %GDPEH, which includes all Private, National and State sources of finance, American average was 13.53%. Only France, Germany, and Switzerland of the OWN averaged 10%, whilst the UK average was 7.67%, was second lowest. Yet the greatest %GDPEH is the USA and highest mortality rate indicating the American health service is the effective service in reducing mortality. Indeed, there are many American researcher show their health care system as failing [31-35], indeed, Garber and Skinner posed the question, is the American system “uniquely inefficient”! [31].

Table [5] Total % Gross-Domestic-Product Expenditure on Health 1980 –2000-2015 & Percentage GDPEH from Private Source & OW to USA average %GDPEH Odds Ratios (Based upon 27 years reported data unless noted in brackets).

Country & Rank	Total GDP 1980	Total GDP 2000	Total GDP 2016	% 2016 GDPEH Private	Private% of Total GDP	Total Average 1980-16	OWN: US Odds Ratio
1. USA	9.0	13.4	17.07	9.15	54%	13.53	1:1.10
2. Switzerland	7.3	10.2	12.25	4.80	39%	10.17	1:1.33
3. Germany	8.4	10.1	11.14	2.62	24%	10.16	1:1.33
4. France	7.0	10.3	11.54	2.47	21%	10.13	1:1.34
18. Ireland	8.2	6.1	7.38	1.80	24%	8.03	1:1.68
19. Spain	5.3	7.2	9.20	1.63	18%	7.77	1:1.74
20. Greece	5.9	7.9	8.40	3.23	38%	7.71	1:1.75
21. U.K	5.6	7.0	9.90	1.58	16%	7.68	1:1.76
Other Countries average	6.9	8.3	9.97	2.09	25%	8.79	1:1.55

Whilst there has been some improvement following the Affordable Care Act, there are still problems, even occasional medical bankruptcy, levels of health insurance and the crisis of being under-insurance [31-36]. Indeed, later President Obama admitted that ACA was far from ideal but having to make compromises, he realised most other Western health systems was more effective than the USA. He saw was because Own unlike the USA system was because the insurance companies need to make a profit [37], which many American researchers argued that it was profit needed to gain from the ill-health of the people [38-41]. Conversely, the British hospital care is totally free at the point of need, paid through non-profit system of taxes, which is more economical and patient centred, without middle-management needing to make a profit [31-39]. Paradoxically, the British people do not consider NHS being `political, rather reflects a great American tradition, that of mutual `neighbourliness`, of helping other people at times of crisis, as they know that too will be helped when they in need [30].

Future Threats? Recent international work analysed cardio-vascular disease deaths throughout the Western world, between 1989 and 2014. It was found that the USA have the highest heart rates, at 4194pm, compared to the Western average of 2533pm, being 66% lower than America [17-19].

Another problem and future threat, relates to cultural and social factors around animal welfare and misuse of antibiotics, reported by numerous American researchers [42-50]. However, it was said that there were unfair in reporting stories about US chlorinated chicken, with claims that the European Union farming methods were a “museum piece” and that America had one of the lowest food poisoning rates in the world [51]. This led to a study that compared the USA with OWN of Sepsis deaths, coded A39.2-39.4, A40 - 42.9, and, Intestinal- Disease-Deaths (IDD), coded A00-A0090 (IID) [20], which are associated with animal standards leading to Multi-Drug-Resistant-Bacteria (MDRA) and [45-50].

In brief, in 2015 the USA had the highest adult Sepsis deaths of 211pm (68,989 individual deaths) to OWN average of 67pm. America had the second highest Sepsis infant deaths at 43pm, to Western average of 17pm [19].

Adult IDD deaths were highest in America at 38pm (just 12,425 deaths) to a Western average 10pm, and the highest Infant IDD of 59pm to ONC average of 6pm. Thus, both Sepsis and IDD America deaths were three times the average of the OWN [19]. These results support long-time warning of American researchers concerned about US farming welfare and food production and the links with the misuse of anti-biotics, which leads to Multi-Drug-Resistant-Bacteria (MDRB) and serious illness (Bonnet et al, 2009; Havelaar et al, 2015; Hald et al, 2016; Zilberg et al, 2016; Rhee et al, 2012; Paoli et al 2018; Guo et al, 2019; Giralaldi et al, 2019; Suzuki et al, 2019) [42-50-52]. Indeed, the WHO recently warned that MDRB are increasing due to misuse of anti-biotics in hospitals and animal welfare for septicaemia and intestinal disease [43, 44, 52]. Fearing that if MDRB continued, it could return modern surgery back to the 19th Century, when even a minor operation was very risky

New Epidemics for the Western nations? Another health crisis, with under-lying socio-economic factors, concerns an almost hidden epidemic of increased neurological disease affecting all the Western world. This is especially for America, as in 1979, then the USA had been fifteenth highest of twenty-one Western countries but by 2015 they are now second highest [5,9, 11,53,54]. The first study between 1979-1997, found twelve of the twenty-one Western nations had substantial rises in neurological deaths but by 2015, all have substantial increases, after controlling for population [5,9,11,53,54].

To highlight that the increases are not primarily due to demography, there focus was up on earlier Early-Adult-Deaths (55-74years), which is well below the Western average of life-expectancy. The two biggest increases were in Britain and America. In the UK between 2000 and 2015 the E.A.D rates went from 511pm to 710pm, up 39%, whilst the USA rose from 420pm to 653pm, a rise of 55% in just sixteen year. WHO controlled Age-Standardized-Death Rates (ASDR) in Britain went from 205pm to 553pm, up 170%, American rose from 336pm to 592pm, a 76% rise [11,53,54].

In the UK, the numbers of dying of a neurological condition amongst the 55-74 went from 4,650 at the Century's beginning was to 9,019 by 2015 went 96%, whilst total deaths rose from 24,601 to 103,550, a three-fold increase. In America E.A.D went from 21,810 to 40,047 and total neurological deaths going from 174,708 to 434,438, more than doubling in the Century [11,53,54].

These neurological conditions are starting earlier, and modern epigenetics teach us that, whilst genetics loads the gun, it's the environment that often pulls the trigger, which are related to the multiple-interactive environmental pollutions, contributing to neuro-degenerative conditions [9,11,53,54]. Indeed, the USA Federal Communications Agency was successfully sued by the Environmental Health Agency for under-playing environmental impact of electromagnetism as one factor impacting on human health. Whilst the European Union, noted that possible electro0magnetism hazards, "are now beginning to appear" [55-59].

A Nature Research study in 2021, explored the possible links between neurodegeneration and the modern electro-magnetism [59]. In an in-depth analysis, they found virtually every major country having problems that "*Magnetic sensing of the human brain provides compelling evidence of new electric mechanisms in human brains and may interfere with the evolution of neurodegenerative diseases.*" Kletetschka et al said they "*show that a nano-mineralization of magnetic grains in human brains correlates with the progression of neurodegenerative diseases*" (p1-2) [59]. This supports the idea that electro-magnetism is *one* of the multiple inter-active factors in the modern world associated that contributing to a 'hidden neurological' epidemic [9,11,53-59].

All Western technologies societies are changing fast, perhaps America faster than the others, so there is an urgent need for the 'precautionary principle' on new technologies, that appear to begin to impact upon human health [53-59].

Violent Deaths in Western Nations: We turn to a very topical American issue, gun deaths, to appreciate just how different is the USA from OWN. Based upon WHO data, the USA has the highest suicide and homicide rate of all Western countries [60]. Moreover, US suicides are due nearly two-thirds by firearms, and four-fifths of homicides occurred by guns [61-63]. A survey of World Gun deaths, the USA, along with Columbia, Guatemala, Mexico, and Venezuela, accounted for more than half the gun deaths in the world [64]. The gap between the Western average and USA gun ownership is between 185 versus 1205 per thousand people, more than six times the majority of

OWN, therefore the greater suicide and homicide risk. To be fair, the US homicide rates have fallen over the past 20 years. Nonetheless, during this Century, at least annually 30,000 Americans were killed by guns via suicide or homicide. For example, in 2015 American suicide rose to 42, 732, plus 17,588 homicides, giving a conservative estimate of 30,160 deaths from firearms [60,64]. In terms of Youth (15-24) suicides and homicides, a recent study showed that they have averaged more than 5,000 a year by guns, which close to the average annual American Vietnam military losses [65]. Indeed, currently, more US Youth die by firearms through suicide and homicides, than combined Americans died in the Afghan and Iraqi wars [60]. The focus was upon Youth (15-24) because their impulsivity is strongly linked to suicidal behaviour, and America have the easiest access to firearms and the quickest method to suicides [60,64, 65], and many using their parent's weapons [51].

Poverty, Ethnicity and Mortality: The final cultural example of socio-economic factors impacting upon Public Health, is a comparative analysis of deaths amongst the five USA ethnic populations. Based upon the National Vital Statistics for 2015 [22], five ethnic groups Age-Standardized-Death-Rates (ASDR) were examined. It was found that Black Americans died at a rate of 8761 per million (pm), Alaskan/Indian 8057pm, Non-Hispanic Whites 7532pm, Hispanic 5253pm and Asian Americans 3962pm, an overall average of 6201pm [17]. Whilst the association of child mortality, poverty and belonging to a minority group, is well known in many Western countries [66,67] as is well known of Africa-Americans but not as profound in the OWN [68-71].

For the year 2016, amongst Black Americans people 360,082 died, however, if they had matched the *average* rate of the other ethnic groups, there would have been 94,422 fewer grieving Black families. Whilst the poverty link and infant deaths is shown between Black American infant deaths rate of 117000pm, to Hispanic 5200pm and White infants 4800pm i.e., more than doubled the other two ethnic groups [17]. When juxtapose against US mortality and its health expenditure, we would concur that American critic is “*uniquely inefficient*”! [31].

It is appreciated, that these results will be challenging, and it is concluded, that America has not “*done what honour, would have thee do*”. Yet America's great progressive ideals have been an inspiration for the world, but the USA needs to look outside to measure itself against other Western nations, to test how well it has achieved aspiration and “dare to speak truth to power” [25], to realise Dr Martin Luther King's hope:

“I have a dream that one day this nation will rise up and live out the true meaning of its creed: “We hold these truths to be self-evident, that all men are created equal.....”

then America could respond to “*what might thou do, that honour, would have thee do?*”

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