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APPENDIX E

OFFERING A LIFELONG ALLIANCE TO PEOPLE WITH DISABILITIES

CROTCHED MOUNTAIN

February 20, 2014

To Whom It May Concern:

Re: Investigation Report Regarding Death of Mr. [REDACTED]

I was asked to respond to the following statement from the Lakeview Neurorehabilitation Center's response to the Disabilities Rights Center of NH's draft report regarding the [REDACTED] matter dated February 3, 2014 and pertaining to the presence of ketones in Mr. [REDACTED]'s urine a few days before his death:

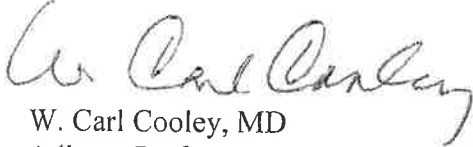
"It is important to note that the presence of ketones is representative of fasting not "starvation", as even an overnight fast can affect this level. Mr. [REDACTED]'s ketones were slightly elevated when Dr. Badman evaluated him on [REDACTED]. This effect could be further exacerbated by Zonisamide, a drug which Mr. [REDACTED] was taking regularly for seizure management. Zonisamide is well known to cause metabolic acidosis which can produce ketones in the urine. Dr. Badman was therefore not unduly alarmed by the elevated ketones which never measured in an extreme range warranting an acute intervention."

Rarely, an overnight fast may result in a trace or small amount of ketones in the urine, but it would not account for the presence of "large" ketones as documented in the testing of Mr. [REDACTED]'s urine on [REDACTED], 2012. Ketones in the urine are a direct reflection of ketones in the blood so that "small" amounts of ketones in the urine reflect small elevations of ketones in the blood, and "large" amounts of ketones in the urine reflect large elevations of ketones in the blood. The latter circumstance, when unexplained, should always evoke concern and further investigation on the part of a health care provider. The statement in the final sentence above is puzzling, since the urine test on [REDACTED], 2012 did in fact show the ketones to be in an "extreme range" and did warrant further intervention or, at the very least, a repetition of the urine test to ensure its accuracy. Mr. [REDACTED]'s ketones were not "slightly elevated" as the above statement alleges, but according to the [REDACTED], 2012 urine test, the level of ketones was "large." This is the highest level measureable by a urine dipstick test. A "slightly elevated" level of ketones would have measured as "trace" or perhaps "small" on this test. There was nothing in the urine dipstick result that would have suggested a urinary tract infection (only minimal white blood cells were present and nitrite test was negative), but even the presence of a urinary tract infection would not have been a cause for a "large" amount of ketones in the urine.

While it is true that zonisamide may cause a metabolic acidosis, it does not do so by causing an elevation of ketones in the blood or urine. Zonisamide might have produced a metabolic acidosis in Mr. [REDACTED] which might have been an added medical problem had Dr. Badman tested for it, but it would not have caused elevated ketones in the blood or urine. Metabolic acidosis occurs as the result of any alteration of metabolism that causes the blood to become more acid than normal. There are

many pathways to metabolic acidosis. The acidosis produced by elevated ketones in the blood is one of those pathways and is known as ketoacidosis. Other pathways including the one that zonisamide may trigger may also lead to metabolic acidosis, but not by causing elevated ketones in the blood or urine. Therefore, the fact that Mr. [REDACTED] was taking zonisamide as an anticonvulsant medication has no bearing whatsoever on the presence of ketones in his blood or urine.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "W. Carl Cooley".

W. Carl Cooley, MD

Adjunct Professor of Pediatrics; Geisel School of Medicine at Dartmouth
Chief Medical Officer, Crotched Mountain Foundation