What is already known on this topic

Socioeconomic gradients exist in uptake of breast cancer screening in the United Kingdom

What this study adds

Significant socioeconomic trends exist in the likelihood of breast cancer being diagnosed at high grade or advanced stage

These trends are stronger in women potentially exposed to the breast cancer screening programme

cers early in their clinical course. The socioeconomic gradients in disease progression at diagnosis may thus be due in part to socioeconomic gradients in uptake of breast cancer screening. The finding that no such gradients were present in data collected before the implementation of the national breast cancer screening programme supports this explanation, although such data are from other parts of the United Kingdom and rarely have complete stage data. Other factors must explain the gradient in women who have not been screened.

The national breast cancer screening programme may have led to socioeconomic inequalities in disease progression at diagnosis in the United Kingdom. Further consideration of the possible impact of interventions on socioeconomic inequalities in health is needed.

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Correct use of the Apgar score for resuscitated and intubated newborn babies: questionnaire study

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The Apgar score has played a crucial role in the delivery room assessment of newborn babies since 1953,[1 2] but this system has its limitations and is prone to interobserver variation.[3 4] Moreover, scoring definitions in textbooks vary slightly and no specific guidelines are available for scoring intubated babies. We studied variations between observers and focused on the scoring of respiratory effort in resuscitated and intubated newborn babies.

Participants, methods, and results

We developed a questionnaire with three case presentations of newborns in which the Apgar score had to be determined.

Case 1—A full term newborn baby is breathing irregularly at five minutes after birth. Oxygen and mask and bag ventilation are applied. The infant's heart rate is 120 beats/min. The infant cries in response to stimulation, has some flexion of extremities, and is pink with blue extremities.

Case 2—A full term newborn baby is born after a breech extraction. The infant is immediately intubated and ventilated because of apnoea. At five minutes, the heart rate is 120 beats/min, the infant is completely flaccid on the ventilator, does not respond to stimulation, and is pink.

Case 3—A preterm boy, born at 25 weeks of gestation, is intubated and ventilated immediately after birth. At five minutes the child is active on the ventilator with a heart rate of 120 beats/min and is pink with blue extremities. His muscle tone is normal for gestational age and response to stimulation is good.

A total of 166 paediatric professionals from nine general hospitals and three university hospitals in the Netherlands participated in the study (table). Scores for respiratory effort in case 2 and 3 varied most (standard deviation 0.90 and 0.84). We also found many different scores for colour and reflex irritability in case 1 and 3. In case 1, the total Apgar score assigned was 6 (16%), 7 (55%), 8 (21 %), or 9 (7%). In case 2, the total Apgar score was 2 (1%), 3 (1%), 4 (68%), 5 (1%), or 6 (24%). In case 3, the total Apgar score was 7 (16%), 8 (23%), 9 (38%), or 10 (16%). (The bracketed values are the percentage of participants assigning that score.)

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No (%) of 166 paediatric professionals from 12 Dutch hospitals assessing three newborn babies with the Apgar score

	Case 1				Case 2				Case 3			
Score	**Invalid**	**0**	**1**	**2**	**Invalid**	**0**	**1**	**2**	**Invalid**	**0**	**1**	**2**
Heart rate	0	0	1 (1)	165 (99)	0	0	1 (1)	165 (99)	1 (1)	0	3 (1)	162 (98)
Respiratory effort	0	3 (2)	152 (91)	11 (7)	5 (3)	115 (69)	1 (1)	45 (27)	10 (6)	40 (24)	38 (23)	78 (47)
Muscle tone	0	0	151 (91)	15 (9)	0	165 (99)	1 (1)	0	1 (1)	0	2 (1)	163 (98)
Reflex irritability	2 (1)	0	52 (31)	112 (68)	0	166 (100)	0	0	1 (1)	0	0	165 (99)
Colour	0	0	107 (64)	59 (36)	0	0	1 (1)	165 (99)	1 (1)	0	104 (63)	61 (36)

Comment

The assessment of the Apgar score varied greatly among participants, particularly when scoring respiratory effort in intubated newborn babies. The original definition for scoring respiratory effort states that an apnoeic infant should score 0, and an infant who "breathed and cried lustily" should score 2.[1 2] All other types of respiratory effort, such as irregular shallow ventilation, should score 1.[1 2] We propose therefore that an infant who is apnoeic and requires intubation and ventilation should receive the minimum value of 0 for respiratory effort, not withstanding the fact that normoxia may be achieved through adequate artificial ventilation. If an infant requires artificial ventilation at birth due to irregular or shallow ventilation, he or she should score 1. To assess whether an artificially ventilated infant is apnoeic or not, ventilation should be stopped briefly, when possible, to check for the presence of spontaneous respiratory movements.

Scores for colour and reflex irritability also varied widely. Although acrocyanosis (cases 1 and 3) should score 1, and a cry in response to a brisk tangential slap of the soles of the feet (case 1) should score 2, actual scores were incorrect in a third of cases.

For the Apgar score to survive another 50 years, uniformity in scoring is paramount. Paediatric professionals should follow Apgar's original definitions more strictly, and consensus on scoring intubated newborn babies should be reached.

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My minor omission

"Push, push, push, puuuuuush," I command. The labouring woman in lithotomy position before me focuses, bears down, and complies with a vigorous effort.

The nurses on either side supporting her legs encourage as well: "Give a good push, dear. Come on, push this little baby out into the world." We labour together, the mother, as always, doing most of the work. The nurses, my "assistants," know more than I do at this early point in my medical career. However, as an intern on rotation to obstetrics and gynaecology, I feel that I must have attended a billion deliveries this month. "I could do this in my sleep," I think, which is a damn good thing because I am practically comatose, the result of far too many hours in a row on duty in the era before 80 hour weeks for residents. I'm literally bobbing and weaving while mother pants and blows.

Finally, the baby's head emerges. I suction mouth and nares; it's a textbook spontaneous vaginal delivery. "Nuchal cord," my tired brain cautions. "Check for a cord around the neck." I do. It's not there. I'm entering the home stretch, cruising; the obstetric resident isn't even in the room. After this one's out I can lie down for a few minutes. I want the bed so much I can taste it. One more small push and minimal downward pressure by me, and the anterior shoulder delivers, easy. A bit of upward pressure, and there's the posterior one as well. The rest of the body glides out smoothly. Gently I grasp the flexed, wet infant. I haven't dropped one yet, and I'm not going to start now. I quickly dry and wrap my slippery new charge and begin to step away from the bed, ready to present the world's newest citizen to the proud mother.

Halfway through my first pace away from the delivery table mother begins to come with me. "What's this?" I wonder in a fog, "Why is mom following me to the warmer?" She actually slides ever so slightly down the table toward me, issuing a vaguely alarmed moan. Even the normally unflappable nurses seem more than a little concerned. In an instant it hits me. I've made a "minor" oversight in my well practised delivery sequence. How does it go again? The baby is connected to the umbilical cord, the umbilical cord to the placenta, and the placenta to the mother, at least at this stage of the proceedings. With my brain just about asleep, I almost walked away from the mother with her baby still attached.

After profuse, red faced apologies, much propping up from the always supportive nursing staff, and the true completion of all the labour stages, I exit the scene feeling slightly lower than a snake's belly. The thoroughly overworked mother ultimately understood and thankfully was distracted by more pressing concerns. I crept away to bed, and, despite overwhelming fatigue, stayed awake for approximately two seconds mentally kicking myself before sinking into a dreamy reprieve from shame.

No harm was done, except to my then fragile psyche, but I've never forgotten the incident. Fatigue coupled with a momentary lapse of attention could have resulted in disaster but thankfully only produced enough embarrassment to last me a lifetime.

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