WN *Inspiration*

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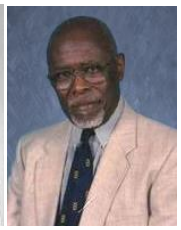
Geoffrey Cannon on Cicely Williams

Public health and child nutrition hero



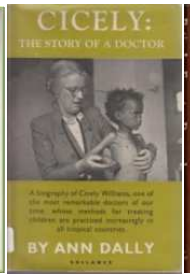


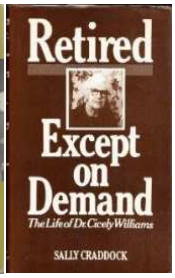




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Personally, and through the people, institutions and networks she has influenced and inspired, Cicely Williams may have protected the lives and health of more children in Africa, Asia, and even in the world, than anybody else, ever. She was Jamaican, born in 1893. Above she is a young paediatrician; in 1928 at the London School of Hygiene and Tropical Medicine; in 1950 examining a malnourished child on the cover of one of the many books, chapters and papers by and about her; and at right, in older age. She died aged 98 in 1992. The pictures at top indicate some of her achievements. In the early 1930s during colonial service in the Gold Coast she diagnosed kwashiorkor. In 1939 in Malaya she delivered her address 'Milk and murder' that makes her the founding spirit of networks such as the World Alliance for Breastfeeding Action. During the 1939-1945 war she survived internment by the Japanese. After the war she became the first head of mother and child health at WHO. She has inspired many other leaders, such as Derrick Jelliffe, who inaugurated the human milk bank in Brazil as shown (centre); Cornell head of international nutrition and champion of breastfeeding Michael Latham (next to right); and Ghanaian sickle-cell disease authority Felix Konotey-Ahulu (right). She listened to the people and spoke with her own voice.

The meaning of kwashiorkor

Cecily Williams diagnosed kwashiorkor. The word speaks worlds to us, about the significance of nutrition in the service of public health, and of primary health care, properly understood. The word also can remind us of the tenacity, integrity, wisdom and courage of Cicely Williams, and of her unique contribution to the nutrition and health of children and mothers, and thus of families, communities and populations.

In the Ga language of coastal Ghana, where she worked as a medical officer between 1929 and 1936, 'kwashiorkor' means 'the condition of the displaced child'. In these seven years she said she saw up to 100,000 children, and she listened to the mothers and their mothers. So she perceived this condition in all its stages, up to when it becomes apparent, and then in its later stages as a usually fatal disease (1,2).

She identified the disease as a distinct entity. She thought about what the people knew. It comes after a premature often abrupt ending of breastfeeding when pregnancies are close to one another. She saw the context, of poverty, monotonous starchy weaning food, and infection or infestation. She realised that improvement of nutrition is a social and political process, needing to be based on actual local circumstances and customs. She persevered, and so the condition, still common within Africa and a public health issue in many countries, retains the name given to it by the Ghanaian Ga people, who in their wisdom sensed its real cause (3,4).

Box 1

Listening to the people

Extracted and edited from Rosemary Stanton, 'Listening to the Ga' (5).

Cicely Williams was an extremely strong-willed and tough woman, but perhaps partly thanks to her childhood in Jamaica, she responded to the Gold Coast people she met in a far more empathetic way than most European colonials. Thus she listened to the Ga language and used its term for the 'disease of the deposed child', *kwashiorkor*, a word she later said nobody mentioned in front of her for her first three years, because of its dire associations. She listened to the Ga people – mothers and grandmothers, nurses, traditional healers or 'witchdoctors'. The identification of a weaning crisis was tied in with her recognition of *kwashiorkor*, which usually struck children between the ages of 2 and 4, and then nearly always proved fatal. She indicated that poverty was the fundamental cause, giving a radical prescription: 'The function of a medical department conducted by any government is to raise the standard of living rather than to provide orthodox medical attention for the individual'.

Her arguments for combining preventive and curative medicine caused her to clash with her immediate superiors. But nutritional disorders amply illustrate the need for a combined approach. As long as she worked in the Gold Coast treating sick children, the hopelessness of cases of *kwashiorkor* drove her to seek to understand the syndrome, not described in any medical texts she consulted. Her ability to head for the centre of a problem, untrammelled by awe of 'experts', enabled her to develop a plan for primary health care as well as to discover, for western medicine, *kwashiorkor*. Her discovery emerged more strongly after the war, while her views on primary health care became almost gospel for the next generation.

A child of Empire and war

Cicely Williams was a child of Empire. The Welsh ancestors of her family settled in Jamaica after Britain seized it from Spain in the mid 17th century. Born in 1893, the fourth of six children, she wanted to study medicine in Britain, but her career was delayed by the family estate being devastated by hurricanes and an earthquake. So at first she trained as a Montessori teacher. She fought for her vision, and raised enough money to go to Oxford age 23 to study medicine at Somerville College.

She then worked as a hospital physician in London, including in working-class Hackney, and then in her mid 30s studied at the London School of Hygiene and Tropical Medicine (see group photograph above). In 1928 she worked in Macedonia with Greek refugees from Turkey, and met Croatian public medicine leader *Andrija Štampar* (1888-1958), later a founder of the World Health Organization. She applied to the Colonial Medical Service, expecting to work in Jamaica. Instead, in 1929 she was posted to the southern Gold Coast in West Africa, formally ruled by Britain since the 1870s, where she built a mother and child clinic and worked until 1936.

Box 2

A social pathology

Edited from letters to the BMJ and the Ghana Medical Journal by Felix Konotey-Ahulu (6,7)

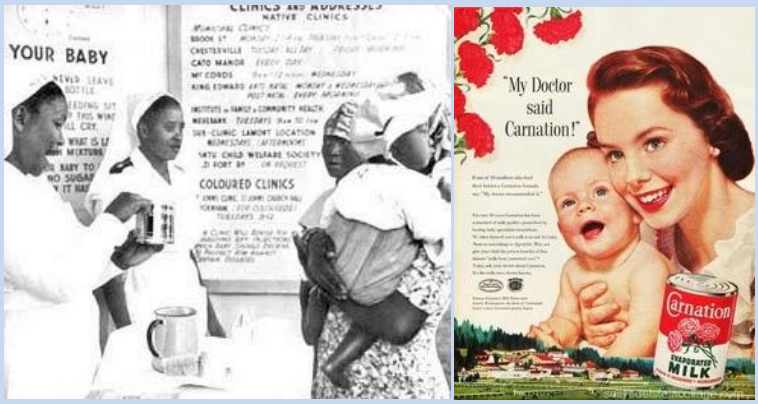
My greatest gratitude goes to Dame Cicely Williams who, as a medical officer working in the Gold Coast (Ghana), learnt the name *kwashiorkor* in my tribal language. There is no mystery about 'kwashiorkor'. This is a word from my Krobo-Dangme-Ga megatribe. The condition was brought to her attention by my fellow tribesfolk. Kwashiorkor is a reflection of the 'birth position' of the sufferer before it is a pathology. It means 'the disease of the displaced child'.

I have a personal reason to know about kwashiorkor. In my tribe, it was said of me the day my younger brother was born while I was not yet completely weaned, *afor ese kwashiorkor,* stressing my risk from being between my elder brother Agbetey, 13 months older than me, and the sibling 17 months my junior. The whole tribe expected me to develop kwashiorkor because of the birth of my brother. I escaped because my educated parents fed me with beans, eggs, milk, minced meat, and Ovaltine. Less fortunate relatives of my age in my tribe, whose parents also had 3 children in less than 3 years, developed kwashiorkor because their parents could only afford corn products such as *akasa* and *kenkey* as weaning food.

I had the privilege of meeting up with 93 year old Cicely Williams at Somerville College, Oxford, on 1 September 1986. I thanked her for all she did for my tribe in those colonial days. We both were baffled why many experts find it difficult to accept that kwashiorkor is the result of a social pathology before it is a biochemical pathology. Clinical epidemiology, in addressing the questions who, which, where, when, why, what, and how? is the right tool to investigate a tropical phenomenon such as kwashiorkor. Cicely Williams gets my Full Marks for employing that tool with hardly any funds for medical research. Those of us who grew up in the kwashiorkor belt, and who have also had the benefit of an excellent medical education, should caution our ministries of health and social welfare about the danger of missing the social pathology wood for the trees of free radicals and leukotrienes.

Box 3

Cicely Williams on artificial infant feeding



Women dressed as nurses, pushing formula feed to mothers of newborns (left). (Right): promotion of condensed milk for infants continued after condemnation by Cicely Williams

From 'Milk and murder', her address at the Singapore Rotary Club, 1939 (8)

If you are legal purists you may wish me to change the title of this address to 'Milk and manslaughter'. But if your lives are as embittered as mine is, by seeing day after day this massacre of the innocents by unsuitable feeding, then I believe you would feel as I do that misguided propaganda on infant feeding should be punished as the most miserable form of sedition, and that these deaths should be regarded as murder... Anyone who, ignorantly or lightly, causes a baby to be fed on unsuitable milk, may be guilty of that child's death.

The protection of breastfeeding

In 1936, she was moved by the colonial medical service to Islamic Terengannu in North-East Malaya, ceded in 1909 by Siam to Britain as one of the British Malay States. There she applied what she had learned in the Gold Coast. She set up a network of village health centres with nurses and local midwives who she trained to recognise the social aspects of disease and to use safer methods of delivery, and wrote her report on *An Experiment in Health Work in Trengannu in 1940-1941*.

She become increasingly aware of the unique value of breastmilk and of extended breastfeeding as traditionally practiced. She knew that breastfeeding was declining and artificial infant feeding was increasing. In Britain at that time formula feeding was a reason for preventable deaths of 20,000 infants a year (9). Correspondingly, she became increasingly incensed by the advertising and marketing of baby formula and of condensed milk to mothers of infants. She saw that this included the hiring of 'girls dressed as nurses', 'dragging a good lactating breast out of the baby's mouth and pouring in baby milks' (10). In 1939 she addressed the Singapore Rotary Club on the topic of *'Milk and murder'*, quoted above, in front of the local president of Nestlé. She thus became the founding spirit of the world social action movements set up to protect breastfeeding, such as the *International Baby Food Action Network*, set up in 1979. In 1981, 42 years after 'Milk and murder', WHO member states agreed the now renowned *International Code of Marketing of Breast Milk Substitutes*.

Box 4

Cicely Williams on extended breastfeeding



Women and children imprisoned by the Japanese after the fall of Singapore in 1942 (left), and Allied soldiers in Changi jail (right). Conditions were often much worse than seen here

Speaking of her experience during internment. From Protein Malnutrition,1955 (11).

We had twenty babies born in prisoner-of-war camp; twenty babies were breastfed, and twenty survived. They were all breastfed for 1 year, although the mothers were European women who would not, under normal circumstances, have breastfed their babies for more than 4 or 5 months. But we were an educated community and therefore we saved the best food for the pregnant and lactating women. The women were convinced that if their breasts gave out, then the child would have a poor chance of survival. Of those twenty women – I think nineteen were pure Europeans – none of them ceased lactating until the end of the year, and only then were the babies completely weaned from the breast.

Breastfeeding put to the test

In early December 1941 the Japanese army invaded Malaya from the north, planning to capture Singapore. Non-Asian civilians including Cicely Williams fled ahead through dense jungle territory, but were captured at the fall of Singapore in mid-February together with 80,000 Allied troops, and were interned. In the next three and a half years she was brutally interrogated for six months, lost one-third of her body weight, and suffered from beri-beri (peripheral neuropathy thereafter. Elected their leader by her fellow women prisoners, she put her knowledge and wisdom of breastfeeding to the test (see the text above), as she reported in her *Nutritional Conditions Among Women and Children in Internment in the Civilian Camp in Singapore.*

After the war she stayed in Malaysia for a while. In 1948, aged 55, she was appointed the first head of maternal and child health at the newly formed World Health Organization in Geneva. Desk work did not suit her, and she spent much of the rest of her life on behalf of the UN and other bodies surveying child health in Africa, Asia and Europe; teaching in London, Beirut and New Orleans; and working with those in most need, such as Palestinian refugee mothers in the Gaza Strip. She was recognised by Jamaica with the award of its Order of Merit; with a 90th birthday symposium at Somerville College; and by Ghana with an honorary doctorate when she was 93. She remained active until her mid 90s, and died in Oxford in 1992.

Learning from Cicely Williams

Personally, Cicely Williams was heroic. Her response to prejudice, setbacks, disasters, attacks, poverty, persecution, imprisonment, was always courageous. She was a leader. She encouraged many thousands of families and students she worked with, and still inspires public health professionals and their organisations and movements. She spoke out. 'If you learn your nutrition from a biochemist' she said, 'you're not likely to learn how essential it is to blow a baby's nose before expecting him to suck'.

She has made three great contributions to child nutrition and health. One is from Ghana: her diagnosis of kwashiorkor and its positioning apparent in the name, as a social condition. One also is from Malaysia: her insistence on extended breastfeeding. One is from all her work: personally in her sympathy with the communities she worked with, expressed with love and care for children, and professionally in her creation of health centres using local resources that fostered mutual trust.

She tends to be admired separately by nutrition scientists; breastfeeding advocates; and primary health care workers. But enlightened public health and child nutrition leaders inspired by her, such as Michael Latham, Derrick Jelliffe, David Morley, David Sanders, Annelies Allain, and Patti Rundall, see her life and work as a whole, and as a grand example of general practice, whether as a family physician, a barefoot doctor, or a traditional healer. This circles back to what 'kwashiorkor' means. Learning from Cicely Williams is to realise that the nutritional cause of kwashiorkor, as Felix Konotey-Ahulu indicates (6), is not deficiency of protein, but deficiency of breastmilk with all its nutritional and protective qualities, when too soon, the mother becomes pregnant again and the child is deprived of breastmilk and is fed on starchy paps (12). Rex Dean, co-author of the classic 1954 monograph (4), said plainly: 'Children do not get kwashiorkor when they have an adequate amount of breast milk' (8). This statement unites the work of Cicely Williams and what she represents. It indicates the limitations of modern medicine in public health crises (13).

There is a popular saying, 'cometh the hour, cometh the man' – not appropriate for a woman, who just as *Christabel* and *Sylvia Pankhurst* (1880-1958, and 1882-1960) did, paved the way for women in public life. Indeed, without the suffragette movement before her, Cicely Williams might have led an obscure life. As it was though, in the circumstances also of empire and of war, the scale of her achievement can be compared with that of children of empire outside public health, such as the explorer of West Africa *Mary Kingsley* (1862-1900), the co-creator of Iraq *Gertrude Bell* (1868-1926), and her exact contemporary the Middle East traveller *Freya Stark* (1893-1993).

Seeing Cicely Williams as the foremost hero of public health and nutrition, is to perceive the value of nutrition in the service of public health. The tough times that now press on us have a different form from those that forged her life and work. But they prove to be just as challenging and require equal determination. Where are the indomitable leaders and inspirers now, who will protect public health and public goods? Meanwhile we all can learn from Cicely Williams. This means action (14).

Notes and references

1 Williams CD. A nutritional disease of childhood associated with a maize diet. *Archives of Diseases of Childhood* 1933; **8**: 423-428.

2 Williams CD. Kwashiorkor - a nutritional disease of children associated with a maize diet. *Lancet* 1935; **2**: 1151-52. *Access pdf here*

3 Hugh Trowell also identified the condition in East Africa in the 1930s, and called it 'malignant malnutrition'. After Cicely Williams's release from prison in 1945 he and she met. He accepted her primacy, a necessary reason why the West African native name with its significance, often misunderstood, is now universally used.

4 Trowell HC, Dean R, Davies J. *Kwashiorkor*. London: Edward Arnold, 1954. Also reprinted: New York: Academic Press, 1982.

5 Stanton R. Listening to the Ga. Cicely Williams' discovery of kwashiorkor on the Gold Coast. [Chapter 7] In: Hardy A, Conrad L (eds). *Women and Modern Medicine*. Atlanta GA: Amsterdam, 2001. *Access pdf here*

6 Konotey-Ahulu F. There is nothing mysterious about kwashiorkor. [*Letter*] *BMJ* 14 May 2005. http://www.bmj.com/content/330/7500/1095?tab=responses

7 Konotey-Ahulu F. Clinical genetics: Ghanaian gratitude for British and Hungarian contributions. *Ghana Medical Journal* 2009, **43**, 4, 175-178.

8 Williams CD. Milk and murder. Address to the Rotary Club of Singapore, 1939. In Allain A (ed). International Organisation of Consumer Unions, 1986. *Access pdf here*

9 Spence JC. The modern decline of breastfeeding. *British Medical Journal* 1938; **2**, 4057, 729-33. PMID 20781788. PMC 2210420.

10 Williams CD. Interview. *Lansing Star,* 18 October 1978.

11 Williams CD; and also Dean R. In: Epidemiology and prevention. [Fourth session]. In: Waterlow JC [Ed]. *Protein Malnutrition. Proceedings of a Conference in Jamaica (1953).* Cambridge University Press, for the UN Food and Agriculture Organization, the World Health Organization, and the Josiah Macy Foundation, 1955.

12 Onofiok N, Nnanyelugo D. Weaning food in West Africa: Nutritional problems and possible solutions. *Food and Nutrition Bulletin* 1998, **19**, 1, 27-33.

13 Scott-Smith T. The story of kwashiorkor and the medicalisation of hunger. http://tomscottsmith.wordpress.com/2013/06/30/the-story-of-kwashiorkor-and-the-medicalization-of-hunger/ *Access pdf here*

14 Other sources include Stanton J. Cicely Williams obituary, *The Independent*, 16 July 1992; and Gairdner D. Review of Craddock S, *Retired Except on Demand. Archives of Disease in Childhood,* 1984, **59**, 582-584. Special thanks go to Claudio Schuftan.

Editor's note

In *Inspiration* we link to key documents that help explain the reasons to be inspired. Here, these are Cicely Williams's diagnosis of kwashiorkor published in *Lancet* in 1935 (2), *pdf available here* Rosemary Stanton's'Listening to the Ga' (5), *pdf available here*, and Cicely Williams's address 'Milk and murder' in Singapore in 1939 (8), *pdf available here*

Contributors are invited to celebrate the person who has most impressed them. The choice can from any time in history. It need not be about nutrition or public health, but it should be offered as inspiration to *WN* readers. Please also include one or more supporting documents in pdf form. Send suggestions for *Inspiration* to wn.network@gmail.com.