WRITTEN TESTIMONY OF QUENTIN L. VAN METER, MD

Credentials

1. My professional background, experience, and publications are detailed in my curriculum vitae, a true and accurate copy which is attached as an exhibit to this declaration.

2. I am a pediatric endocrinologist in private practice in Atlanta, Georgia. I am the President of Van Meter Pediatric Endocrinology, P.C. I am on the clinical faculties of Emory University School of Medicine and Morehouse College of Medicine, in the role of adjunct Associate Professor of Pediatrics.

3. I am board certified in Pediatrics and Pediatric Endocrinology. I have been licensed to practice medicine in Georgia since 1991. I have been previously licensed to practice medicine in California, Louisiana, and Maryland.

4. I received my B.A. in Science at the College of William and Mary, and my M.D. from the Medical College of Virginia, Virginia Commonwealth University.

5. I did my Pediatric Endocrine fellowship at Johns Hopkins Hospital from 1978-1980. The faculty present at that time had carried on the tradition of excellence established by Lawson Wilkins, M.D. Because of the reputation of the endocrine program as a center for exceptional care for children with disorders of sexual differentiation, I had well-above average exposure to such patients. As a Pediatric Fellow, I was also exposed to adults with Gender Identity Disorder (then called transsexuality), and received training from John Money, Ph.D., in his Psycho-hormonal Division.
6. I have maintained a continued interest in gender discordance since my fellowship years and have read extensively the literature in scientific peer-reviewed journals and have attended national and international pediatric endocrine conferences where this subject is presented and discussed. I am also familiar with the wide array of commentary on the subject.

7. My professional memberships include the Pediatric Endocrine Society, the Endocrine Society, the American Association of Clinical Endocrinologists, the American Diabetes Association, and I am a fellow of the American College of Pediatricians, currently serving on the Board of Directors as President.

8. My opinions expressed in this report are based upon my education, training, and experience in the subject matters discussed. The materials that I have relied upon are the same types of materials that other experts in my field rely upon when forming opinions. Specific sources upon which I rely in this declaration are footnoted.

9. My publications include a textbook chapter, case studies, and articles generated by clinical research studies. I serve on the speaker’s bureau of major pharmaceutical companies.

Sex is fixed and inalterable.

10. Sex is binary: male or female. It is determined by chromosomal complement and corresponds to the reproductive role in the inherently binary process of the fusion of two haploid gametes, egg and sperm, to form the diploid zygote. An individual’s sex is not “assigned” by doctors. It is an immutable feature of human beings established at conception, when the person’s male (XY) or female (XX) genetic status is determined.

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1 American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (DSM) 829 (5th Ed., 2013).
11. Sex chromosomes impart innate differences to males and females in every nucleated cell of their body.²

12. The presence of a Y chromosome in the fetus directs the gonadal tissue to develop as a testicle. The absence of a functional Y chromosome leads to the gonadal tissue developing as an ovary. Under the influence of the mother’s placental hormones, the testicle will produce testosterone which directs the genital tissue to form a penis and a scrotum. Simultaneously, the testicle produces anti-Müllerian Hormone (AMH) which regresses development of the tissue that would otherwise develop into the uterus, fallopian tubes, and upper third of the vagina.

13. This combination of actions in early fetal development is responsible for what we subsequently see on fetal sonograms, and what we observe at birth as male or female genitalia (penis and scrotal testes in the male and vaginal orifice in the female). It is only when the genital structures are ambiguous in appearance, and a child’s sex is initially unclear, that official notation of sex is withheld until a thorough expert team evaluation has occurred.

14. In these extremely rare cases there are malfunctions of normal differentiation, and a fetus may have to have a combination of sex-determining chromosomes, many of which are not compatible with life, and some of which are the cause of identifiable clinical syndromes. These aberrations of normal development are responsible for what we classify as Disorders of Sexual Differentiation (DSD) and they represent a very small fraction of the human population. The incidence of such circumstances occurs in 1:4500 to 1:5500 births.³

15. DSDs are all medically identifiable deviations from the human sexual binary norm. The 2006 consensus statement of the Intersex Society of North America and the 2015 revision of the Statement does not endorse DSD as a third sex. In other words, these patients are still biological males or females, and not something else. DSD patients are not “transgender”; they have an objective, medically verifiable, physiologic condition. Transgender-identifying persons as a rule do not have intersex conditions or any other verifiable physical anomaly. People who identify as “feeling like the opposite sex” or “somewhere in between” do not comprise a third sex. The biology of reproduction remains binary. These individuals remain either biological males or biological females.

16. There are at least 1559 known differences between males and females that relate not just to sexual organs but also to other organs, such as the brain, skin, and heart. A woman's skin is different from a man's skin. A woman’s brain and heart and internal organs are different than a man’s. Further, 6500 genes alone have been discovered which are expressed differently in men and women. External surgical manipulation of genitals does not change the internal genetic-biological makeup of a person.

17. The notion that the combination of counseling for cross-sex social performance, the interruption of natural puberty, the subsequent cross-sex hormone therapy, and eventual surgical alteration of the body will create a new sexual identity for a child is not based on science. Physical appearance can be irreversibly manipulated; sex in its manifold and vital dimensions

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1. Lee PA et al, Consensus Statement on Management of Intersex Disorders, PEDIATRICS 2006; 118 e488-e500.
cannot be changed or eradicated. It is for this reason that persons manipulating their appearance and hormonal balance to achieve a cross-sex cosmetic effect remain lifelong clients of the medical-pharmaceutical industry. They must perpetually maintain the expensive and risky regimen of synthetic hormonal alteration of and indeed resistance against their physiology, for the significance and composition of its genetic, cellular, and organic form never relents.

18. Patients arranging for surgical removal of testes or ovaries must replace their hormonal contributions with compensatory pharmaceutical infusions, as the removal of gonads destroys the body’s natural hormonal maintenance system, requiring synthetic alternatives until death.

**Concepts of gender and related disorders**

19. “Gender” is a term historically employed in the context of grammar to describe male and female nouns and their modifiers. In its contemporary use, “gender” is an ambiguous and inconsistently used term, but one often directed to the stereotypic social roles, appearance, and mannerisms prescribed for each sex respectively in a given cultural context. The American Psychological Association has offered that gender “refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for boys and men or girls and women” that “influence the ways that people act, interact, and feel about themselves.” Contributing to confusion, “gender” in contemporary parlance is also sometimes used as a synonym for or simply conflated with biological sex.

20. The term “gender” moved from a grammatical description to one describing persons when sexologists of the 1950s and 1960s in their psychological practice repurposed the term to

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7 American Psychological Association, *Answers to Your Questions About Transgender People, Gender Identity and Gender Expression* (2011), available at [http://www.apa.org/topics/lgbt/transgender.pdf](http://www.apa.org/topics/lgbt/transgender.pdf) (A child’s gender reflects the extent to which he or she conforms to or deviates from socially normative behavior for boys or girls.)
aid in conceptualizing the mental dynamics in play with cross-dressing and transsexualism. Also, feminist scholars in the 1970s advanced the use of gender to distinguish socially constructed distinctions between the sexes from biologically determined ones.

21. “Gender identity” is a term coined by my former Endocrine Fellowship faculty member John Money in the 1970s and has come to refer to an individual’s alleged mental and emotional sense of being male or female, and one’s awareness of, and level of comfort with, his or her body.

22. Like all states of mind, gender identity can fluctuate and is not an immutable trait. It consists in thoughts. A genetic-biological etiology for gender identity has never been shown.

23. Gender incongruence (formerly Gender Identity Disorder, or GID) is a phrase used in psychiatry’s billing code and mental illness classification manual, the DSM-5, to describe a psychological condition of a person who experiences dissociation from his biological sex. This condition is often described in terms of an incongruence between his gender experience or sensibility and the gender sensibility one presumes should be associated with his sex. Such a person will often express the belief that his true self is contained in his mind, and that his mind inhabits the wrong body, or a body of the wrong sex. In describing this nomenclature convention, I do not intend to ratify its conceptual integrity.

24. “Gender Dysphoria” (GD) is a diagnostic term to describe the emotional distress caused by gender incongruity.8

25. The ordinary and overwhelming pattern of human development is for a child to acknowledge and align mentally with physical reality; that is, for his or her self-conception to accept the unchangeable biologic sex of body that defines and is inseparable from the person.

26. Dr. Kenneth Zucker, a highly respected clinician and researcher from Toronto, evaluated and treated GID patients for forty years. His academic works, widely published, found that the vast majority of boys and girls with GID develop to identify with their biological sex by the time they emerge from puberty into adulthood. His results are mirrored in other studies.

Lack of etiology for gender identity disorders.

27. There are no laboratory, imaging, or other objective tests to diagnose what is called gender incongruence or gender dysphoria. It is based on individual self-reports. There is no empirical demonstration that any human being or other mammal has ever been born with an innate, opposite-sex “gender identity.”

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28. Infants’ brains are imprinted prenatally by their own endogenous sex hormones, which are secreted from their gonads beginning at approximately eight weeks’ gestation.\textsuperscript{15} \textsuperscript{16} \textsuperscript{17} There are no published studies documenting MRI-verified differences in the brains of gender-disordered children or adolescents. The DSD guidelines state that current MRI technology cannot be used to identify those patients who should be raised as males or raised as females.\textsuperscript{18}

29. Behavior geneticists have known for decades that while genes and hormones influence behavior, they do not hard-wire a person to think, feel, or behave in a particular way. The science of epigenetics has established that genes are not analogous to rigid “blueprints” for behavior. Rather, humans “develop traits through the dynamic process of gene-environment interaction. ... [genes alone] don’t determine who we are.”\textsuperscript{19} \textsuperscript{20} \textsuperscript{21}

30. Regarding gender-discordant identification, twin studies of adults prove definitively that prenatal genetic and hormone influence is minimal. The largest twin study of transgender-identifying adults (involving 74 pairs) found that only 28 percent of identical twins were both transgender-identified.\textsuperscript{22} Since identical twins possess 100 percent of the same DNA from conception, and develop in the same prenatal environment exposed to the

\textsuperscript{19} Shenk, D. \textit{THE GENIUS IN ALL OF US: WHY EVERYTHING YOU’VE BEEN TOLD ABOUT GENETICS, TALENT, AND IQ IS WRONG} 18 (2010).
\textsuperscript{21} More on the shortcomings of modern epigenetics: Greally J, \textit{Human Disease Epigenomics 2.0}, \textit{PLOS Biology} (July 7, 2015).
same prenatal hormones, if genes and/or prenatal hormones essentially dictated a gender-incongruent identification, the concordance rates would be close to 100 percent. Instead, 72 percent of identical twin pairs were discordant. This would indicate that much of what contributes to transgender identification as an adult in one identical co-twin consists of one or more non-shared post-natal experiences including but not limited to non-shared family experiences or differential subjective response to shared experiences.

31. These findings also mean that persistent GD is due to the impact of non-shared environmental influences or differential subjective response to shared environmental influences. These studies, along with the converse absence of empirical proof that gender incongruence is attributable to genetic contributions, provide compelling evidence that the psychological phenomenon described as discordant gender is not hard-wired in the person.

**Treatment of gender-confused children**

32. Natural pubertal maturation in accordance with one’s sex is not a disease. The pubertal work of sex steroids (estrogen and testosterone) produced by the gonad is designed to carry a malleable, immature individual forward to healthy adulthood, capable of conceiving progeny. It affects physical changes unique to the person’s sex.

33. Interruption of puberty as a treatment measure is reserved legitimately only for children who begin puberty at an age much younger than normal. This treatment is applied in an effort to preserve final height potential and avoid the consequences of precocious maturation. For the short- and long-term health of the patient, it is important that pubertal development occur at the time of life proper to those changes.
34. Gonadotropic releasing hormone agonists (GnRH agonists, or puberty blockers) were developed and first employed in the 1980s specifically to interrupt the signaling between the pituitary gland and the gonads in both males and females. Their use in children was directed to those who experience central precocious puberty, that is, onset of true puberty before the age of 8 years in females and 9 years in males. In such cases, treatment is continued and then stopped in time to allow the child to re-enter puberty at a time when the majority of his or her age-matched peers will enter puberty (10.5 years for girls, and 11.5 years for boys). The discontinuation is important because puberty is a vital and necessary event in the personal development of the adolescent.

35. To treat puberty as a pathology that should be prevented by administration of puberty blocking drugs is to interrupt a major and necessary physiologic transformation at a critical age when such changes can effectively happen. The physiologic event of puberty cannot safely be put off to a later date. There is some evidence that bone mineral density is irreversibly decreased if puberty blockers are used during the years of adolescence. This diminished calcium accretion in the bones results in osteoporosis in adulthood. The chemical suppression of puberty also inhibits what would be the maturation of the adolescent brain in response to the innate sex steroids.

36. Aside from the known harmful effects of puberty blockers, other potential long-term effects continue to be largely unknown and will only become apparent through time after


evidence accumulates from the current vast experiment being conducted on the bodies of children.

37. Erikson described the developmental stage of adolescence as "Identity versus Role Confusion" during which the teenage child works at developing a sense of self by testing roles then integrating them into a single identity.25 This process is often unpleasant regardless of the presence or absence of gender identity conflicts. A major benefit for GD patients of undergoing the developmental process of puberty is that its powerful physiological changes and developments in the large majority of cases also bring about the formation of adolescents’ psychological sense of identity consistent with their sex. The empirical data from multiple studies from different research groups reveal that 61%- 98% of pre-pubertal children with GD will come to identify with their biological sex by late adolescence—if they are permitted to go through that process living in an identity that corresponds to their sex.26 27 28 Some will require extended counseling, others will not.29

38. By contrast, recent reports suggest that social and medical interventions in support of a supposed opposite sex “identity” may impede what would in most cases be natural resolution of childhood gender dysphoria. The data indicating persistence in cross-sex social identification by essentially all patients subject to puberty suppression30 conspicuously contrasts with research

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29 Zucker, supra n. 9, 737-753.
30 De Vries ALC, Steensma TD, Doreleijers TAH, Cohen-Kettenis, PT, Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study, J. SEX MED 8:2276-2283 (2011) (in a follow-up study of 70 puberty-suppressed patients ages 11 to 17, all 70 advanced to cross-sex hormones).
data revealing majority desistance from gender dysphoria by those not affirmed in cross-sex identity.

39. The effects of iatrogenic hormonal manipulation on adolescent cognition remain unknown. What is known is that neurons in the brain are affected by the neurosteroid estrogen that is locally produced in response to gonadal hormones released in the natural condition course. The short- and long-term effects on these neural processes by puberty blockade and cross-sex synthetic hormones remain to be discovered.

40. Nor is it known or demonstrated by research how an adolescent’s brain that is deprived of the normal contribution of GnRH affects his psychological maturity, cognition, and means of processing or counter-balancing the strong influences of continuous cross-sex social performance and the reinforcement by authority figures and peers of that cross-sex role.

41. With respect to that strong influence, the cross-sex socialization program itself seems to impede the otherwise likely outcome of a child resolving to a sex-congruent self-identification. Based on the research data analyzing socially transitioned prepubertal children, Dr. Zucker argued that “parents who support, implement, or encourage a gender social transition (and clinicians who recommend one) are implementing a psychosocial treatment that will increase the odds of long-term persistence” of gender dysphoria.31

42. Certainly, administration of puberty-blocking drugs is a dramatic medical intervention in the body, development, and life of a child. Further, treating gender dysphoria with puberty-

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blocking drugs is not an FDA-authorized regimen, but an “off-label” use, meaning that no clinical trials have demonstrated this treatment to be safe and effective.

43. The consequences of puberty blockade and high-dose cross-sex (HDCS) hormones include potential sterility, sexual dysfunction, thromboembolic disease, cardiovascular and cerebrovascular disease, early osteoporosis and malignancy. 32 33 34 35 36

44. Even with early and temporary childhood use of GnRH agonists to treat precocious puberty in boys, risks of harm are present. Evidence of the impact of such treatment is limited due to the rarity of male precocious puberty.37

45. There is no evidence showing that treating adolescent gender dysphoria with puberty-blocking drugs is preferable to other therapies. There is no evidence showing that treating such adolescents with puberty-blocking drugs is without harmful effect on reproductive capacity, brain maturation, or physical growth potential. And it is certainly not intuitive that halting until the years of young adulthood the dynamic physiological and psychosexual maturation process of puberty would be free of negative physical and psychological impact.

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46. Considering the current unknowns attending these treatments, their use is dangerously experimental.\textsuperscript{38,39}

47. Given the high percentage of eventual desistance of gender dysphoria by the end of puberty, and the harms and risks associated with sex-controverting social and medical interventions, the ethical and logical course is to counsel a child patient to understand himself or herself—and to counsel the family to rear the child—truthfully, as a person of the sex he or she actually and unchangeably is.

\textit{Science vs Pseudoscience}

48. The advent of “centers of excellence” for gender-disordered patients\textsuperscript{40} combined with a sociologic agenda in academia has created the popular societal misimpression that there is scientific basis to view discordance between sex and subjective gender identity as a healthy variation within the range of normal human development. There has been a flurry of articles in journals and newsletters circulated to general pediatricians that promote the ideology of transgenderism without scientific support.\textsuperscript{41,42,43,44}

\textit{WPATH}

49. The World Professional Association for Transgender Health (WPATH) is an agenda-

\begin{itemize}
\item \textsuperscript{40} Hsieh S and Leninger J, \textit{Resource List: Clinical Care Programs for Gender-Nonconforming Children and Adolescents}, PEDIATR ANN 43:238-244 (2014).
\item \textsuperscript{41} Prager LM, \textit{A boy who wants to be a girl}, CONTEMPORARY PEDIATRICS 25:56-58 (2008).
\item \textsuperscript{44} Simons LK et al, \textit{Understanding gender variance in Children and Adolescents}, PEDIATR ANN 43:e-126-e131 (2014).
\end{itemize}
driven advocacy organization whose membership is open to anyone who has an interest in the
transgender social and political agenda. There are no requirements that its members possess
specialty training or certification or any medical or psychological qualifications at all.

50. WPATH offers standards of care by which it promotes social and medical treatments for
children with gender dysphoria, including puberty suppression, cross-sex hormone infusions, and
surgical procedures to remove or destroy their healthy tissue and organs. Many of its guidelines
and standards of care are not scientifically supported. WPATH’s “peer-reviewed” journal is not
reviewed by anyone with a perspective that deviates from the advocacy position of the
organization itself.

51. While recommending puberty blockers for GD adolescents, the WPATH guidelines
acknowledge that negative side effects can accompany this protocol, and that no studies have
validated safety in long-term effects from the practice of puberty blockade.

52. WPATH-recommended interventions on adolescents also include cross-sex
hormone therapy during the time when the patient would naturally be experiencing
endogenous pubertal changes. This, too, lacks a scientifically demonstrated showing of
safety. The use of cross-sex hormones on young people can cause life-long infertility.

53. WPATH also recommends body altering surgeries, which can include surgical
removal of the breasts, ovaries, and uterus in females, or destruction or removal of the

45 See WPATH STANDARDS OF CARE FOR THE HEALTH OF TRANSSEXUAL, TRANSGENDER AND GENDER
NONCONFORMING PEOPLE (v. 7).
46 Id. at 21.
47 Hembree WC et al., Endocrine Treatment of Transsexual Persons: and Endocrine Society Clinical Practice
Guideline, J CLIN ENDOCRINOL METAB 94:3132-3154 (2009); Hembree WC et al., Endocrine Treatment of Gender-
Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline, J. CLIN ENDOCRINOL.
penis, testicles, and scrotum in males. Each of these surgeries present adverse outcomes. Sex organ removal surgery is, by nature, permanent.

54. While recommending administration of puberty-suppressing drugs, WPATH also recommends that young boys with immature penises be told that—because puberty blockers will prevent the growth of the penis that comes with puberty—they will not develop enough penile tissue available to invert for use in later construction of a faux vagina. Doctors are encouraged, however, to tell boys that colon tissue and skin grafting may be used for that purpose.48

55. A 2011 review study evaluated long-term outcomes of every adult in Sweden who had cross-sex hormone therapy and surgery between 1973 and 2003. (The study therefore implicates no ascertainment bias). The mortality rate of the medically treated adults was over double the controls, and the completed suicide rate in these patients was 19 times higher than the general population. These treated patients passed through a post-treatment period of relative happiness, then after ten years began to experience strikingly high levels of serious physical and mental health problems, including death from a variety of causes.49

56. There are an emerging number of hormonally and surgically manipulated transgender adults who are now reporting that such treatment brought them implacable misery. In the realm of true medical science, a single case report of such an adverse outcome can shut down a treatment protocol overnight, based on the ethical guidelines of informed consent.

48 WPATH STANDARDS OF CARE (V. 7), p. 20.
57. The treatment model promoting dangerous cross-sex hormone infusions and surgeries on a healthy body in order to assuage the patient's mistaken mental condition makes that so-called "affirming" model of GD treatment an anomaly deviating from ethical standards regulating all the remainder of medical practice.

The American Academy of Pediatrics

58. The American Academy of Pediatrics created and issued an advocacy statement in the form of treatment guidelines for gender dysphoric children. The AAP is an organization with reportedly over 66,000 pediatrician members. The leadership of the AAP did not consult with or poll the members of the organization before issuing the guidelines document, and that document does not represent the contributed consensus of AAP membership. It represents the activism of several people in executive positions within the organization.

59. The AAP advocacy statement may be properly described as inept, dishonest, and an abuse of the persuasive authority attending statements from a publicly esteemed organization such as the AAP. Dr. James Cantor's thorough refutation of the AAP guidelines is an instructive and remedial read. The conclusion of his critique contains the following:

In its policy statement, AAP told neither the truth nor the whole truth, committing sins both of commission and of omission, asserting claims easily falsified by anyone caring to do any fact-checking at all. ... [T]hey provided recommendations entirely unsupported and even in direct opposition to [currently available] research and opinion. ... The problems in Rafferty [i.e., the AAP policy statement] do not constitute merely a misquote, a misinterpretation of an ambiguous statement, or missing a reference or two. Rather, AAP's statement is a systematic exclusion and misrepresentation of entire literatures. Not only did AAP fail to provide compelling evidence, it failed to provide the evidence at all. Indeed, AAP's recommendations are despite the existing evidence.

50 Rafferty J, Ensuring Comprehensive Care and Support for Transgender and Gender-Diverse Children and Adolescents, PEDIATRICS 142(4): e20182162 (2018)
60. The Endocrine Society published a document in 2009, recommending for children with gender dysphoria a treatment sequence involving psychological evaluation, counseling, blocking of pubertal maturation at the onset of puberty, the subsequent use of cross-sex hormones, and offering surgical alteration of the body at the age of consent. Of the 22 recommendations contained in the document, only three were supported by strong scientific evidence. These three warned of potential adverse effects of hormonal manipulation. The remaining 19 recommendations were nearly evenly split into a group that was based on very limited scientific evidence and a group that was based on absolutely no scientific evidence at all.

61. After the publication of these guidelines, there occurred an exponential burgeoning of Gender Identity Clinics in the United States—from three to over forty-five in a period of seven years. Subsequently, the Endocrine Society revised its guidelines to be yet more permissive, recommending cross-sex hormones and surgical treatment for younger patients. It did, however, add the concern that counseling regarding fertility loss should be included. Notably, the Guidelines specify a disclaimer regarding their limitations: “The guidelines cannot guarantee any specific outcome, nor do they establish a standard of care.” And yet these are widely promoted as if they represent a standard of care. The number of pediatric gender identity clinics in the nation today exceeds sixty-five.

54 Id. at 3895.
55 https://static.wixstatic.com/ugd/3f4f51_c295b2f528884acbb01fa3ac19ff874a.pdf
Conclusion

62. Transgenderism is a cultural phenomenon supported by organized interest groups including beneficiaries in the medical profession. Its precepts lack conceptual and scientific integrity. Its regimens present known dangers and risks of others to the minors subjected to them. Cross-sex medical interventions upon children are forms of human experimentation and should not be promoted or rewarded by the coercive power of law.

Quentin Van Meter, M.D.
Signed March 10, 2020