

Facemasks during COVID-19 and the importance of smiles in developmental assessment

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Wearing Personal Protective Equipment (PPE) including a mask, I try to elicit a social smile from a 7-week-old baby. Despite exaggerated cooing and wide smiley eyes on my part, it is unsuccessful. The carer reports that the baby has just started smiling at home with her. I step back, allow the carer to remove her mask and smile at the baby ... the baby responds with a grin happily!

There are parts of a developmental history and examination that we are used to taking on report from a child's carers—can they feed themselves with a spoon, for example. The social smile is not one of these. I would normally try to elicit it to be reassured that a baby was responding normally.

I am needing to change so many of my practices as a result of COVID-19. I have had to change the whole clinic setting—no toys, PPE, limited people in the room; the way I examine—social distance until physical contact is needed; the way I communicate to work round the face covering—increased body language, increased checking verbally back with people. Things we did automatically from years of practice all now have to be risk assessed and possibly altered. Eliciting that smile is one of them!

Does the fact that the baby cannot see our mouths behind a mask matter and will it affect their long-term development such as emotional processing? Babies have periods in their development when they are particularly interested in mouths—they reach out to touch a carer's mouth, they put objects to the mouth, they copy the movements made by others' mouths.

It is probably too early for any evidence on the long-term outcomes from this specific scenario. However, we know that institutionalised children devoid of carer interactions are more likely to have global developmental delay and social interaction problems.¹ Can we learn from cultures where public mask wearing is the norm such

as in Islam? There is a dearth of literature from this setting although some papers report that the interpretation of expressed emotion is reduced for adults in these cultures possibly balanced by other environmental factors.² Literature from psychology studies in other situations is divided on the impact.³ Some call for clear masks to be used by carers citing that the 'crucial reliance on faces and mouths for language development is a learning tool in the same way that books are'.⁴

Some reassure us that social interactions and body language are more than just the movements of the mouth—such as the eyes and tone of voice.⁵ If the baby is spending enough time face to face with non-mask-wearing carers, the impact may be reduced but we therefore need to be more intentional about this and the activities we engage in advising primary carers to redress the balance.

Will it affect the social interactions with non-primary carers such as grandparents or strangers whom a child or baby only ever sees wearing a mask? The inhibition of proper social interaction and facial recognition has been shown to lead to fear and anxiety among babies and children,⁶ which can have long-term consequences for emotional and social development.⁷ Should we again be more intentional about non-mask contact with others through screens or social media? There are some lovely videos of grandparents communicating through a window with a baby regularly and how recognition and relationship have been enabled to grow, including the give and return of a smile.

Back to my clinic setting—does it matter that I, as the paediatrician, do not see the baby smile? Does it leave the developmental check incomplete?

An observed smile communicates a lot and in the acute setting is one marker in the NICE (National Institute for Health and Care Excellence) traffic light system for identifying risk of serious illness.⁸

Many developmental assessment tools (Ages and Stages Questionnaire (ASQ), Schedule of Growing Skills, Denver III,

Bayley's 3) use the smile as one of the domains including the routine well baby general practitioner check at 8 weeks. The acquisition of a key performance skill is referred to as a milestone, and as the social smile by 8 weeks is consistent, this is one of the standard milestones used. The responsive smile develops between 1 month and 8 weeks. If there is no social smile by 3 months of age (statistically the age at which this skill should have been achieved—two SDs from the mean⁹), the examiner is alerted early to concerns regarding social interactions, communication and visual skills. Denver specifically gives instructions about how to elicit the smile ('Do not touch him/her') and therefore it should be observed and not taken on report for this item to score. The ASQ however is compiled almost completely on parental report. Both are validated assessments with good specificity and sensitivity.

There are many papers comparing parental report with clinically observed or measured items. Most suggest report is reliable although reported detail, or quality of the item, may differ.

So, as with all clinical encounters, there is a need for weighing up: Do I trust the carer's accounts? Is the reported ability incongruent with the other aspects of development I have been able to examine for myself? Is the baby's visual activity normal for their age? Do they suck well? Are they responding well to handling? I will make a clinical decision regarding development based on many factors of which that smile is only one small part.

So if seeing the smile myself is not vital to the assessment, why do I feel like I have missed something so important? Is the desire to see that smile not clinical but my own need? The social connection, the shared delight with the carer in their smiley child. These connections enhance relationships which may influence outcomes for the child.

Or the way a smile makes me feel—the light that a baby's smile brings to me is always a positive medicine in a busy clinic. Do we, as paediatricians, have a yearning, particularly in stressful times like these, to feel that we are doing right by the child, meeting their needs and dare I say, bringing a smile to their faces?

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