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Adapting the 'First 2000 Days maternal and child healthcare framework' in the aftermath of the COVID-19 pandemic: ensuring equity in the new world

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ABSTRACT

The purpose of this perspective article is to emphasise the importance of the 'First 2000 Days' policy of life from conception to age five, and to propose new directions in which the policy's implementation could be extended for the benefit of children and families. The proposed approach highlights principles of responsiveness, integration, sustainability and equity, specifying initiatives that embody the kind of innovation each principle aspires to. The article also proposes innovations in data collection and linkages that would strengthen the implementation of first 2000 days policies and frameworks. This perspective proposes a framework that could improve health systems implementation of services in the first 5 years of life, by proposing a well-coordinated continuum of services with integrated physical and digital solutions. This has the potential to transform how the health system monitors and responds to children and families' needs in the critical early years of life during and beyond the current pandemic.

Keywords: child and family health, child health, COVID-19, early life heath policy, early life determinants of health, health and social policy, health systems, health services research, paediatric health, women's health.

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The international recognition of the importance of the early life determinants of health and wellbeing has stimulated an increasing number of government initiatives worldwide.[1,2] Higher rates of developmental vulnerability and an increased risk for obesity are often compounded by parental mental health challenges and families' psychosocial vulnerability. These are critical barriers preventing children from developing school readiness and having a successful start to their life.[3,4] The pandemic has exacerbated this situation, with an Australian National poll from July 2020 revealing that 48% of parents and 36% of children's mental health has been negatively impacted.[5] Furthermore, the poll showed that more than half of the children found it difficult to connect with friends and only 1 in 10 children engaged in adequate physical exercise during the pandemic. Further, a national survey of parents of children with Neurodevelopmental Disability found that coronavirus disease 2019 (COVID-19) had an adverse impact on the health and well-being of over three-quarters of children and their parents.[6] Further, 80% reported having more screen time with around half having worsening of sleep issues. Even prior to the COVID-19 pandemic there was a marked inequity in access to appropriate health services, with one in five Australian children starting school developmentally vulnerable and as many as 50% of these children coming from disadvantaged populations (e.g. children of First Nations Australians families and/or socioeconomically disadvantaged communities).[7,8] In response to these issues, the Australian Government Department of Health and the New South Wales (NSW) Ministry of Health recognised the first 2000 days of a child's life as a priority.[9,10] Similarly, the Department of Social Services has emphasised the importance of the first 1000 days of a child's life as part

of the 'National Community Awareness Raising Strategy'.[11] Nowhere is this focus clearer than in NSW Health's "First 2000 Days: from conception to age five" Framework, which outlines the importance of the first 5 years in a child's life and what actions people within the NSW Health system need to take to ensure that all children have the best possible start in life.[10] This Framework has expanded into the NSW whole-of-government 'Brighter Beginnings: the first 2000 days of life' initiative,[12] in recognition of the partnerships necessary to ensure parents and carers, children and their families have access to universal services and targeted supports in early life. The implementation of the Framework in practice is also guided by the NSW Health First 2000 Days Implementation Strategy 2020–2025, published contemporaneously with the onset of the pandemic. Now as we look across a renewed pandemic/post-pandemic healthcare landscape characterised by health organisations embracing technological solutions with telehealth, blended care, and online assessment and intervention services,[13] we have the opportunity to review and renew, the application of the policy implementation through a new paradigm.[14] The Framework's goals are: *awareness and informed decisions about the first 2000 days among parents and professionals (Goal 1); availing and promoting engagement for integrated family and child-centred initiatives and services (Goal 2), and additional support for disadvantaged populations commensurate with needs using a 'proportionate universalism' framework (Goal 3)*, these enable young children and their families to have an optimal start to life, and remain integral to implementation.[14] In this commentary, we examine below how these goals can best be implemented in a new healthcare landscape.

Goal 1 argues for increased information, resources and capacity-building for NSW Health staff, parents/carers, early childhood educators, and other partners to provide coordinated evidence-based services offering continuity of care. It is critical to promote awareness about the importance of the first 2000 days of a child's life by providing the key messages consistently and effectively. This is particularly relevant as the COVID-19 pandemic has distorted the information landscape significantly as: (1) unemployment and/or lack of social connectedness have funnelled the general public's attention to social media and entertainment platforms, rather than credible information sources;[6,15] (2) face-to-face sessions and opportunistic clinical contacts between health care professionals and families from disadvantaged families – who may not have the capacity to access telehealth services – has significantly reduced;[16] and (3) parents may find it difficult to navigate COVID-related information about maternal and child healthcare services among a backdrop of other COVID-19 information and restrictions.[17]

Goal 2 advocates for an expansion in the provision of care and support for all children and families while working 'in partnership with communities to promote health, wellbeing, capacity and resilience during the first 2000 days'.[10] A system-wide approach where services are coordinated and care is integrated remains a fundamental requirement to achieve this goal. While Australian States and Territories have rolled out universal developmental surveillance programs and related opportunities involving validated screening questionnaires (e.g. NSW My Personal Health Record Blue Book), engaging and motivating parents and health professionals to take up these resources has been challenging. A 2014 national survey of Child and Family Health Nursing services reported steep declines in developmental checks as children age, with rapid drop-offs after 6 months.[18] Likewise, health professionals such as general practitioners may not be aware or trained on how to use electronic tools and integrate these emerging technologies into their practice.[19]

Goal 3 aims to provide specialised intervention and supports to those who need it most including families with domestic violence, those living in poverty or where there are parental alcohol abuse issues. These areas saw a quick move to telehealth during COVID-19 to be able to continue providing services, and yet these are the areas that tend to have the least amount of evidence for the effectiveness of remote services. This is compounded by increased risks such as foetal alcohol spectrum disorder, adverse childhood experiences, and deficits in social determinants of health.[14] Further, these services often operate at capacity, finding it difficult to effectively restructure and integrate with other services, leading to a fragmented healthcare landscape that is difficult to navigate for families. These challenges accumulate to build inequity in the health system, but they can be addressed.

To implement the key objectives of the 'First 2000 Days' Framework post the COVID-19 pandemic, we suggest the following RISE (Responsive, Integrated, Sustainable and Equitable) approach embedded within a *proportionate universalism* framework where there is universal care plus service enhancement commensurate with the child and the family's needs.[20,21]

(1) **Increasing responsiveness**

Responsiveness refers to services that are easy to access, intersecting with families at the right place and time. In this regard, opportunistic contacts such as antenatal services during pregnancy, Child and Family Health or Primary Care General Practitioner clinics for immunisation, and attendance at early childhood education centres or other community social care services can be effectively utilised to engage parents. Particularly in the context of COVID-19, digital technology can assist to engage and maintain contact with families, while enabling connectiveness in the background. The national poll suggested that about 69% parents were satisfied with the telehealth services accessed during the lockdown, and ~92% indicated that they would access telehealth services again.[22] The Watch Me

Grow Electronic platform is an example of an innovative digital navigation tool with an ingrained web-based application that facilitates access to health services by individuals, with a unique opportunity to reach vulnerable families in the community or during opportunistic contacts, while enabling service providers to identify and address parental mental health or family social care needs.[13] The use of auto-reminders and appointment schedules engage and empower parents to actively participate in their children's health and developmental monitoring.[13] It is also important that parents and service providers are aware of the existing resources and link families with relevant (in-person or online) services to disseminate information. Such an approach has been shown to be effective in reducing unmet social needs of families.[23]

(2) **Integration – integrated child and family health service models**
Integration in this context prioritises the horizontal coordination of quality care across services, with a focus on delivering services in the way clients understand them – as an integrated whole.[24] An emerging practice among NSW Government and non-government organisations is to combine social care with health care, as local health districts and primary health networks engage in social prescribing to integrate with local community services. These partnerships, collaborations and coalitions need to recognise each other and unite to effectively address the fragmented care landscape, and provide Australians with sustainable, efficient and effective services. Examples of these collaborative approaches are emerging as 'integrated health-social care hubs' – where maternity, child and family health services are co-located with social services and preschool education centres, with an integrated model of care via navigators and shared referral pathways.[25–27] These Kids Care Connect hubs operate with a 'no wrong door' policy and provide seamless continuity of care from intake to closure, covering pregnancy to start of school with care that is matched to families' needs. A pilot study in NSW for preschool children from disadvantaged families from culturally and linguistically diverse backgrounds showed that access to hubs improves family engagement and retention.[28,29]

(3) **Sustainability** is another critical component which relies on the recognition of excellence in existing systems and a willingness to ensure that change is embedded into existing care pathways. Achieving this will require well-informed collaborative leadership with a strong understanding of its constituents' needs, who can successfully link governance structures and encourage multi-lateral partnerships. In this regard a dedicated interagency group consisting of representatives of key stakeholder groups operating in the first 2000 days context could support the sustainability of new implementation models. Mutuality involving shared investment across agencies, co-design with target communities, and information-sharing needs to be agreed upon and actioned before and during a phased implementation that draws in real-time data for early troubleshooting and course-correction. For example, once established, integrated child and family hubs require ongoing key performance indicator systems that use a common/connected approach for assessing effectiveness (e.g. COVID-19 safe contactless services) that may feed into a multiagency hub training and coaching unit that ensures quality cross-agency standards. An example of this framework is the Nest action plan for child and youth wellbeing by the Australian Research Alliance for Children and Youth.[30]

(4) **Equity** in access and availability of services is another key challenge, including the recognition that modern solutions fall short of what disadvantaged populations need.[31] Establishing and maintaining contacts with equitable care navigation for complex needs would provide the necessary resources for an effective implementation of the models of care promoting evidence-based maternal, child and family health care practices.[20] It could build on the prioritised assessment of the family's needs and vulnerability consistent with the NSW Health SAFE START model which helps determine the level of care required.[32]

Further, for effective and integrated implementation of the above approaches, it is critical that routinely collected clinical, administrative, biological, and psychosocial data is utilised to assist early identification and to match interventions using personalised care pathways. Taking advantage of data collection opportunities during the first 2000 days of life that can detect risk and be shared with agencies and services is a function of a properly operating care system where a team approach to case management and care planning is central to practice.[10] Currently, for example, preconception screening for biomarkers does not have an automatic data transfer to later pathways of care, nor does the antenatal screening data for depression and anxiety that would signal the need for a psychosocial intervention.[33,34] The gaps (outlined in Fig. 1) should be reviewed and addressed at the implementation stage.

The way forward

As we recover from the COVID-19 disruption we need a health system that is responsive to **all** children and families regardless of their cultural, linguistic, geographic and/or socioeconomic barriers. The RISE framework proposed here (responsiveness, integration, sustainability, equity) will require reconfiguration of the health systems so that it is routine and integral to the organisation of service

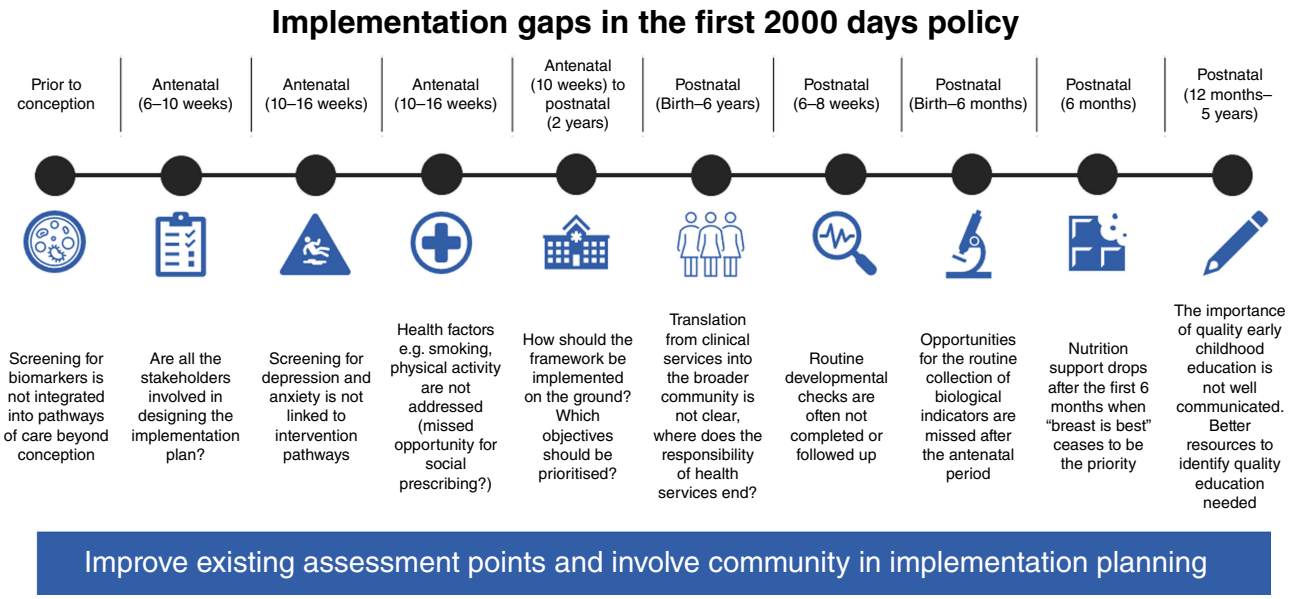

Fig. 1. Data collection gaps that affect the implementation of integrated care policies.

delivery during the first 2000 days of life. This will include investments in existing early childhood services and linkages through place based 'hubs'. Specifically, a case could be made about the establishment of co-located health, early childhood education and social care services with opportunities for step up and step-down care pathways with 'warm handover' ensuring that there is uptake of the recommendations and continuity of care/after-care. Such co-located place based 'hubs' will be well integrated with linkages to community-based support services. Further, parental engagement and access can be enhanced using digital navigation tools in the implementation of services from womb to school as a means to overcome the current barriers of physical attendance to access care. Thus, a well-coordinated continuum of services with integration of physical and digital solutions has the potential to transform how the health system monitors and responds to children and families' needs in the critical early years of life during and beyond the current pandemic.

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