

## Departing from Straightline Obstetrics And Timelines



*From "Call the Midwife"*

## Data Collection on Plateaus and Cervical Reversal/Recoil in Labour

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### Background

The attempt to define and predict the "normal" and "abnormal" in labour came into fashion in the 1950s, when Dr. Emanuel Friedman, of Columbia University, published a study that mapped how long 500 Caucasian women at his centre took to dilate during labour. He plotted dilation by the hour on a table that suggested how quickly the birthing persons in his sample progressed (Friedman 1955 and 1956). What became known as the "Friedman curve" was based on very interventive obstetrics, including a 55% forceps rate and 13.8% induction and augmentation rate in the study.

Widely adopted for use in obstetrics worldwide, the Friedman curve became adopted for use as a means by which medical intervention could be prescribed to limit the length of labour, even though its restrictive concepts of "normal" did not necessarily equate with adverse outcomes when not followed. Today if birthing persons do not conform to these strict guidelines of progress, sometimes slightly adjusted, they are augmented or are subjected to forceps or cesareans. A parallel might be drawn that Friedman had created, like Einstein, an invention that had unwittingly lead to a metaphorical time bomb in obstetrics. His analysis "for purposes of mathematical simplification" became a

tool that was used to restrict labour rather than merely enhance an understanding of it.

Practising for over a decade in Latin America and rural Alabama 1975-1982, initially with minimal standard obstetric or midwifery training, Betty-Anne was at first unaware of Friedman's work. When she discovered it, she could see that the Friedman curve did not very accurately describe how labours progress in the births she had been attending in Latin America, Alabama, or Canada. She had training from traditional midwives and women whose major rules were to follow what their body told them--that is, trust what was actually happening to them. She recognized that labour occurs in fits and starts, and that trying to describe it in straight lines as Friedman had done did not reflect the reality of the populations with which she worked in home birth settings. Worse, she observed that his work was limiting practitioners' perceptions of "how long" they would permit birthing persons to labour. And it did not appear that what she called "the straight-line obstetric theory" took into account emotional issues or issues such as posterior babies who need more time to turn.

### **Persuading Midwives in North America that the Nuances of their Practice are Important: Creating the terms "Plateau," Cervical Reversal, and Cervical Recoil**

After we worked 1988-1989 on the outcomes of Ontario midwives from the 1980s, Betty-Anne began working with the Statistics Committee at the Association of Ontario Midwives and with the Statistics and Research Committee of the Midwives Alliance of North America (MANA).

Latent first stage had already been observed by Friedman and latent non-pushing second stage by midwives. Based on her experience, Betty-Anne proposed and coined the use of the word "plateau" to apply to lulls in labour during any and *all* segments of first stage, as she began to realize that in her experience, this occurred frequently with no major problems and must represent normal physiology. She thought it would be more prudent to specifically isolate the centimetres at which birthing persons most frequently had these lulls, thus collecting data on it in a more accurate way than simply by plotting it on a straight line. She thought, rather than putting limitations on these "plateaus," it would be better to demonstrate how frequently or infrequently they occurred, and then make the information available to birthing people.

The intention for collecting on plateaus throughout labour was to encourage parturients to know that others had experienced plateaus at similar centimetres that they had, rather than make them feel inadequate should they experience them. Conversely, if they realized it was rare what they were doing, they could consider whether or not they wanted augmentation. At the same time, BA questioned whether time alone should be used as an indication for augmentation, without other parameters such as FHT and the condition of the mother. Time appeared to drive the use of unnecessary medical intervention, even when both appeared to be fine, and the mother preferred not to take medical intervention. This became more evident the more outcomes that we collected as we began to set up databases for midwives across the provinces and in the US.

Betty-Anne was strategically and purposefully reframing and cultivating the use of the term "plateau" as a statement of a natural occurrence to avoid the negative word "stall." Joining other home birth midwives' recognition of the need to claw back the arbitrary timelines that hospitals were imposing, with augmentation based on overly restrictive guidelines for length of time in labour, she took the proposal to put the term "plateau" on a new dataform to the Ontario Statistics Committee in 1989 and to the MANA Board 1989-90.

In Toronto, the capital of the province, she was not met with enthusiasm. Ontario at the time was heading to midwifery legislation. Some of the midwifery leadership felt they needed to be pragmatic about impending midwifery legislation, discounting most discussions of "difference" from the way the medical world viewed and tabulated birth, worried it would look unprofessional. They feared midwives being seen as permitting "chaotic" labours or stretching times limits at a time when Ontario midwives were trying to prove compliance in order to achieve legislation. On one occasion, when we had data that we could present in court about lengths of second stage in the province and elsewhere, the lawyers for the midwife were persuaded not to use it because the midwives' association feared it would expose how long midwives in the province allowed clients to push. At this time, discussion about women's feelings, even story-telling was considered something that should not be done in public or at events with hospital administrators or physicians (Daviss 1999).

As a result of the politics, at first Betty-Anne only managed to get support to put "anterior lip" as a plateau in first stage and latent phase of second stage as a second plateau, on the form. That is all that was included on the 1991 dataform proposed for Ontario.

In 1991, as Ken received a WHO grant to study perinatal epidemiology, we travelled to spend several months at the National Perinatal Epidemiology Unit (NPEU) in Oxford, to work with the team of epidemiologists on how to develop a database. We found that the focus at that time at the NPEU on randomized controlled trials could not study well the intimacies of home birth midwives that a good observational database could (Johnson 1997).

As an epidemiologist, Ken Johnson felt it important to impress upon the midwives in Canada and the US, first that their care may be substantially different from the mainstream and worthy to collect data on, and secondly, to encourage them to take the time to actually do it. That included the rare occurrences that may not be seen in textbooks. As a scientist, Ken encouraged rather than discouraged midwives from collecting on what they saw rather than what obstetrics had deemed appropriate. We soon found more support for a more detailed form from the midwives outside Toronto in Ontario, as well as in Quebec, Nova Scotia, Manitoba, Saskatchewan, Alberta, and BC- and in the US.

Both Manitoba and Quebec engaged us to collect data on their outcomes in order to demonstrate to their legislatures their success. Rather than worry about their differences from the medical world, they felt they wanted to expose and safeguard those differences. The Canadian midwives agreed to collect data together and formed the Canadian Statistics Collaboration.

Finally, in 1992, Betty-Anne became the co-chair and then Chair of the MANA Statistics. We thus managed to add the detailed collection fields on “plateaus” all through first stage as well as another new term that BA created-- “cervical reversal”-- on both the MANA data form as well as the Canadian Midwives Statistics Collaboration (CMSC) data forms of 1993. We were also able to request of midwives on each form for each birth they filled out, to “Describe serious personal, emotional, or family problems that may be adversely affecting the woman during pregnancy.” (Box on page 1 of the MANA/CMSC 1993 data form and footnote#6).

Adding all of this involved ample negotiation because it was not just about being politically correct and medically compliant; it required more dedicated time for the midwives to retrieve the information from their charts than to simply write down the length of first and second stage.

### **British Researchers Become Engaged in Our Data Collection Concepts**

In the mid 1990s, as some of the midwives in the Association of Radical Midwives in the UK had an interest in joining in the data collection with MANA and the CMSC, BA traveled to Britain to demonstrate it. Soo Downe in Lancashire and Denis Walsh were among the British researchers who were becoming interested in salvaging normal birth and they and Sheila Kitzinger recognized the work we were doing was worthwhile, at a time when Betty-Anne was struggling to get Toronto midwives to even consider it.

British midwifery was well-established, was not constrained by the same fears as Betty-Anne witnessed in her own province, and midwives and researchers in the UK had an appetite to stretch into new areas of research.

Invited by Mavis Kirkham on one trip to the UK in the mid 1990s, Betty-Anne presented to midwives and researchers gathered in Sheffield, using transparencies on an overhead projector, the new 1993 dataform. She highlighted the segment on the dataform that introduced the terms “plateau” and “cervical reversal.” While Mavis and her colleagues liked the new idea of using the neutral word “plateau,” for collection of all lulls at any given centimetre, they were particularly struck by the cervical reversal story: Betty-Anne described how she had noticed the reversal after a fearful trip to hospital for a labouring client, had simply invented the word “cervical reversal” to describe it, and had put it on the data form. She explained that, even though she recognized that it had never been described in obstetric or midwifery texts, she had discussed it at midwives meetings, midwives seemed to know exactly what she was talking about, recognized the term as applying a name to a valid occurrence, and were beginning to provide data to demonstrate it.

At the Sheffield meeting, Betty-Anne found a new group willing to engage in the discussion of how emotions, insecurity, apprehension, and “not having everything in place,” could interrupt a woman’s labour. She discussed moments in labour she had seen such as somebody waiting for their mother to arrive before they could push, or wanting somebody out of the room before they could get on with it, as very real deterrents in labour. Besides such occurrences causing plateaus, she also described “reversal” as the technical term for a cervix actually regressing in fright. Discussion ensued at that meeting how to come up with a term that described the emotional qualification. “**Recoil**” became bantered about in the room as such a term-- about how to describe what BA was referring to, that caused the reversal in the first place, and many of the British midwives could relate to the concept in their own practice. “Recoil” stuck as a term that we began to use, along with “reversal” after that meeting. *Reversal* was what everybody understood, and we continued to use the term on the data forms. *Recoil* was reserved for explaining the concept that the reversal (just like plateaus) were in all likelihood, the result of a psychological hesitancy-inducing lull.

Subsequent to the Sheffield meeting, and after we published our findings on cervical reversal, the British researchers became more interested in the concepts of “plateau” and “cervical reversal” or “recoil,” and began to publish about it.

## **ICM 2002 Presentation on Plateaus and Publication of Cervical Reversal Findings**

It was in 1998 that we first published in the MANA newsletter an article about how the term “cervical reversal” was developed and the data demonstrating that it occurred 2.6% of the time among midwives in North America (Daviss and Johnson 1998).

In 2002, at the Triennial ICM Congress in Vienna, we presented on the plateaus that we had gathered from the MANA/CMSC database on 11,527 planned home or birth centre births sent to us from Canada and the U.S. As we were in the midst of analyzing the data on the Certified Professional Midwives for the large study on home birth eventually published in the BMJ, we were overloaded, and did not actually publish our plateau/cervical reversal findings in a peer-reviewed journal. However, several researchers have quoted the evidence that we provided at the presentation.

Once the BMJ CPM home birth study was published (2005), midwives were weary of collecting detailed data and more of them moved to the shorter data form made available to get compliance for all the CPMs to take part in the CPM2000 project. The shorter form did not include the plateaus. BA had just begun to promote the inclusion on the data form of any incident or emotional awareness that the midwife or birthing person felt might be in the way of the birthing person “getting on with it,” specifically regarding the plateaus and cervical reversals (although the more general emotional concerns were already being captured. However, collecting on it had only just begun to transpire before the individual Canadian provinces began to be required to collect their

own government-required data and the MANA form was reduced to basic standards again.

Recent interest in plateaus and cervical reversal appears to suggest we should revisit the outcomes collected from the data forms from 1993 to 2004, which still include the plateaus and cervical reversal. We are aware that these births occurred at a time when midwives were willing to sit and wait with women instead of taking them into hospital for “lack of progress” prescribed by arbitrary timelines.

### **Surveillance Medicine: From Hyper Vigilance of Height and Weight to the Friedman Curve and the Attempt to Bridle the Breech**

We would like to develop a short educational video about the history of surveillance medicine. It would explore the history of how medicine started in earnest in the 20th century to study healthy populations as an adjunct to the treatment of those who had already succumbed to sickness. We would use the example of the measurement of children’s height and weight-- at first of genuine need in poor populations and among the sick, but which became imposed and undue significance granted to its importance, even on healthy well-fed populations. Today the measurement of height and weight is considered an indispensable equation for parents, even though it tells the practitioner little about the genuine health of the child and the parameters developed for Caucasians are often imposed on different ethnicities, as well as on non-carnivorous but very healthy children.

Friedman’s curve became one of the obstetric tools of surveillance. In answer to the restrictions felt by such interventive obstetrics, including the use of the Friedman curve, women of the counterculture of the 1970s began to have their babies at home. In the early 1990s, following several years of the collection of data of women’s births, principally at home, via the data from the Midwives Alliance of North American/CMSC database, we plotted the length of time and the plateaus that women experienced during normal labour and at what centimetres midwives felt it was time to transfer.

By 2014 the American College of Obstetrics and Gynecology arrived at some important conclusions about the need to put off augmentation and began to suggest plotting dilation only at 6 cm instead of at 3-4. Cohen and Friedman expressed concerns about the new parameters (Cohen and Friedman 2015). But by 2018, the WHO also began to recommend against the use of medical interventions to accelerate labour before 5 cm and abandoned the cervical dilatation rate threshold of 1 cm/hour during active first stage. They pointed out that growing evidence demonstrates the latter is “inaccurate to identify women at risk of adverse birth outcomes.” (WHO 2018)

More recently, as vaginal breech has been re-emerging and studied in earnest,

especially from 2004 on, several practitioners have published or presented descriptions of the cardinal movements of the breech and expectations of what might occur as the breech descends and how to intervene or not intervene (Evans 2012; Frye; Louwen et al. 2017; and Daviss 2017-2021). To date these authors have all refrained from imposing time frames on the progress of the breech, in particular on the descent from “rumping” on. Learning lessons from the history of medical surveillance and breech experience in particular, not focussing on timing has been purposeful.

### **Friedman Déjà vu with Vaginal Breech**

A recent attempt to impose timing (Reitter, Halliday, and Walker 2020) is raising serious concerns among several breech practitioners in the field because of its academic attempt to overly micromanage the breech and impose a questionable focus on time instead of on the condition of the mother and the baby. Worse, the time frames in the recent publication are based on a convenience sample of 42 videos taken from the internet and solicitation, which is not systematic data collection, reduces the study to not much more than a self-selected survey, with no ability to define the experience of the practitioner attending the births, a full understanding of the interventions used --e.g. oxytocin-- or whether the births were from mothers having their first or 5th baby. Memories of Friedman, which took us decades to undo.

These data from a convenience sample of videos are also different from the data of systematic data collections of consecutive births that reveal more ample time allowance for the breech to descend, in particular in the primip (soon to be published). However, we continue to advise not to focus even on these less restrictive, more appropriate timeframes, but on the conditions of the mother and the baby.

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