



Clinical Policy: Umbilical Cord Blood Storage

Reference Number: HNCA.CP.MP.177

Effective Date: 09/04

Last Review Date: 3/19

[Coding Implications](#)

[Revision Log](#)

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Description

Umbilical cord blood, which contains a large number of hematopoietic stem cells, has been used successfully for allogeneic (related or unrelated) transplantation to treat a variety of pediatric genetic, hematologic, and oncologic disorders. If autologous (self) marrow is not available, the best option for successful reconstitution therapy is to secure marrow from a sibling with an identical HLA (human leukocyte antigen) match. Close matching is important to achieve successful engraftment and to minimize the risk of potentially fatal graft-vs-host disease. Cord blood is a potential alternative when autologous or allogeneic transplantation with HLA - matched marrow is unavailable for children.

Policy/Criteria

- I. It is the policy of Health Net of California that testing umbilical cord blood is considered medical necessary for the following indications:
 - A. for compatibility for transplant when a covered family member of a newborn infant has certain conditions (e.g., leukemia, aplastic anemia and certain inherited metabolic disorders) that may be effectively treated by an allogeneic bone marrow transplant.
 - B. for short-term storage of umbilical cord blood for a plan member with a malignancy undergoing treatment when there is a match. It is not covered if the intended recipient is not covered by the plan.
- II. It is the policy of Health Net of California that prophylactic collection and storage of cord blood from the placenta when proposed for some unspecified future use is considered not medically necessary. Charges to randomly freeze and/or store umbilical cord blood for possible future use are also not covered.

Background

The American College of Obstetricians and Gynecologists (ACOG) updated their Committee Opinion on Umbilical Cord Banking (Number 771) in 2019 stating that the decision to harvest and store umbilical cord blood needs to be made with balanced and accurate information regarding the advantages and disadvantages of public and private banking as well as consideration of the clinical instances in which this blood can be utilized and the associated costs. Most conditions potentially treated by a patient's own umbilical cord blood already exist in his or her own cells, and therefore, the stored blood cannot be used to treat the same individual. The chance of an autologous unit of umbilical cord blood being used for a child or family member is remote, unless a family member is known to have a medical condition that could be treated with transplant, and this fact should be disclosed to the patient. Directed cord blood banking should be encouraged when there is knowledge of a full sibling in the family with a medical condition that could benefit from cord blood transplantation.

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The American Academy of Pediatrics (AAP) (Shearer, et al 2017) recently updated their recommendation 2017. They recommend the use of public cord blood banking as the preferred method of collecting, processing, and using cord blood cells for use in transplantation in infants and children with fatal diseases, such as malignancies, blood disorders, immune deficiencies, and metabolic disorders. They note that physicians need to convey accurate information about the potential benefits and limitations of allogeneic and autologous cord blood banking and transplantation to parents, including that autologous cord blood would not be used as a stem cell source if the donor developed leukemia later in life. It is important for parents to be aware that at this time, there are no scientific data to support the claim that autologous cord blood is a tissue source proven to be of value for regenerative medical purposes.

In 2008, the American Society for Blood and Marrow Transplantation (ASBMT) published the recommendations encouraging the use of public rather than private banking, noting that the likelihood of stored blood being used from transplantation is very low. They note family member banking may be recommended for a newborn who has a sibling with a disease that can be successfully treated with transplantation. Family member banking on behalf of a parent with a disease that may be treated successfully with allogeneic transplant is only recommended when there are shared HLA-antigens between the parents.

Coding Implications

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ICD-10-CM Diagnosis

ICD-10-CM Codes	Description
Z52.001	Unspecified donor, stem cells
Z52.011	Autologous donor, stem cells
Z52.092	Other blood donor, stem cells

HCPCS Codes	Description
S2140	Cord blood harvesting for transplantation, allogeneic
S2142	Cord blood-derived stem-cell transplantation, allogeneic



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CPT Codes	Description
38205	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; allogeneic
38206	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous
38207	Transplant preparation of hematopoietic progenitor cells; cryopreservation and storage
88240	Cryopreservation, freezing and storage of cells, each cell line

Reviews, Revisions, and Approvals	Date	Approval Date
Initial Review	09/04	09/04
Annual Review March 2007 – March 2016		03/16
Updated References	03/18	03/18
Updated References (ACOG, AAP, ASBMT)	03/19	03/19

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Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy,



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contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

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Note: For Medicaid members, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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The benefits and limitations of public versus private umbilical cord blood banking should be reviewed with the patient because they serve different purposes. This patient discussion also should include the concept of autologous and allogeneic use of umbilical cord blood. Umbilical cord blood collected from a neonate cannot be used to treat a genetic disease or malignancy in that same individual (autologous transplant) because stored cord blood contains the same genetic variant or premalignant cells that led to the condition being treated ([6](#), [7](#)). The estimated lifetime probability of an individual to develop an indication for autologous umbilical cord blood transplant ranges from 1 in 400 to 1 in 2,500 ([8-10](#)). Private banks advertise directly to consumers and often encourage parents to bank their infants' umbilical cord blood as a form of "biological insurance" against future disease. Such routine storage of umbilical cord blood for this purpose is not recommended by the American Academy of Pediatrics, given the lack of scientific data to support its use and availability of allogeneic transplantation ([6](#)); the American College of Obstetricians and Gynecologists concurs with this recommendation. Further, there is no current evidence to support the use of an autologous umbilical cord blood sample in regenerative medicine. The routine collection and storage of umbilical cord blood with a private cord blood bank is not supported by the available evidence ([6](#)).

The current indications for umbilical cord blood transplantation are limited to select genetic, hematologic, and malignant disorders. Private umbilical cord blood banking may be considered when there is knowledge of a family member with a medical condition (malignant or genetic) who could potentially benefit from cord blood transplantation. Patients should be made aware of the quality control and regulatory organizations that provide oversight for the process of umbilical cord collection and storage ([6](#), [11](#)). Private umbilical cord banks are not subject to the same regulatory mechanisms as public umbilical cord blood banks and may not produce samples that meet the expected standards, with resultant decreased usefulness ([12](#)). Health care providers also should review the financial obligation for processing and the annual storage fees related to private and public umbilical cord blood banks