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The California Malpractice Cap on Noneconomic Losses: Unintended Consequences and Arguments for Reform

Jack Needleman, PhD, FAAN
UCLA Fielding School of Public Health

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ABSTRACT

In 1975, a cap of $250,000 was adopted by California on noneconomic losses in malpractice cases. It was imposed in a time of perceived crisis, when state legislators and others believed rising malpractice premiums and risk of lawsuit would encourage physicians to retire from practicing medicine and would raise overall medical costs through defensive medicine. Since the adoption of the cap, two arguments have been put forward as reasons to revise or eliminate it: The first is that the lack of adjustment to reflect inflation or the growth of household incomes is inequitable, because it lowers the real value of the reward — which in current dollars, could be as much as $1.5 million; the second is that the cap, by lowering the risk of suit for malpractice, also weakens the deterrent effect of risk of suit on physician efforts to avoid malpractice. The best available research suggests imposing caps is associated with a 16% increase in adverse events, and several approaches to applying this to California data are suggested or implemented. The estimated additional costs due to loss of deterrence are a significant offset to the potential costs of higher and more frequent claims were the cap to be eliminated or raised to reflect inflation.

HISTORY OF THE CALIFORNIA MALPRACTICE CAP ON NONECONOMIC LOSSES

Concern has been raised through the years about the costs of medical malpractice claims and the implication for higher health care costs, such as increased premiums and defensive medicine, retirements by physicians in the face of increased practice costs, and loss of access for patients who physicians would consider at higher risk of bringing suit.[1-4]

In response to those concerns, states have considered a variety of mechanisms to reduce the frequency of claims and costs of successful suits. California was among the early adopters of such legislation. In 1975, it enacted the Medical Injury Compensation Reform Act which, among other provisions, established a cap of $250,000 on noneconomic damages that could be awarded in malpractice cases.[5] No provision was made for indexing the cap level for inflation or growth in household income.

Since its adoption, arguments to eliminate or adjust the cap for inflation have been made on the basis of both equity and to increase the deterrence of malpractice.

This paper briefly examines the equity claims and then provides a more extensive analysis of the research on loss of deterrence due to tort reform or capping malpractice liability for noneconomic losses and the application of this research to California.

EQUITY CONSIDERATIONS OF AN UNADJUSTED CAP

In the decades since the cap on noneconomic losses of $250,000 was adopted, it has not been adjusted to reflect changes in inflation or household incomes. The lack of adjustment has been challenged as inequitable, lowering the real value of any potential awards. Between November 1975 and November 2021, the Consumer Price Index (CPI) increased by a factor 5.03.[6] If the cap had been adjusted based on CPI to maintain its purchasing power, its current value would be $1.257 million. Given the cap addresses noneconomic losses, perhaps a better measure of the value of the cap would be the ratio of the cap to household income. In 1975, the cap of $250,000 was 19.5 times the median California household income of $12,778.[7] If the cap had been adjusted to maintain the ratio of value to household income, its current value would be $1.5 million.

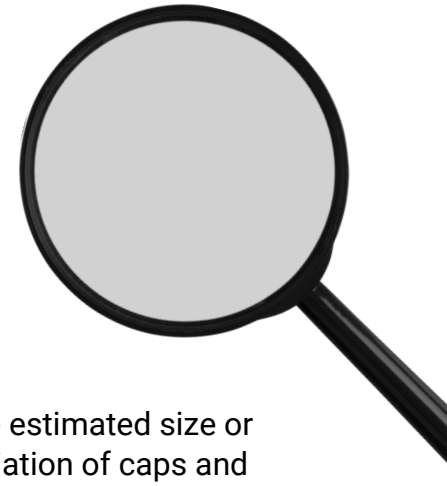
If the $250,000 cap had been indexed for inflation to maintain purchasing power, at the end of 2021 it would have been $1.257 million.

THE LOSS OF DETERRENT EFFECT ASSOCIATED WITH A CAP

The key argument for a cap on malpractice awards is that the caps lower malpractice risk and premiums. The lower premiums and lower risk reduce practice costs, reduce the incentive for defensive medicine such as unneeded diagnostic testing (which increases overall health care costs), and reduce the incentive for physicians to leave practice. But imposing a cap on awards also reduces the incentive to avoid malpractice. If the incentive to reduce malpractice is weakened, and malpractice rates increase, this raises the potential costs to patients and insurers as well as increasing potential noneconomic losses for patients.

Assessing the magnitude and impact of the loss of deterrence associated with a cap or other tort reforms is challenging. Malpractice, while economically and personally significant to the families experiencing it, is rare. Studying changes in rates and costs associated with policies that influence rare events requires data on large numbers of patients and substantial and clear variation in policy whose impact can be assessed. And since adverse events can result from other factors than malpractice or error, malpractice can also be hard to discern in the data sets available to conduct research on large population samples.

The basic strategy for assessing the impact of policy on malpractice rates is to look for differences in rates of adverse events among patients, some but not all of which may be due to malpractice. Because these signals can be statistically noisy, larger samples are needed than would be required to assess differences in rare events that were more clearly identifiable as malpractice. When analyzing infrequent events, appropriate pooling of patients and outcomes in analysis may also be needed to have sufficient power to detect the impact of policy on deterrence.



"When analyzing infrequent events, appropriate pooling of patients and outcomes in analysis may also be needed to have sufficient power to detect the impact of policy on deterrence."

A substantial number of studies have sought to assess the impact of loss of deterrence. A 2020 study by Mello and colleagues compiled a list of 37 research studies for a systematic review that examined the association of indicators of malpractice liability risk and indicators of health care quality and safety.[8] Eighteen looked at the impact of various measures of tort reform, including caps on noneconomic damages. Eight of these focused only on obstetrical outcomes, one only on mortality associated with accidents. The other nine looked at a wider range of measures in a variety of samples: some limited to Medicare populations; some limited to a narrow range of outcomes, such as mortality or readmissions associated with specific diagnoses; and some to general measures of hospital performance, such as rankings in the Centers for Medicare & Medicaid Services' Hospital Compare system. Because of the narrow range of patients and outcomes examined and data sets, sample sizes for both hospitals and patients were limited and sometimes small.

Mello and colleagues concluded "most studies suggest that higher risk of malpractice liability is not significantly associated with improved health care quality" and "Because only a limited number of studies addressed care delivered in [non-obstetrical] settings, it is not possible to draw conclusions about the deterrence in those clinical contexts."[8, page 364] Significance in the conclusion is statistical significance, and not a statement of the estimated size or direction of the association of caps and quality. The conclusions reflect the limitations in sample size, range of outcomes examined, and the inability to pool results in a meta-analysis, each of which makes drawing conclusions difficult, a problem noted in an editorial that accompanied the Mello et al. paper.[9] Focusing on lack of statistical significance, that is, the inability to reject a null hypothesis of no effect because of the uncertainty in a noisy estimate from a limited sample, can result in undervaluing the overall effects of the full set of studies. In fact, in all but one study, the estimates that lowered malpractice exposure due to tort reform were consistent with lower exposure being associated with poorer quality and higher potential rates of malpractice.

A study by Zabinski and Black[10] included in the Mello et al. review addresses many of the concerns that limit the ability to observe an association of tort reform and deterrence. For many reasons, it is the study most likely to find a deterrent effect if one exists. It is a large study, using patient discharge data from 31 states over an 11-year period from 1999–2010. During that period five states of the 31 enacted caps on noneconomic damages. The caps ranged from $250,000 to $500,000 in four of the states, and higher limits were adopted in Florida, so these caps are similar to but somewhat less stringent than those in California.

Because data is available for the states adopting caps before and after adoption, their pre-adoption and post-adoption experience can be examined and compared to the experience over the same time period of states that did not change their malpractice environment. This design model, termed difference-in-difference in the econometric literature, is one of the strongest models for drawing causal inference from observational data. This approach, by looking at the impact of time-specific changes in policy, is stronger than that of other studies in the Mello review that simply compared experience across states with and without different tort reform regimes. Also, because the policies examined are specifically caps on noneconomic damages, the analysis is directly relevant to California debates on changing malpractice caps.

(The authors, in discussing the limitations of their study, note that with a limited sample of states, the standard methods for calculating standard errors may be unreliable. They specifically implemented methods to address this issue.)

The authors use a broad range of 22 patient safety measures developed for the Agency for Healthcare Research and Quality (AHRQ) that collectively apply to large samples of patients. Each of the events is rare, reducing the ability to infer impact from any one measure. The authors argue correctly that if liability reform is reducing attention and resources directed to quality, the effect should be broad and observed across different quality metrics. Outcomes will be correlated and the ability to infer impacts of policy enhanced by pooling results across measures. They conduct a wide range of specification and sensitivity checks to test the robustness of their findings. These checks strengthen the conclusion that the findings of the impact of imposing the caps are real and causal.

Zabinski and Black find that state adoption of caps on noneconomic damages in medical malpractice lawsuits is associated with higher rates of preventable adverse patient safety events in hospitals. Based on their analysis of their composite measures, they estimate a 16% increase in these adverse events. Their measures are hospital measures, and as a further check, they compare the changes they observe in the hospital measures to estimates of changes in annual medical malpractice payouts per physician in the states post-reform. They estimate a 31% reduction in payouts per physician in the post-cap period.

APPLICATION OF ZABRINSKI AND BLACK, "THE DETERRENT EFFECT OF TORT LAW: EVIDENCE FROM MEDICAL MALPRACTICE" TO CALIFORNIA

The key conclusion of the Zabrinski and Black analysis is that the introduction of caps on noneconomic damages are associated with a 16% increase in adverse events. Given this, it is likely that repeal of a cap on noneconomic damages would increase attention to patient safety and lead to reduction of adverse patient events. These changes would be associated with cost savings to payers and patients, and reduced economic and noneconomic damages that improve the life and health of patients.

Some of those savings would accrue to the state of California as the health insurer for the Medi-Cal, CalPERS, and University of California populations. Estimating those savings is challenging because there are no comprehensive, authoritative measures of the extent of malpractice or avoidable adverse events. In this section, we offer several approaches to estimating the effect of eliminating the cap on noneconomic damages.

One approach, beyond the scope of this paper because the data is not available to the author, is to use the California state inpatient database to identify the admissions with the patient safety events for each AHRQ PSI used by Zabrinski and Black, to estimate the higher cost of admissions with these safety events compared to those without (an approach that has been widely used in the field, see, e.g., Needleman et al., Health Affairs 2006 [11]), add up the additional hospital costs by payer, and reduce them by 16% to estimate the reduction. It should be noted that this estimate will underestimate the total value of the reduction in adverse events because it does not include savings in physician costs, costs of other health care to address adverse events such as rehabilitation or home health services, or non-health care economic costs such as lost wages or the economic value of lost lives or long-term disability.

A second approach is to expand upon the analysis of proposed impacts of legislation to repeal the cap on noneconomic losses and other changes in the Medical Injury Compensation Reform Act (MICRA) of the Legislative Analyst's Office.[5] That analysis estimated medical malpractice costs at one percent of state health spending, and that higher damages and changes in the number of claims associated with raising the cap would increase malpractice costs by 20%–30%, an estimate described as very rough. What is not considered in that analysis is deterrence due to increased liability exposure. Increasing the cap to reflect inflation since it was enacted, and indexing the increase the cap over time, rather than full repeal, would have a smaller impact than full repeal.

"...state adoption of caps on noneconomic damages in medical malpractice lawsuits is associated with higher rates of preventable adverse patient safety events in hospitals."

A third approach is to estimate malpractice expenses directly for Medi-Cal or other state payers. As noted above, it is a challenge to obtain full estimates of all claims involving malpractice. A lower bound estimate can be obtained from what are characterized as "never events," claims with diagnosis or procedure codes for serious incidents that are wholly preventable or avoidable. These include events such as wrong-site surgery, foreign bodies left in a patient after surgery, mismatched blood transfusions, hospital-acquired pressure ulcers, or infections.

A list of diagnoses that can be considered "never events" was provided to Medi-Cal. (The full list is in the Appendix.) The list was based on the list of reportable adverse events in the California Health and Safety Code Section 1279.1. Some reportable events would not be associated with a billable diagnoses or procedure (e.g., a sexual assault on a patient). For those that could be associated with a diagnosis code, however, we provided ICD10 codes. Medi-Cal identified 2018 billings with these diagnoses, and presented us with the estimated number of events in each category for fee-for-service beneficiaries and managed care beneficiaries, and the mean and median paid amount per event in fee-for-service. Table 1 presents analysis from this data with the number of events in fee-for-service and managed care, the total paid amount in fee for service, and an imputed amount for the cost to managed care providers of these events if the amount in managed care was equivalent to the per event fee-for-service amount.

The costs of these "never events" to Medi-Cal, a limited portion of the likely malpractice burden on the Medi-Cal population and program, are substantial. While there are few events in the surgical or environmental event categories, there are many events in the care

management category (which includes transfusion errors and pressure ulcers). The paid amount per discharge associated with these events is $8,091. The number of events associated with childbirth is also high, with the average paid amount $1,909. There is a small number of events associated with products or devices, but the average paid amount for each event is $61,728.

The estimated total paid amount for Fee-for-Service beneficiaries is nearly $791 million. If this is projected to managed care, the total estimated cost is $1.5 billion. A 16% reduction in these amounts would save Medi-Cal $245 million. This analysis can be extended to claims to other state-paid health care programs including the California Public Employees' Retirement System (CalPERS) and for employees of the UC system. We would anticipate comparable savings. These are direct expenses of the state for medical care. There would be additional reductions in economic losses and noneconomic losses for patients and their families.

Table 1. Count of Medi-Cal Beneficiaries and Total Paid amounts (Fee-for-Service) for Claims with the Provided Diagnoses, Grouped by Diagnostic Category in 2018				
"Never event" Category	**Count of Beneficiaries – Fee-for-Service**	**Count of Beneficiaries – Managed Care**	**Paid Amount Fee-for-Service**	**Total with Paid Amount Per Event in Fee for Service Applied to Managed Care**
1-Surg_Events	**	**	**	**
2-Prod_Events	952	1,835	58,765,284	172,036,604
3-Care_Mgt_Events	79,239	61,505	641,156,618	1,138,819,861
5-Envrmt_Events	*	*	*	*
Childbirth-Related Events	47,593	66,755	90,855,037	218,290,332
Total	127,784	130,095	790,776,939	1,529,146,798

*' small cells (<11) values are supressed

**' complimentary cells values are suppressed

CONCLUSION

The cap of $250,000 adopted by California in 1975 on noneconomic losses in malpractice cases was imposed in a time of perceived crisis, with rising malpractice premiums and risk of lawsuit believed to encourage physicians to retire from practice and raise overall medical costs through defensive medicine. There are two arguments to eliminate or adjust the cap. The first is that the lack of adjustment to reflect inflation or the growth of household incomes (and thus the value of noneconomic losses) since 1975 is inequitable, even if the appropriateness of the cap is accepted.

The second argument is that the estimate of the costs and gains of the cap have not been properly balanced because the value of the deterrence of malpractice was not fully considered in 1975 and research to assess the deterrence effect was not available. That deficit in research has been addressed in spite of the challenges of rare events and small samples. The best available research on deterrence associated specifically with caps on noneconomic losses is that of Zabrinski and Black. They estimate introducing a cap, as has been done by five states in their analysis between 2003 and 2005, led to increases in the adverse events they analyzed by 16%. That amount represents a significant offset to the potential costs of higher and more frequent claims were the cap to be eliminated or raised to reflect inflation.

ABOUT THE AUTHOR

Jack Needleman, PhD, FAAN, is the Fred W. and Pamela K. Wasserman Professor and Chair of the Department of Health Policy and Management at the University of California Los Angeles (UCLA) Fielding School of Public Health. Before joining the UCLA faculty in 2003, he was on the faculty at the Harvard School of Public Health, after earlier receiving his PhD from Harvard University in Public Policy. Prior to that, he was co-director of what is now the Lewin Group, a Washington-DC health policy research and consulting firm. Dr. Needleman is an elected member of the National Academy of Medicine.

Dr. Needleman's research focuses on the impact public policy and changing health care markets have on quality and access to care; and health care provider and insurer responses to market and regulatory incentives. He has extensive experience in the design and conduct of research on the quality and cost of health care, health care system economic performance, health care payment, and community impacts of health care. Dr. Needleman's other work has examined the organization and management of hospitals, including hospital mergers and transitions in mental health services. His work on quality measurement has been used by the U.S. Centers for Medicare and Medicaid Policy, the Joint Commission, and the U.S. National Quality Forum (NQF). Dr. Needleman was lead author on three publications analyzing quality of care and nurse staffing that were designated patient safety classics by the Agency for Healthcare Research and Quality (AHRQ).

Note: Affiliation for identification purposes only. Analysis and opinions are those of the author and should not be attributed to UCLA or any of its units.

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APPENDIX

ADVERSE "NEVER EVENT" CODES ANALYZED BY MEDI-CAL

(1) Surgical events:
Y65.53 – Perform of correct procedure (op) on wrong side or body part
Y65.52 – Perform of proc (op) on patient not scheduled for surgery
Y65.51 – Performance of wrong procedure (op) on correct patient
T81.500A – Foreign body accidentally left during a procedure
T81.501A – Acute reaction to foreign substance accidentally left during a procedure
T81.502A – Foreign object left in body during surgical operation
T81.503A – Foreign object left in body during infusion or transfusion
T81.504A – Foreign object left in body during kidney dialysis or other perfusion
T81.505A – Foreign object left in body during injection or vaccination
T81.506A – Foreign object left in body during endoscopic examination
T81.507A – Foreign object left in body during aspiration of fluid or tissue, puncture, and catheterization
T81.508A – Foreign object left in body during heart catheterization
T81.509A – Foreign object left in body during removal of catheter or packing
T81.510A – Foreign object left in body during other specified procedures
T81.511A – Foreign object left in body during unspecified procedure

(2) Product or device events:
Y64.9 – Contaminated medical or biological substance administered by unspecified means
Y64.0 – Contaminated med/biology sub, transfused or infused
Y64.1 – Contaminated medical or biological substance, injected or used for immunization
Y64.8 – Contaminated medical or biological substance administered by other means
T80.211A – Other and unspecified infection due to central venous catheter
T80.218A – Bloodstream infection due to central venous catheter
T82.518A – breakdown of cardiac and vascular devices and implants
T82.599A – Mechanical complication of unspecified cardiac and vascular devices and implants
T82.595A – Mechanical complication of umbrella device, initial encounter
T82.595D – Other mechanical complication of umbrella device, subsequent encounter
T82.595S – Other mechanical complication of umbrella device, sequela
T82.539A – Leakage of unspecified cardiac and vascular devices and implants, initial encounter
T82.539D – Leakage of unspecified cardiac and vascular devices and implants, subsequent encounter
T82.539S - Leakage of unspecified cardiac and vascular devices and implants, sequela
T83.39 – Other mechanical complication of intrauterine contraceptive device
T85.521 – Displacement of esophageal anti-reflux device
088.019– Air embolism in pregnancy
088.03 – Air embolism in the puerperium
T79.0XX – Air embolism (traumatic)
T80.0 – Air embolism following infusion, transfusion and therapeutic injection
004.7 – Embolism following (induced) termination of pregnancy

(3) Patient protection events (no ICD-10 codes)

(4) Care management events:

Y65 – Other misadventures during surgical and medical care
Y65.0 – Mismatched blood in transfusion
Y65.1 – Wrong fluid used in infusion
Y65.3 – Endotracheal tube wrongly placed during anesthetic procedure
Y63 – Failure in dosage during surgical and medical care
Y63.0 – Excessive amount of blood or other fluid given during transfusion or infusion
Y63.1 – Incorrect dilution of fluid used during infusion
Y63.2 – Overdose of radiation given during therapy
Y63.3 – Inadvertent exposure of patient to radiation during medical care
Y63.4 – Failure in dosage in electroshock or insulin-shock therapy
Y63.5 – Inappropriate temperature in local application and packing
Y63.6 – Underdosing and nonadministration of necessary drug, medicament or biological substance
Y63.8 – Failure in dosage during other surgical and medical care
T80.31 – ABO incompatibility with hemolytic transfusion reaction
T80.310 – ABO incompatibility with acute hemolytic transfusion reaction
T80.310A – ABO incompatibility with acute hemolytic transfusion reaction, initial encounter
T80.310D – ABO incompatibility with acute hemolytic transfusion reaction, subsequent encounter
T80.310S – ABO incompatibility with acute hemolytic transfusion reaction, sequela
T80.311 – ABO incompatibility with delayed hemolytic transfusion reaction
T80.311A – ABO incompatibility with delayed hemolytic transfusion reaction, initial encounter
T80.311D – ABO incompatibility with delayed hemolytic transfusion reaction, subsequent encounter
T80.311S – ABO incompatibility with delayed hemolytic transfusion reaction, sequela
T80.319 – ABO incompatibility with hemolytic transfusion reaction, unspecified
T80.319A – ABO incompatibility with hemolytic transfusion reaction, unspecified, initial encounter
T80.319D – ABO incompatibility with hemolytic transfusion reaction, unspecified, subsequent encounter
T80.319S – ABO incompatibility with hemolytic transfusion reaction, unspecified, sequela
O29 – Complications of anesthesia during pregnancy
O29.90 – Unspecified complication of anesthesia during pregnancy, unspecified trimester
O74 – Maternal complications arising from the administration of a general, regional or local anesthetic, analgesic or other sedation during labor and delivery
O74.1 – Obstetrical pulmonary complication of anesthesia and/or sedation, Pulmonary complication of obstetric anesthesia in childbirth
O74.2 – Cardiac complication of obstetric anesthesia in childbirth, Obstetric anesthesia with cardiac complication in childbirth
O74.3 – Central nervous system complication of obstetric anesthesia in childbirth, Obstetric anesthesia with central nervous system complication in childbirth
O75 – Other complications of labor and delivery, not elsewhere classified
O75.9 – Complication of labor and delivery, unspecified
O69.5 – Labor and delivery complicated by vascular lesion of cord
O69.9XX9 – Labor and delivery complicated by cord complication, unspecified, other fetus

P57 – Kernicterus
P57.0 – Kernicterus due to isoimmunization
P57.8 – Other specified kernicterus
P57.9 – Kernicterus, unspecified
P58 – Neonatal jaundice due to other excessive hemolysis
P58.0 – Neonatal jaundice due to bruising
P58.1 – Neonatal jaundice due to bleeding
P58.2 – Neonatal jaundice due to infection
P58.3 – Neonatal jaundice due to polycythemia
P58.4 – Neonatal jaundice due to drugs or toxins transmitted from mother or given to newborn
P58.41 – Neonatal jaundice due to drugs or toxins transmitted from mother
P58.42 – Neonatal jaundice due to drugs or toxins given to newborn
P58.5 – Neonatal jaundice due to swallowed maternal blood
P58.8 – Neonatal jaundice due to other specified excessive hemolysis
P58.9 – Neonatal jaundice due to excessive hemolysis, unspecified
P59 – Neonatal jaundice from other and unspecified causes
P59.0 – Neonatal jaundice associated with preterm delivery
P59.1 – Inspissated bile syndrome
P59.2 – Neonatal jaundice from other and unspecified hepatocellular damage
P59.20 – Neonatal jaundice from unspecified hepatocellular damage
P59.29 – Neonatal jaundice from other hepatocellular damage
P59.3 – Neonatal jaundice from breast milk inhibitor
P59.8 – Neonatal jaundice from other specified causes
P59.9 – Neonatal jaundice, unspecified
L89.003 – Pressure ulcer of unspecified elbow, stage 3
L89.004 – Pressure ulcer of unspecified elbow, stage 4
L89.103 – Pressure ulcer of unspecified part of back, stage 3
L89.104 – Pressure ulcer of unspecified part of back, stage 4
L89.113 – Pressure ulcer of right upper back, stage 3
L89.114 – Pressure ulcer of right upper back, stage 4
L89.123 – Pressure ulcer of left upper back, stage 3
L89.124 – Pressure ulcer of left upper back, stage 4
L89.133 – Pressure ulcer of right lower back, stage 3
L89.134 – Pressure ulcer of right lower back, stage 4
L89.143 – Pressure ulcer of left lower back, stage 3
L89.144 – Pressure ulcer of left lower back, stage 4
L89.153 – Pressure ulcer of sacral region, stage 3
L89.154 – Pressure ulcer of sacral region, stage 4
L89.203 – Pressure ulcer of unspecified hip, stage 3
L89.204 – Pressure ulcer of unspecified hip, stage 4
L89.213 – Pressure ulcer of right hip, stage 3
L89.214 – Pressure ulcer of right hip, stage 4
L89.223 – Pressure ulcer of left hip, stage 3
L89.224 – Pressure ulcer of left hip, stage 4
L89.303 – Pressure ulcer of unspecified buttock, stage 3

L89.304 – Pressure ulcer of unspecified buttock, stage 4
L89.313 – Pressure ulcer of right buttock, stage 3
L89.314 – Pressure ulcer of right buttock, stage 4
L89.323 – Pressure ulcer of left buttock, stage 3
L89.324 – Pressure ulcer of left buttock, stage 4
L89.43 – Pressure ulcer of contiguous site of back, buttock and hip, stage 3
L89.44 – Pressure ulcer of contiguous site of back, buttock and hip, stage 4
L89.503 – Pressure ulcer of unspecified ankle, stage 3
L89.504 – Pressure ulcer of unspecified ankle, stage 4
L89.513 – Pressure ulcer of right ankle, stage 3
L89.514 – Pressure ulcer of right ankle, stage 4
L89.523 – Pressure ulcer of left ankle, stage 3
L89.524 – Pressure ulcer of left ankle, stage 4
L89.603 – Pressure ulcer of unspecified heel, stage 3
L89.604 – Pressure ulcer of unspecified heel stage 4
L89.613 – Pressure ulcer of right heel, stage 3
L89.614 – Pressure ulcer of right heel, stage 4
L89.623 – Pressure ulcer of left heel, stage 3
L89.624 – Pressure ulcer of left heel, stage 4
L89.813 – Pressure ulcer of head, stage 3
L89.814 – Pressure ulcer of head, stage 4
L89.893 – Pressure ulcer of other site, stage 3
L89.894 – Pressure ulcer of other site stage 4
L89.93 – Pressure ulcer of unspecified site, stage 3
L89.94 – Pressure ulcer of unspecified site, stage 4
G95.11 - Acute infarction of spinal cord (embolic) (nonembolic)

(5) Environmental events:
T41 – Poisoning by, adverse effect of and underdosing of anesthetics and therapeutic gases
T41.5X – Poisoning by, adverse effect of and underdosing of therapeutic gases
T41.5X5 – Adverse effect of therapeutic gases
T41.5X5A – Adverse effect of therapeutic gases, initial encounter
T41.5X5D – Adverse effect of therapeutic gases, subsequent encounter
T41.5X5S – Adverse effect of therapeutic gases, sequela

(6) Criminal events (no ICD-10 codes)

(7) An adverse event or series of adverse events that cause the death or serious disability of a patient, personnel, or visitor (no ICD-10 codes)

Childbirth related codes:
P10 – Intracranial laceration and hemorrhage due to birth injury
P10.0 – Subdural hemorrhage due to birth injury
P10.1 – Cerebral hemorrhage due to birth injury
P10.2 – Intraventricular hemorrhage due to birth injury

10.3 – Subarachnoid hemorrhage due to birth injury
P10.4 – Tentorial tear due to birth injury
P10.8 – Other intracranial lacerations and hemorrhages due to birth injury
P10.9 – Unspecified intracranial laceration and hemorrhage due to birth injury
P11 – Other birth injuries to central nervous system
P11.0 – Cerebral edema due to birth injury
P11.1 – Other specified brain damage due to birth injury
P11.2 – Unspecified brain damage due to birth injury
P11.3 – Birth injury to facial nerve
P11.4 – Birth injury to other cranial nerves
P11.5 – Birth injury to spine and spinal cord
P11.9 – Birth injury to central nervous system, unspecified
P14 – Birth injury to peripheral nervous system
P14.0 – Erb's paralysis due to birth injury
P14.1 – Klumpke's paralysis due to birth injury
P14.2 – Phrenic nerve paralysis due to birth injury
P14.3 – Other brachial plexus birth injuries
P57 – Kernicterus
P57.0 – Kernicterus due to isoimmunization
P57.8 – Other specified kernicterus
P57.9 – Kernicterus, unspecified
P91 – Other disturbances of cerebral status of newborn
P91.6 – Hypoxic ischemic encephalopathy [HIE]
P91.60 …… unspecified
P91.61 – Mild hypoxic ischemic encephalopathy [HIE]
P91.62 – Moderate hypoxic ischemic encephalopathy [HIE]
P91.63 – Severe hypoxic ischemic encephalopathy [HIE]
A34 Obstetrical tetanus
O03.37 – Sepsis following incomplete spontaneous abortion
O03.87 – Sepsis following complete or unspecified spontaneous abortion
O04.87 – Sepsis following (induced) termination of pregnancy
O07.37 – Sepsis following failed attempted termination of pregnancy
O08.82 – Sepsis following ectopic and molar pregnancy
O86.04 – Sepsis following an obstetrical procedure
O14 – Pre-eclampsia
O14.0 – Mild to moderate pre-eclampsia
O14.00 …… unspecified trimester
O14.02 …… second trimester
O14.03 …… third trimester
O14.04 …… complicating childbirth
O14.05 …… complicating the puerperium
O14.1 – Severe pre-eclampsia
O14.10 …… unspecified trimester
O14.12 …… second trimester
O14.13 …… third trimester

O14.14 …… complicating childbirth
O14.15 …… complicating the puerperium
O14.2 – HELLP syndrome
O14.20 …… (HELLP), unspecified trimester
O14.22 …… (HELLP), second trimester
O14.23 …… (HELLP), third trimester
O14.24 …… complicating childbirth
O14.25 …… complicating the puerperium
O14.9 – Unspecified pre-eclampsia
O14.90 …… unspecified trimester
O14.92 …… second trimester
O14.93 …… third trimester
O14.94 …… complicating childbirth
O14.95 …… complicating the puerperium
O15 – Eclampsia
O15.0 – Eclampsia complicating pregnancy
O15.00 …… unspecified trimester
O15.02 …… second trimester
O15.03 …… third trimester
O15.1 – Eclampsia complicating labor
O15.2 – Eclampsia complicating the puerperium
O15.9 – Eclampsia, unspecified as to time period
O20 – Hemorrhage in early pregnancy
O20.0 – Threatened abortion
O20.8 – Other hemorrhage in early pregnancy
O20.9 – Hemorrhage in early pregnancy, unspecified
O88.2 – Obstetric thromboembolism
O88.21 – Thromboembolism in pregnancy
O88.211 …… first trimester
O88.212 …… second trimester
O88.213 …… third trimester
O88.219 …… unspecified trimester
O88.22 – Thromboembolism in childbirth
O88.23 – Thromboembolism in the puerperium
O99.4 – Diseases of the circulatory system complicating pregnancy, childbirth and the puerperium
O99.41 – Diseases of the circulatory system complicating pregnancy
O99.411 …… first trimester
O99.412 …… second trimester
O99.413 …… third trimester
O99.419 …… unspecified trimester
O99.42 – Diseases of the circulatory system complicating childbirth
O99.43 – Diseases of the circulatory system complicating the puerperium

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