

Child and Antenatal Nutrition Bulletin

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A nutrition newsletter for health professionals working with families. Edited by Ana Gowrea, Policy Officer (Nutrition), Statewide Policy and Planning Directorate, Child and Adolescent Community Health Division, 8/233 Adelaide Terrace Perth WA 6000; Anne Rae, Senior Dietitian, Kind Edward Memorial Hospital for Women, 374 Bagot Road Subiaco WA 6008; and Catherine Jones, A/Senior Dietitian, Child and Adolescent Health Service, Princess Margaret Hospital for Children, Roberts Road, Subiaco, WA 6008.



Department of
Health

Celebrating the Bulletin's 20th year

John Coveney, first editor in 1987

When I joined the Health Department of Western Australia in December 1985 as Senior Dietitian, Child and Antenatal Nutrition based at Rheola Street, West Perth, I found myself with some of the most committed and talented people I had ever worked with. One of the products of that creativity was the Child and Antenatal Nutrition (CAN) Bulletin, which first appeared in early 1987. Thank you for giving me the opportunity to contribute a short piece in this edition to celebrate the 20th birthday of the Bulletin.

It would be fair to say that when we first published the CAN Bulletin we had no idea that it would last 2 years, let alone 20. We knew however that there was a need for a regular, reliable and informed source of information for field staff on the ever-changing world of infant feeding, child nutrition and appropriate foods for pregnant and lactating women. Especially to counter so much of the often biased, commercial information that plagues the field.

The Bulletin was initially the product of the Child and Antenatal Nutrition Committee, which comprised members of the Health Department, Princess Margaret Hospital for Children and King Edward Memorial Hospital for Women, plus others who were co-opted for various tasks. Lack of space prevents me from naming the Committee members and others who gave their time so generously, but be assured that without their support CAN Bulletin would not have seen the light of day.

The Bulletin was designed to alert practitioners to new developments and products, but also to challenge and dispel myths and rumours that abound in nutrition generally, but are rife in infant feeding, child nutrition and food for pregnancy and lactation. We agreed on a publishing style to make the CAN Bulletin easy to read and informative: short articles with references containing supporting evidence and which allowed readers to follow up for more detail if needed. Our

imagined audience were harried practitioners in the field who simply did not have time to wade through long articles or reports, but might, over lunchtime or during teabreak (when such things existed!), have a moment to read a couple of articles relevant to their work. It has been heartening to see that the CAN Bulletin has pretty much continued with that format to this day.

Feedback from the field has always been very encouraging and taught us that we had got the content and format of the Bulletin just about right. We were even given compliments from interstate practitioners when the CAN Bulletin began to circulate beyond its target audience. Given the ever-changing nature of information on feeding infants and children and what's best to eat in pregnancy and lactation, CAN is probably assured of a long life, always depending of course on continued funding.

Earlier it was mentioned that no names would be mentioned in relation to the development and continued growth of the CAN Bulletin. However, it would be wrong not to heap praise on those people who supported the initiative and kept it going. Bruce Reynolds and the late Elizabeth Owles, at the time working for the Health Department of WA and the Princess Margaret Hospital for Children respectively, were prime movers of the Bulletin. Elizabeth in particular was a reliable source of ideas for articles. Lyn Howard and, later, Anne Rae from King Edward Memorial Hospital for Women kept things going from the antenatal area. Margaret Miller and Robyn Miller championed the CAN Bulletin when publication was taken over by the Health Promotion Branch of the Health Department of WA. Thanks to them all and to the others who have contributed to the Bulletin's undoubted success.

The anthropologist, Margaret Mead, is credited with the statement "Never underestimate the power of a small group of committed people to change the world. In fact, it is the only thing that ever has."

Of course, I'm not sure that the CAN Bulletin has had a global influence! But I am certain that it has, and will continue to have, an important role to play in providing accessible, reliable and authoritative information to balance the commercial and media hype that abounds, and often confuses, parents and professionals who want to provide the best possible nutrition in infancy, childhood, pregnancy and lactation.

Congratulations on the CAN Bulletin's 20th birthday!

John Coveney
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Type 2 diabetes in childhood.

Elizabeth Davis, Paediatric Endocrinologist, Princess Margaret Hospital for Children, Perth, WA

The increase in paediatric obesity is having a major impact on the health and well being of children. Obesity has a number of adverse health consequences, including insulin resistance, a precursor of Type 2 diabetes (T2DM). Reducing obesity is a critical step in caring for children with insulin resistance and T2DM. In Western Australia there has been a steady increase in the diagnoses of youth with T2DM over the last decade¹ and management poses many challenges (see Figure 1).

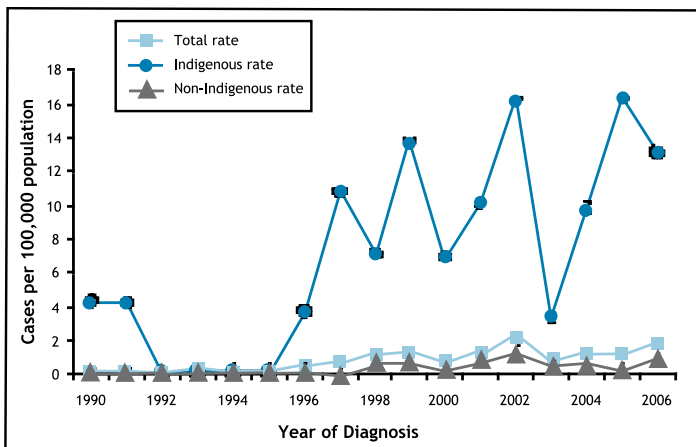


Figure 1. Estimated rate of T2DM in WA children ≤ 16 years based on number of patients managed by PMH Endocrinology department. Prepared by Dr J Hewitt.

In Western Australia, 20% of children are overweight or obese. This is thought to be the single most important reason for the increase in T2DM in youth. However, other contributors include a family history of T2DM, gestational diabetes and low birth weight. The Western Australian experience is that T2DM most frequently presents in puberty (a time of physiological insulin resistance) and is disproportionately more common in indigenous people and in females.

Children with T2DM present in two ways. About half of the children present with classic diabetes symptoms of polyuria and polydipsia, and management involves

separating out the diagnosis of T2DM from T1DM, based on history, antibody levels (GAD, ICA), C-peptide levels (a measure of insulin production) and natural history. The other cases come to light as a consequence of screening children with obesity and clinical signs of hyperinsulinism such as Acanthosis Nigricans (a dark rash around the neck). Although there may be no symptoms present, an oral glucose tolerance will meet the diagnostic criteria for diabetes².

The preferred model of care is a team approach, including a physician, diabetes nurse educator, dietitian, social worker, physical activity specialist, and psychologist.

Children with T2DM are at risk of medical complications and comorbidities - related to both their obesity and diabetes. These include hypertension, dyslipidaemia, renal disease, polycystic ovary disease, and eventually macro and microvascular disease.

Management needs to include screening for comorbidities and complications and a plan for treatment if required. Critical to successful long term health are weight loss, and normalisation of blood glucose levels.

Management of youth with T2DM may include one or all of the following options:

1. Lifestyle modification, including dietary, exercise and family counselling, is the mainstay of treatment for both obese and diabetic adolescents.

Wherever possible lifestyle changes should be directed to the whole family rather than one individual. The effectiveness of lifestyle intervention may be limited at times (depending on their readiness to make change and motivation to maintain changes). Lifestyle intervention can reduce weight gain and fat deposition in children, and delay or prevent the development of T2DM in obese adults (in trials lasting up to 4 years)³. However, to be effective, lifestyle modification needs to be continuous and intensive in highly motivated subjects. There are not many studies in children, but intensive lifestyle intervention has been shown to reduce body weight by up to 4.3-7 Kg, during the first year⁴. To date, many of these studies have been short term, e.g. 1-2 years, and rebound weight gain has been a feature with cessation of intervention. Most of the dietary aspects of these interventions use caloric restriction, together with recommendations for reduction in simple sugars and use of low glycaemic-index foods. Increasing the intake of fruit and vegetables is difficult but important. Sweetened drinks should be eliminated from the diet completely. Physical activity should be promoted to all the family. Specific health benefits can be gained from improved fitness, independent of weight loss. Sedentary activity, such as television viewing and playing video games, should be specifically discouraged.

2. Pharmacotherapy.

a. Oral - Metformin is the most commonly used oral medication for children with T2DM and several studies now show that Metformin can delay the development of T2DM in insulin resistant individuals. Its action is to reduce hepatic glucose production and plasma insulin levels as well as inhibit fat cell lipogenesis. Metformin also increases peripheral insulin sensitivity and may reduce food intake by raising levels of glucagon-like peptide. The recent availability of extended release Metformin (Metformin ER) reportedly reduces the gastrointestinal side-effects which to date have limited compliance.

b. Subcutaneous - Insulin is used as first line therapy in children presenting with ketoacidosis. There is some evidence that early insulin introduction improves long term glucose control. It should be added to the management plan if adequate glucose control is not achieved after 3-6 months of lifestyle change.

Whatever therapeutic regimen is used, all children with T2DM should monitor and record their blood glucose regularly. Support from school nurses and family members can help facilitate this happening.

Many of the problems in managing T2DM arise from difficulty in making lifestyle changes. Frequently the behaviours one is seeking to change are endemic in the family, and if the parents are able to make successful changes the chances of long term success for the child are much improved. Families need support and encouragement in making positive changes.

References

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3. Poston WS, Reeves RS et al. Weight loss in obese Mexican Americans treated for 1 year with Orlistat and lifestyle modification. *Int J Obes Related Metab Disord* 27: 1486-1493, 2003.
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Nutrition workforce profiles

There are many people in various roles working in the area of nutrition across Western Australia. These people work day to day in a service, team, group and as individuals; they are connected through a common desire to improve the nutritional health of the population by delivering a range of services from clinical, community, consultative, policy, and research through to education.

A new section in the CAN Bulletin has been created to showcase the people working in various nutrition fields across Western Australia with the purpose to establish links, share personal perspectives, promote services and extend opportunities for collaboration.

Ana-Kristina Skrapac

Clinical Specialist Dietitian, Princess Margaret Hospital for Children (PMH), Eating Disorders Program (EDP).

Role

I have been working as a paediatric dietitian at PMH for the past six years in a range of clinical areas, specialising in eating disorders for the past four years. My role as clinical specialist dietitian within the EDP encompasses a focus on education and training.

Main clinical interest and area of work

My main area of work is in child and adolescent eating disorders, however I am continuing to work as part of the neonatal unit, managing nutrition issues of the premature infant.

People you work with & services

The PMH EDP supports a multidisciplinary team model in which Program Leader Julie Potts, Paediatric Gastroenterologist Professor David Forbes and Child and Adolescent Psychiatrist Dr John Dingle, lead the interface of physical and psychological medicine - which mirror the disorder as a psychological illness, with often severe medical compromises. The multidisciplinary focus of the team makes use of the skills of psychologists, mental health nurses, occupational therapists, dietitians, family therapists, alongside more traditional medical professions such as gastroenterology and medical nursing. The EDP at PMH offers a continuum of care where most care is provided whilst the young person is an outpatient and utilises the medical wards for patients requiring management of acute or severe medical issues. The PMH EDP is developing a Day Program for 2008, which will enable clients to access more intensive group therapy and educational services whilst living in the community. We accept referrals from all health professionals.

In September last year the team celebrated 10 years of service by hosting a state conference not only for health professionals but also consumers (patients and families). This unique mix of showcasing professional expertise and consumer perspectives provided the ideal framework for collaboration. Consumer involvement is valued by the PMH EDP as an important part of service development. 2006 saw the initiation of both a parent and a youth consumer advisory group and the first forums were able to provide valuable feedback on service delivery and treatment. 2007 will see the employment of consumer workers and the establishment of ongoing consumer advisory groups. Along with colleagues from the EDP and consumers, I am involved in the development of *Bridges*. *Bridges* association was formed as an alliance of past sufferers, parents/carers and health professionals who are passionate about working together to advocate a holistic and team approach in the recovery process. *Bridges* aims to promote understanding and provide support services for all people affected by eating disorders in WA.

I hope to support professional understanding of and interest in eating disorders amongst colleagues and improve access to knowledge and training. As part of this I regularly present workshops at conferences with the team, demystifying the role of the dietitian and presenting ways of using motivational counselling techniques and readiness for change model in providing dietary advice and nutritional counselling for young people at different stages of illness and readiness for change. In May this year, I will be presenting with colleagues from the EDP at the International Eating Disorders Conference in Baltimore USA, a workshop titled "Turbulence, Trouble, Threat: Teams get in a mess". We will be exploring how teams can 'get in a mess' and a range of helpful responses to the challenges that eating disorder teams experience from systemic and cultural theoretical perspectives, and address ways in which teams can develop "team cultures and practices" that are resilient to threat and assist professionals through turbulence and other troubles.

Contacts: PMH EDP (08) 9340 7012; *Bridges* website, www.bridges.net.au

Ailsa Rothenbury

Community Health Nurse, Child and Adolescent Community Health Division.

Role

Child Health Nurse located in Greenwood, currently working 3 days a week with 50 per cent of workload directed at the normal physiology of the lactating woman and the breastfeeding infant.

Areas you cover

Normal is a diverse topic - development, physiology, preferences, relationships and coping skills. Every mother and baby who comes in the door of the child health centre is unique. Monitoring infants requires a thorough idea of the range of normal. Consequently, applying theory to practice is a valuable skill for all community health personnel.

About 35 years ago I was surprised by a GP suggestion about how I fed my baby, which did not align with the content of the child health course I had just completed. I sought help with the voluntary community group of like minded mothers. I did their training course, and on moving to Papua New Guinea developed an advocacy role for the mothers and babies there. By 1986, the Americans had seen the need to develop an examination to validate the expertise of lay counsellors in infant feeding, and specifically breastfeeding (or as they say 'nursing'). Since then my interest in 'all

things lactation' has enabled me to represent Australia on that exam committee, participate in the WHO/ UNICEF initiative to accredit the Baby Friendly Hospital Initiative (BFHI) hospitals in WA (only 2 so far) and provide a focused service to clients. Since visiting the Toronto breastfeeding clinics of Dr Jack Newman, in 1998, I have also developed a format for an infant suck assessment and correction, so efficiency and coordination are achieved.

People you work with

Most child health nurses 'work alone' although I share the job with Raelene. We make a good team - she sees the new babies and organises the mother's group and has an open session for parents. I phone new mothers, conduct an antenatal breastfeeding session, do routine developmental assessments and act in a lactation consultancy role as required.

Main referral pathway

The lactation clients are referred to me by other child health nurses, midwives, self referral or friends/ relatives phoning for an appointment. Sometimes it is possible to do phone counselling - I get about 35 contacts each month but only 25-30 need to come in.

Main concerns and current trends in your field

It is amazing that after 20 years of applying the WHO Code in Australia, there is still so much misinformation about human milk, breastfeeding infants and lactating mothers.

I am very keen to assist mothers to successfully breastfeed. For example, at least one third of dysfunctional sucks have a pre-existing positional turn which impacts on the muscles of the neck and mouth, altering the suck.

If a mother has sore nipples, but the suck can be corrected within the first 4 weeks, it is highly likely that the Mum will be able to successfully breastfeed until 12 months or longer. My daily concerns involve infant physiology and appropriate nutrition, a natural corollary.

Common issues

Child health nurses often ring to share myths still being perpetuated... "need to stop feeding because of the anaesthetic, or the antibiotics, or the baby is 10 months now, there no nutrition in it, too much lactose in it, takes too much out of you, can't produce enough, needs more cow's milk, needs more vegetables!". Dealing with people of all ages requires tact and problem solving on a daily basis, in order to promote optimal growth and development for the infants/ children we monitor.

Acknowledgment

This issue was produced by Nadine Radin, Policy Officer (Nutrition), Statewide Policy and Planning Directorate, Child and Adolescent Community Health Division, Child and Adolescent Health Service.