Types of Error, Definitions with example

TYPE OF ERROR	DEFINITION WITH EXAMPLE
Coding error	Any error resulting from dissonance between the rules established in the expert rule book at the time of model design and the output resulting from a faulty coding during model programming. For example: Rule states that mean arterial blood pressure (MAP) should increase by one level (from red to yellow or from yellow to white range) after administration of vasopressors. If the reason for inaccurate prediction was found to be a discrepancy between the expert rule and programing code, it would be considered as a coding error.
Expert rule error	Any error resulting from an inaccurate, imprecise, or incomplete expert rule used at the time of model design. For example: Use of sodium bicarbonate in a patient with severe metabolic acidosis will result in only transient improvement in pH. If the model showed a prolonged effect after a single dose of sodium bicarbonate, it was considered as an expert rule error.
Unaccounted error secondary to a known medication	Any error resulting as a result of unaccounted co-administration of a known medication.. For example: based on the expert rule, administration of propofol to a critically ill patient should result in a drop in GCS as well as a drop in MAP. However, if phenylephrine was administrated at the same time as propofol, a drop in MAP would have not occurred. This would be considered as unaccounted error secondary to a known medication.

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Electronic health record error	Any error resulting from a faulty data point capture from the electronic medical record (EHR). For example: if the EHR documented use of metoprolol in a patient (real patient) with atrial fibrillation but the patient actually did not receive the drug at the time that was recorded (charting error), then this would be considered as an EHR error..
Timing error	Any error resulting in a discrepancy with regards to intervention and response time. For example: based on the expert rules with renal replacement therapy we expect hyperkalemia to improve gradually over 2 hours from red to yellow and yellow to white. If however in the model output hyperkalemia resolved within minutes of renal replacement, it was counted as timing error.
Error Secondary to pre-existing illness	Any error resulting in a model output and real patient discrepancy due to an effect of pre-existing illness. For example: lack of improvement in AKI (to a normal level of creatinine in virtual patient) after IV fluids in a patient with CKD (with baseline elevated creatinine in real patient).
Unknown error	An error which did not fit into any of the above mentioned categories.