Infant Smiling Coding System   (Brock, Rothbart, & Derryberry, 1986)

This code offers three degrees of smile size: small, medium, and large. The major defining characteristic of this code is corner retraction.

Small - The "Simple Smile"
The Mouth:
1. There is a slight, but definite retraction of the mouths corners.
2. There is no jaw drop, but there may be a slight mouth opening.
Other Facial Behaviors:
1. There is minimal involvement of the face.
2. There is little, if any, bulging of the cheeks.
3. The naso-labial fold is poorly defined and may not be seen at all.
4. The eyes do not squint and no pouches can be seen to form underneath them.

Medium
The Mouth:
1. Smiles of this degree exhibit marked corner retraction.
2. There may be slight jaw movement, and moderate mouth opening.
Other Facial Clues:
1. There is definite movement of the facial musculature.
2. There is slight to moderate bulging of the cheeks.
3. The naso-labial fold is seen although it may not be clearly defined.
4. The eyes are squinting slightly, and pouches can be seen to form underneath them.

Large – The "Laughing Smile"
The Mouth:
1. There is large upwards and backwards movement of the mouths corners.
2. There is often an obvious jaw drop, revealing a moderate to large mouth opening (and "open mouth smile").
Other Facial Clues:
1. There is dramatic movement of the facial musculature.
2. There may be prominent bulging of the cheeks.
3. The naso-labial fold should be clearly defined.
4. The eyes squint, and pouches can be seen to form underneath them.
Body Clues:
1. There may be movement of the body musculature.
2. Often accompanied by marked movement of the extremities

Behaviors to Look for When Coding Onset, Termination, and Size of Smiles

1. **Corner Retraction**: The basic defining characteristic of smiling is retraction of the mouth's corners. Corner retraction involves both upwards and backwards motions. It should be noted that there is a greater potential for backwards as opposed to upwards movement.
2. **Mouth Opening**: Many smiles involved dropping of the lower lip and/or jaw. In such "open mouth smiles," observation of degree of jaw movement (drop), will be helpful in determining the size of a given smile.
3. **The Cheeks**: There are other facial behaviors that characteristically accompany smiling. Knowledge of these "smiling behaviors" can be helpful in determining smile onset, termination, and size. Bulging of the cheeks due to retraction of the mouth's corners (smiling) may offer clues as to the size of smile. Smiling effects the cheeks such that the greater the degree of corner retraction, the more prominent the bulging of the cheeks.
4. **Naso-Labial Fold**: A related behavior is the naso-labial fold. Apparently implicated by changes in the cheeks due to retraction of the mouth's corners, this is a fold running from the wings of the nostrils to the corners of the mouth. Degree of definition of the naso labial fold offers a clue as to the size of a given smile.
5. **The Eyes**: Changes in the eyes such as squinting and the formation of pouches under the eyes, are also related to changes in the cheeks due to smiling. Observation of these behaviors may help in deciding whether an infant is smiling.
6. **The Body**: With larger smiles there may be marked movements of the extremities. However, because the infants in this study were strapped in their care seats, this should not be a heavily weighted factor.

Reference

Brock, S. E., Rothbart, M. K., & Derryberry, D. (1986). Heart-rate deceleration and smiling in 3-month-old infants. *Infant Behavior and Development, 9*, 403-414.