Chapter 5

Equity

Mitch Blair and Denise Alexander

Abstract

Equity is an issue that pervades all aspects of primary care provision for children and as such is a recurring theme in the Models of Child Health Appraised project. All European Union member states agree to address inequalities in health outcomes and include policies to address the gradient of health across society and target particularly vulnerable population groups. The project sought to understand the contribution of primary care services to reducing inequity in health outcomes for children. We focused on some key features of inequity as they affect children, such as the importance of good health services in early childhood, and the effects of inequity on children, such as the higher health needs of underprivileged groups, but their generally lower access to health services. This indicates that health services have an important role in buffering the effects of social determinants of health by providing effective treatment that can improve the health and quality of life for children with chronic disorders. We identified common risk factors for inequity, such as gender, family situation, socio-economic status (SES), migrant or minority status and regional differences in healthcare provision, and attempted to measure inequity of service provision. We did this by analysing routine data of universal primary care procedures, such as vaccination, age at diagnosis of autism or emergency hospital admission for conditions that can be generally treated in primary care, against variables of inequity, such as indicators of SES, migrant/ethnicity or urban/rural residency. In addition, we focused on the experiences of child population groups particularly at risk of inequity of primary care provision: migrant children and children in the state care system.

Keywords: Equity; child health services; primary care; measurement; children in care; migrants

---

Introduction

Equity is an issue that pervades all aspects of primary care provision for children and as such is a recurring theme in the Models of Child Health Appraised (MOCHA) project. As outlined in Chapter 1, primary care itself is intended to provide and equitable and accessible service to everyone (see Chapter 1). This chapter outlines the work done in MOCHA specifically on equity.

All European Union (EU) member states have agreed to address inequalities in health outcomes (European Parliament, 2011). This requires policies which include both actions to address the gradient in health across the whole of society and actions which are specifically targeted to those children who face an increased risk due to multiple disadvantage such as Roma children, some migrant or ethnic minority children, children with special needs or disabilities, children in alternative care and street children, children of imprisoned parents as well as children within households at particular risk of poverty, such as single parent or large families. Some of the MOCHA Country Agents explained how specific countries are addressing equity issues. For example, the Greek Country Agent claimed that even at the level of a social worker directly interacting with a young person, there is a culture of trying to 'reduce inequalities' for the children. This equity goal is emphasised not just in strategy planning but is enforced at multiple stakeholder levels. France and Spain reference the social inclusion of vulnerable children as a key focus of their equity goals. Denmark, meanwhile, highlights the 'aim of increasing education and employment rates' for vulnerable children. One interpretation that may be deduced from these inclusions in national strategy is that in these countries, a more holistic attitude towards child health strategy seems to be suggested with greater equity explicitly recognised as a pillar of improved child and adolescent health. The UN Convention on the Rights of the Child (UNCRC) (United Nations, 1989) has been ratified by all members of the United Nations (193 countries), except for the United States. States party to the UNCRC must ensure that its provisions and principles are fully reflected and given legal effect in relevant domestic legislation. One of the general principles of the convention is non-discrimination which is outlined in the second paragraph, all children have the same rights irrespective of social or legal status. Thus, equitable health care is not negotiable for children, it is something that is a duty for countries that have signed this convention.

Defining the Terms

Health differences between economically privileged and underprivileged population groups were initially labelled as 'inequalities' (Black, 1980). Since the mid-1980s, however, the term 'inequity' has been used for the presence of 'systematic and potentially remediable differences among population groups defined socially, economically, or geographically' (Starfield, 2011) and will be used in this sense throughout this chapter. Equity in health implies that ideally everyone could attain their full health potential and that no one should be disadvantaged from achieving this potential because of their social position or other socially determined circumstance (Moore, McDonald, Carlon, & O'Rourke, 2015; Whitehead & Dahlgren, 2006). In other words, no child should be left behind.

Inequity in access to health care can be horizontal or vertical. Horizontal inequity refers to the situation when people with the same needs do not have equal access to the necessary healthcare resources. Vertical inequity exists when people with greater healthcare needs are not provided with resources adequate for their need (Starfield, Gervas, & Mangin, 2012). Horizontal inequity disadvantages particular social or ethnic groups, the poor who cannot afford access (including time poverty as a barrier) or those with a weaker or very dispersed pattern of service; there are also examples of gender-based inequity. Vertical inequity involves a false equity of providing the same time and access resource to all, thus depriving those with greater needs of the additional service intensity necessary to meet their greater need. This is precisely what proportionate universalism aims to achieve (Carey, Crammond, & De Leeuw, 2015; Marmot, 2010). Primary child health services need to be appraised against the degree to which they adopt this approach.

A large body of research shows that inequities in health related to social position in the population are present in a wide range of health outcomes and indicators throughout the life course, already commencing in the intrauterine period. Neighbourhood deprivation, parental lower parental income/wealth, child poverty, income inequality, educational attainment and occupational social class, higher parental job strain, parental unemployment, lack of housing tenure and household material deprivation have been identified as some of the key social factors that explain these inequities in child health and developmental outcomes (Pillas et al., 2014).

There are major differences in both the levels of child poverty in Europe (which tend to follow the general wealth [GDP] of a country) and the degree of income inequality (as measured by the Gini index) (see also Chapter 9). For example, the levels of child poverty in Iceland and Hungary are 13% and 35.7%, respectively, whereas UK and Romania remain among the worst countries in terms of income inequality compared to Czech Republic and Denmark (Eurostat, 2015). Income inequality has particularly detrimental effects on the many dimensions of child well-being and health (Pickett & Wilkinson, 2007).

The Importance of Early Childhood

The period of early childhood, defined as the period between prenatal development to eight years of age, is increasingly recognised as the most crucial period during the life course and the period that is the most highly sensitive to external influences (Britto et al., 2017). During early childhood, the foundations are laid for every individual's physical and mental capacities that influence their subsequent growth, health and development throughout the life course. In certain aspects of child health and development, the potential adverse effects of social and biological influences, such as suboptimal infant brain growth, are likely to be irreversible (World Health Organization Early Childhood Knowledge

Network, 2007). Hence, intervening to improve early childhood health and developmental outcomes is increasingly being suggested as a priority, as potential interventions are expected to have a stronger impact on an individual's life course health and development while also achieving higher returns than later interventions (Moore et al., 2015). In recognition of the importance of early childhood, the World Health Organization (WHO) Commission on Social Determinants of Health in their final report *Closing the Gap in a Generation* (World Health Organization, 2008) suggested that 'equity from the start' should be an essential component of any attempt to improve health outcomes overall and, in particular, to address health inequalities.

In consequence, the quality of health services is particularly important in early childhood, so that the negative effects of poor health on the developing body and mind can be minimised. The Commission recognises that:

> Preventing the transmission of disadvantage across generations is a crucial investment in Europe's future, as well as a direct contribution to the Europe 2020 Strategy for smart, sustainable and inclusive growth, with long terms benefits for children, the economy and society as a whole. (European Commission, 2013)

Effects of Health Inequalities on Child Health

Children in lower social strata, however, have not only more illnesses, but also more severe illnesses (Starfield et al., 2012). Obesity and thinness (Pearce, Rougeaux, & Law, 2015; Ruiz et al., 2016) and adolescent mental health disorders including depression are all commoner in socially disadvantaged and single parent families (Klanšček, Žiberna, Korošec, Zurc, & Albreht, 2014; Varga, Piko, & Fitzpatrick, 2014; Wirback, Möller, Larsson, Galanti, & Engström, 2014). French adolescents who are socially disadvantaged are at risk or multi-morbidities such as substance misuse, suicide, tendency to violence, decreased school performance and obesity (Chau, Baumann, & Chau, 2013). Unemployment of parents leads to much greater risk of small for gestational age infants in Finland (Räisänen, Kramer, Gissler, Saari, & Heinonen, 2014). Dental health is extremely sensitive to social inequalities both at individual and at intercountry level (Tchicaya & Lorentz, 2014). Parental education has been associated with asthma inequality in ten European cohort studies, in other words, the offspring of mothers with a low level of education have an increased relative and absolute risk of asthma compared to offspring of high educated mothers (Lewis et al., 2017) and low socio-economic status (SES) parents more likely to give birth to Small for Gestational Age and Premature babies (Ruiz et al., 2015).

It follows that needs for health care are greater in children in socially disadvantaged families. This indicates that health services have an important role to buffer the effects of the social determinants of health by providing effective treatment that can improve the health and quality of life for children with chronic disorders. Unfortunately, underprivileged groups, despite their higher needs, are often shown to have less access to care than the more privileged, given rise to the concept of 'the inverse care law' first described by Hart (1973) and explored further by Black (1980).

Primary Care and Its Contribution to Addressing Health Inequity

Although inequities in health are primarily caused by social determinants, the health services have an important role in buffering the effects of adverse social determinants. Consequently, the quality of primary care health services is particularly important in early childhood when the negative effects of poor health on the developing body and mind can be minimised.

Primary care systems operate in a wider socio-economic context and the quality of primary care is determined not only by the general wealth in the country and the amount of funding allocated specifically for primary care compared to high-tech hospital medicine but also to key aspects such as the caseloads of doctors and nurses or the availability of equipment or medicines, access and continuity of care (see Chapter 9). This ecosystem and the interrelationships are reflected in the working MOCHA Working Model (Chapter 2).

In a similar vein, Maeseneer, Willems, De Sutter, Van de Geucchte, and Billings (2007) describe a number of features at the macro (public policy)-, meso (community)- and micro (individual patient and health system and provider)-levels which can influence the effectiveness of the primary care system in addressing inequity. At the micro-level, utilisation of a service is determined by the individual's risk of a health issue (socially patterned) which in turn is recognised as a perceived need by that individual. That perception will be influenced by their health beliefs, predisposing factors (e.g. pain threshold or symptom severity or response to medication) and contextual factors (e.g. family concern or inability to work). Utilisation of a service requires that individual to express the need which itself may be influenced by financial resources, insurance, logistics attitude and so on. Similarly, utilisation will be influenced on the healthcare provider side by knowledge skills and attitude towards the individual including socio-cultural, socio-economic or socio-demographic factors and similar features of the healthcare system in terms of administrative or physical access (Maeseneer et al., 2007). Healthcare utilisation was the focus of the scientists working on equity in the MOCHA group. We also looked for known risk factors of inequity and healthcare utilisation, to establish if these were reflected in the research.

Healthcare Utilisation and Equity for Child Health

We found that diverse indicators of healthcare utilisation were employed in the literature, including use of telephone services, visits to general practitioner (GP), use of mental health services, use of emergency health services, use of school health services, drug prescription patterns, missing school and hospital admission in children with asthma and physician visits in children with recurrent abdominal pain. The studies we found covered all ages of children. However, only four studies adjusted the analysis of healthcare utilisation to an indicator of healthcare need; these included the perceived health status in the use of primary care physicians in Spain (Berra et al., 2006), physical and mental health in Catalonia (Palacio-Vieira et al., 2013), morbidity load in Aragon, Spain (Calderon-Larrañaga et al., 2011), and a measure of mental health (SDQ) in use of somatic and mental health services in Germany (Wölfle et al., 2014).

Common Risk Factors for Inequity.

We searched for known risk factors of inequity, to see if research had focused on these in relation to healthcare utilisation. The risk factors identified were gender, family situation, SES, migrant or minority status and regional differences.

Gender

Of the research identified, there was no conclusive gender influence on inequity, although 12 of the identified studies had reported patterns of healthcare use by gender. In northern Norway, Turi, Bals, Skre, and Kvernmo (2009) reported a much higher use of school health services and also a higher use of GPs among 15−16-year-old girls compared to boys, a pattern that was shown also in use of general practice in 5−14-year-olds in Catalonia, Spain, by Berra et al. (2006) and by Ivert, Torstensson-Levander, and Merlo (2013) for use of mental health care in teenagers in the south of Sweden. In contrast, 11−18-year-old boys and girls were found to have quite similar use of general practice in Greece (Giannakopoulos, Tzavara, Dimitrakaki, Ravens-Sieberer, & Tountas, 2010) and of GP and primary care paediatrician in 0−17-year-old children in Germany (Rattay et al., 2014).

Family Situation

Ivert et al. (2013) reported a twofold increase in use of mental health care in children in single parent households in two studies in southern Sweden, but otherwise, family situation was not reported in relation to healthcare use in the reviewed studies.

Socio-economic Status

Many different indicators of SES were used in the studies identified. These included: parental education, income, parental occupation and the socio-economic composition of the neighbourhood often expressed as deprivation quintiles/quartiles. SES patterns differed considerably between countries. We found that in some countries (research from Greece, Norway and Germany), there was higher use of primary care (general practice) in families with high SES compared to families with low SES. Although in the German research, it was found that families of higher SES used the primary care paediatrician services and those from the lower SES group used GP services (Rattay et al., 2014), while Wölfle et al. (2014) described a higher use of somatic health care, but a lower use of mental health care in families of low SES compared to families with a higher SES, after adjusting the analysis for a mental health measure (SDQ). Two Spanish studies (Berra et al., 2006; Palacio-Vieira et al., 2013) reported generally equitable healthcare utilisation by children aged 5–14 years and 8–18 years, after adjusting for indicators of healthcare needs. In southern Sweden, Mangrio, Hansen, Lindstrom, Kohler, and Rosvall (2011) described a higher use of general practice in preschool children from families with low SES, compared to those with high SES and Ivert et al. (2013) found a similar pattern in adolescent use of mental health care. In Scotland (UK), Wilson, Hogg, Henderson, and Wilson (2013) reported that families used GP services as a source of information for their children similarly despite their SES background.

In the United Kingdom, telephone advice is provided by the health service (see Chapter 14). Patterns of use for the advice service were reported by two studies. Cooper et al. (2005) found that families from less deprived areas used this service more often in the age group 5–14 years, while the use of the service was more equitable during the preschool years. These findings were followed up by Cook, Randhawa, Large, Guppy, and Chater (2012), who found that deprivation patterns differed by the gender of the child. More deprived families of girls used this service more often, but for boys, the more deprived families used the services less.

In the only study identified of children diagnosed with asthma, Austin, Selvaraj, Godden, and Russell (2005) found that children from more deprived neighbourhoods in Scotland (UK) were more often admitted to hospital and missed school because of their asthma condition compared with children from less deprived areas.

Migrants/Minorities

A range of categorisations were used to identify minority and migrant children in the identified research chapters. One such categorisation was that of foreign-born children compared to foreign-born parents. Fadnes, Moen, and Diaz (2016) reported that children who were foreign-born used less primary and emergency hospital care, while the opposite was true for children born in Norway to foreign-born parents. In Spain, children with foreign-born parents in the region of Aragon were found to visit primary care less often (Gimeno-Feliu, Armesto-Gomez, Macipe-Costa, & Magallon-Botaya, 2009) and be prescribed drugs less often (Gimeno-Feliu et al., 2009), compared to children with Spanish-born parents. In a register study by Calderon-Larrañaga et al. (2011) from the same region, adjustment for a morbidity indicator normalised this association, suggesting that the earlier finding could be explained by better health in the migrant children.

Ivert et al. (2013) described the barriers to using mental healthcare services by adolescents with foreign-born parents in Stockholm (Sweden), and a further study (2013) in southern Sweden found this to be particularly pertinent for children with foreign-born parents who originated from low- and middle-income countries, but not for those with parents originating from other high-income countries. We found only one study on undocumented children, which was based in Germany. Wenner, Razum, Schenk, Ellert, and Bozorgmehr (2016) found that migrant children without residency used emergency health services more than twice as frequently compared to children in migrant families who had been granted residency.

Regional Differences

Two German studies describe the difference in healthcare utilisation between the former East and West Germany. Children in the former East Germany used more healthcare services, in particular family physicians in primary care, while children in the former West Germany were more likely to visit a primary care paediatrician (Hintzpeter et al., 2015; Rattay et al., 2014). According to Rattay et al. (2014), this pattern has been consistent between 2003–2006 and 2009–2012.

Quality Indicators of Primary and Evidence of Inequity

We investigated five indicators representing the quality of primary care for children, as defined in administrative data from healthcare services (see Chapter 6) in relation to equity of provision. In line with the agenda of the World Health Organization's Social Determinants of Health (World Health Organization, 2008), we prioritised indicators of preventive health care and early childhood.

Preventive Care

- Percentage of population vaccinated before two years of age with at least one shot of measles-containing vaccine (MCV): reports of recent measles outbreaks in Europe (Muscat, 2011) showed that marginalised populations with poor access to health care, such as the Roma and traveller populations, have been particularly susceptible to measles. This underlines the importance of equitable access to preventive health care.
- Age at operation for cryptorchidism (in those operated 0–17 years of age): (1) percentage operated before 12 months of age and (2) percentage operated before three years of age.
- Age at first diagnosis of autism spectrum disorder in native-born children according to diagnosis in specialised/hospital care.

Curative care.

- Yearly incidence of (1) hospital admissions and (2) emergency room care with a diagnosis of viral or unspecific gastroenteritis in native-born 1–5-year-olds. Viral gastroenteritis is a tracer condition for care of acute conditions in primary care. Viral gastroenteritis is a common acute disorder in preschool children, particularly because pre-schools and other day care centres are a common setting for transmission of these viruses (Ethelberg et al., 2006). Day care attendance tends to vary little by SES in northern Europe (Hjern, Haglund, Rasmussen, & Rosen, 2000), as a result, major differences in incidence of viral gastroenteritis by SES seem unlikely (Olesen et al., 2005).

- Yearly incidence of (1) hospital admissions and (2) emergency room care with an asthma diagnosis in 6–15-year-olds. Hospital admission for asthma in schoolchildren is a tracer condition for primary care quality of chronic disorders.

(Hjern, Arat, & Klöfvermark, 2017).

We searched for data that included at least one link to an indicator of SES, migrant/ethnicity or urban/rural residency. Data were required to be nationally representative, but data on regional populations were accepted when national data were unavailable. Only eight countries were able to provide such data and none for all of the desired indicators: Austria, Denmark, Finland, Iceland, Ireland, Spain, Sweden and the United Kingdom (England) (see also Chapter 6; Hjern et al., 2017)

- Austria: hospital admissions asthma, cryptorchidism and age at diagnosis of autism;
- Denmark: MMR vaccinations, cryptorchidism, asthma and gastroenteritis;
- Finland: vaccination data, cryptorchidism, asthma and gastroenteritis;
- Iceland: vaccinations via electronic health records (see Chapter 14);
- Ireland: MMR1, hospital admissions, cryptorchidism, asthma and gastroenteritis;
- Spain: vaccinations;
- Sweden: DPT and MMR1 vaccinations, cryptorchidism, asthma, gastroenteritis and age at first diagnosis of autism; and
- United Kingdom (England): MMR1 vaccinations, hospital admissions cryptorchidism, asthma and gastroenteritis.

Findings

Vaccinations

Finland, Iceland and Denmark (random sample only) were able to provide individual data from comprehensive national registers. Complete national data were available with area-based linkage from Ireland. Individually linked regional total population data were available from Sweden and regional small area-based population data from Spain (Catalonia). UK (England-only) data were provided from 1,200 nationally representative English general practices. The Swedish and Danish data were older (2010–2011) than the more recent data provided by the other countries. Regional data and data on ethnicity were only available from three countries (Sweden, Finland and Iceland).

We found minimal differences by gender for MCV (generally MMR1), but girls were slightly more likely to be vaccinated in England and Denmark, and boys more often in Finland. In Finland and Ireland, there were no clear differences between SES groups, but in Spain, uptake of MMR was lower in children from higher SES groups. In Denmark, families in lower SES groups had lower vaccination uptake, as was the case in England.

Age at Operation for Cryptorchidism

Six countries provided data on age at operation for cryptorchidism. Despite the presence of clear guidelines, these were adhered to poorly in all the responding countries. Denmark and Finland had the highest proportion operated aged under 12 months (in line with the guidelines) at 21% and 25%, and the UK (England) had the highest proportion operated before three years of age (78%). Sweden showed a consistent pattern of later operation for disadvantaged children (by family income as well as parental country of birth). Only minimal differences were found between urban and rural areas, again with Sweden as the exception with children in rural areas more often being operated before three years of age than those living in the larger cities.

Age at Diagnosis of Autism

Only three countries provided data on age at the first diagnosis of autism (defined as ICD-10 code F84.0) in the available patient databases, and only two, Finland and Sweden, included social stratification. The long follow-up time needed for this indicator implies that this information reflects clinical practices that may have changed considerably in recent years. There were no clear differences between social groups in Sweden and Finland.

Ambulatory Care-sensitive Conditions:

Hospital care for viral gastroenteritis in preschool children. Data on hospital admissions for viral gastroenteritis were provided by six countries, five of whom also provided data stratified by a SES indicator. Denmark had the highest incidence of hospital admissions, followed by Austria and the UK (England). There was a graded social pattern in Finland, Ireland, Sweden and England, with socially disadvantaged children having the highest incidences of hospital admissions. In Sweden, this gradient also included children of foreign-born parents compared with Swedish-born parents. Denmark was the exception, having high admission rates and relatively small differences between income categories.

In Finland and the United Kingdom, vaccination has taken place against rotavirus (in 2009 and 2013, respectively), which is the main cause of hospital admission for gastroenteritis in high-income countries (Van Damme et al., 2006). Sweden was the only country that could provide outpatient data on emergency care for gastroenteritis. For more details, see Hjern et al. (2017).

Hospital Care for Asthma in Schoolchildren. Six countries provided data on hospital admissions for asthma, five of which provided data stratified by a SES indicator. Four of these six countries participated in the international ISAAC study 2000–2003 into asthma (Lai et al., 2009). Incidence rates of admissions differed greatly between countries, with a 10-fold difference between the highest rates in the United Kingdom (England) and the lowest in Sweden. Despite these differences in incidence rates, gender patterns and the social patterns were similar between countries, with children in more disadvantaged families/areas having higher rates of admissions. When incidence rates were stratified by age groups, England has particularly high rates for 13–15-year-olds, and the difference between the countries with the lowest incidence (Sweden and Austria) and the United Kingdom (England) is almost 20-fold for this age group.

Relationship of Equity Indicators and Model Types

In general, no specific relationship between indicators of equity and the different model types was observed in the MOCHA study, suggesting that other factors contribute to these particular incidence.

Lead Practitioner

Four countries in this study have systems led by primary care paediatricians (Austria, Germany, Greece and Spain). Data from Spain seem to indicate an equitable primary care model for children but there are indicators of a considerable degree of inequity in the literature reviews in the other three countries in terms of healthcare utilisation as well as vaccinations. In Germany, there exist considerable regional differences within the country. The former East Germany relies more on GPs as the principal primary care physicians for children, and the former West Germany relies more on paediatricians (Rattay et al., 2014). Uptake of vaccination rates were higher in the former East compared to the former West Germany, while the SES patterns for access to curative care were similar, suggesting that there are other factors than the lead practitioner in primary care that affect the quality of primary care for children and equity of provision of care in this country.

Regulatory, Financial and Service Provision Classifications

Data from this study showed that primary healthcare organisations based on the professional non-hierarchical model (Austria, Belgium, France and Germany) seem to be associated with considerable regional differences in access to health care (Hjern et al., 2017). In Austria and Germany, there were also indications of considerable socio-economic differences in uptake of preventive health services and for Germany also in access to care.

Reform of many National Health Service-based systems is taking place in Europe, including in the United Kingdom, Spain and Sweden (Saltman, Allin, Mossialos, Wismar, & Kutzin, 2012). An increase in the proportion of private providers, application of market-based mechanisms, the promotion of a patient-choice agenda and changes to resource allocation systems are common features of the reform. Studies in adult populations in these countries show that such changes led to increased inequity in utilisation of primary care (Burstrom,

Burstrom et al., 2017; Burstrom, Marttila, Kulane, Lindberg, & Burstrom, 2017). The consequences of these changes for children should be monitored.

Vulnerable Populations

The MOCHA project has focused on two particularly vulnerable populations to see how existing primary care services address their specific needs. The groups identified for in-depth research are migrant children and children in the state care system.

Migrant Children's Entitlements to Health Care

Children from asylum-seeking families and newly settled refugee children have high rates of stress-related mental health problems during the first years after resettlement, with unaccompanied minors having the highest rates of symptoms. Infectious diseases and poor dental health are more common in these children than in settled European populations and many have an accumulated need of preventive and basic health. Thus, access to health care is a major concern for migrant children (Hjern & Østergaard, 2016).

We investigated the legal entitlements that migrant children have to health care in the EU and European Economic Area (EEA) countries using data from the MOCHA Country Agents and knowledge from the scientific and expert literature. In this report, it was only possible to identify the legal situation as defined by the host country; and it is likely that there are differences between this and the actual delivery 'on the ground' in each country. We found that there exists considerable inequity of legal provision to this vulnerable group (Hjern & Østergaard, 2016).

Table 5.1 summarises the entitlements to care for the different categories of migrant children in the EU and EEA countries. It seems that a migrant child who is legally categorised as an asylum-seeker is more likely to be entitled to health care on equal terms with a resident child than other migrant children without permanent residency. Twenty out of the 30 states have a policy to care for an asylum-seeking child in the same way as they do for the host population. Only 11 states have similar arrangements for irregular migrant or undocumented children from non-EU/EEA countries (see Table 5.1). Eight countries have similar entitlements for asylum-seeking children to that of the host population in a parallel primary care organisation outside of the general primary health care. Healthcare policies in the EU/EEA frequently do not address the rights of migrant families from other EU countries, who have overstayed the three-month period of free mobility or who lack identification. These migrants fall outside the defined categories of a migrant in many national as well as European policies.

A number of key points were identified in the MOCHA research:

- Twelve countries state that unaccompanied children have broader entitlements to health care than accompanied children. This is certainly beneficial

Table 5.1. Levels of equality regarding entitlements to health care for three groups of migrant children compared to national children. (No data = no data were available)

Key:	
□	Entitlements equal to nationals regarding coverage and cost and included in same health care system
░	Entitlements equal to nationals regarding coverage and cost but enrolled in parallel health care system
■	Entitlements restricted compared to nationals/No legal entitlements
▒	Unclear legal provision

	Equality Dimension		
	Child Asylum Seekers	Children of Irregular Third-country Migrants	Children of Irregular Migrants from Other EU Countries
Austria	□	□	□
Belgium	□	□	░
Bulgaria	░	■	■
Croatia	□	□	No data
Cyprus	□	▒	No data
Czech Republic	□	■	No data
Denmark	░	▒	▒
Estonia	░	□	No data
Finland	░	■	▒
France	□	□	□
Germany	■	■	▒
Greece	□	□	▒
Hungary	□	■	■
Iceland	□	▒	▒
Ireland	□	■	▒
Italy	□	□	■
Latvia	□	■	No data
Lithuania	░	■	■
Luxembourg	□	■	■
Malta	□	▒	No data
Netherlands	░	■	■
Norway	□	□	□
Poland	░	▒	■
Portugal	□	□	□
Romania	□	□	□

Table 5.1. (*Continued*)

Slovakia	■	■	■
Slovenia	░	■	■
Spain			
Sweden			▒
UK		■	No data

for this group, but it is also a policy that discriminates migrant children by family status. Germany and Slovakia are the only countries that have policies that restrict health care for asylum-seeking children as well as for irregular migrant children originating outside of the EU/EEA area. In Germany, health care to irregular migrants is tied to a reporting duty.

- Different systems of funding health care for migrant children exist – some countries have a tax-based system while others are funded by health insurance. The insurance-based system is more administratively complicated, but identified successful solutions to this challenge in some insurance-funded countries, such as France and the Netherlands, show that there is no obvious relationship between the funding system and healthcare policy for migrant children in Europe.
- A number of countries define entitlements using concepts such as 'basic', 'necessary' or 'emergency' care. This lack of clarity can make access to health care and, in particular primary and psychological care, arbitrary and dependent upon the judgement of individual healthcare providers, and thereby fosters inequity.
- In all but four countries in the EU/EEA, there are systematic health examinations of newly settled migrants of some kind. In most eastern European countries and Germany, this health examination is mandatory; while in the rest of western and northern Europe, it is voluntary. All countries that have a policy of health examination aim to identify communicable diseases, so as to protect the host population.

Children in the State Care System

For decades, studies from Europe, North America and Australia have consistently reported that children entering and residing in societal out-of-home care (OHC) have radically more health problems and more healthcare needs than other children in national populations (Vinnerljung & Hjern, 2018). The MOCHA project explored how the primary care systems in the EU and EEA addressed the needs of these children, and whether the health system targets this population as having extra need, or if no extra provision is provided (see Chapter 15; Vinnerljung & Hjern, 2018).

A detailed study within the MOCHA project asked the Country Agents to provide data about how the EU and EEA countries address health care for children in OHC. This was combined with research knowledge and the results of an international seminar held in Sweden. The resulting report found a number of key points:

- Administrative responsibility for children in the state care system varies, between local, regional, national or combinations of different government levels.
- In all countries, children in OHC have similar access to care as other children in the population, but in some countries, such as in Ireland, there is prioritised access to somatic, dental and mental health care.
- All countries include and cover children by the national health or national health insurance systems.
- The MOCHA Country Agents reported that provision of health care to these children can vary substantially between regions within the same country.
- There is variation between national guidelines and legislation on health assessment and health monitoring of children in OHC. Half of the countries have some form of legally mandated rules for health assessment of children in the care system, but a standard practice for doing this is less common.
- Despite known high rates of mental health morbidity in these children and young people, only two countries (Spain and the United Kingdom) have legislation or a standard practice for assessment and monitoring of the mental health of children in OHC.
- No country has guidelines specifically concerning the sexual health of youth in OHC, for example, sex education and access to contraceptives.
- Only one country (United Kingdom) monitors immunisations for this population group.

(Vinnerljung & Hjern, 2018).

What Europe Can Do to Address Child Health Inequity in Primacy Care Health Systems

Our research findings support many of the recommendations made by the European Commission to strengthen primary care systems to address the needs of disadvantaged children (European Commission, 2013). These include the following:

- Improved universal coverage of preventive and health promotion activities, especially in the early years;
- Addressing the many obstacles children and families living in such circumstances face, such as cost, cultural and linguistic barriers and lack of information, as was investigated in Chapter 10, in the case of assisting families whose children have complex care needs and are at risk of considerable equity.
- Adequate planning and funding of primary health care, especially where workforce density and skill mix are less developed, and ensuring good intersectoral action for health by connecting primary care with community groups working with disadvantaged communities, for example the coordination

between the non-governmental organisations working with children who have complex health (see Chapter 10) or social care needs (see Chapter 15) are strategies which can help (Gilson, Doherty, Loewenson, & Francis, 2007). Training of the primary care health workforce to recognise inequity, the effects of the social determinants of health and empowering them to address these issues (see Chapter 13) will go some way to addressing the problem.

- Improved data availability on key risk factors for inequity, such as gender, SES, family composition, migrant status and regional differences, will facilitate the monitoring of pro-equity initiatives in primary care (see also Chapters 5 and 6; Shadmi, Wong, Kinder, Heath, & Kidd, 2014).

The European Parliament has now built on earlier recommendations of the Commission (European Commission, 2013) and has mandated the Directorate General Employment and Social Justice to assess the feasibility of a Child Guarantee (European Parliament, 2018) to ensure provision of and access for all at-risk children to:

> free healthcare, free education, free early childhood education and care, decent housing and adequate nutrition.

Echoing the findings of the MOCHA project, the target at-risk groups in the Child Guarantee proposal are as follows: children living in precarious family situations (including single parenthood, severe poverty, and Roma), children residing in institutions, children of recent migrants and refugees and children with disabilities and other children with special needs. This Child Guarantee, if endorsed, would provide a framework for availability of European funds to address these target groups' needs and strengthening of the specified core services. While a distance removed from the core MOCHA study, it is a practical initiative to address specific inequities affecting children in Europe. MOCHA evidence and expertise is being drawn into this feasibility study.

Future Directions

Primary care has an important role, but not the only role, in improving health and access to services for children who are at risk of inequity. There is great influence of social determinants of health and the economic situation of the country on health service provision. The MOCHA project has identified areas of inequity, or potential inequity throughout its work (see Chapters, 3, 6, 7, 8, 9, 10, 11, 13, and 14), and in addition, the project has attempted to identify the areas of particular risk of equity in children and young people, such as in areas of autonomy of access for young people, the experience of migrant children and children in the care systems of EU and EEA countries. In addition, we have tried to gather statistical evidence of inequity in terms of vaccinations, age at operation of cryptorchidism, two ambulatory care-sensitive conditions and age at diagnosis of autism to illustrate equity or inequity in the various primary care systems. This investigation has identified a gap in the data availability to assess inequity of provision and also to evaluate any changes in service in terms of equity measures (see also Chapters 6 and 7). We found no clear relationship to the principle models of primary child health care and equity for vulnerable groups. However, highly specialised services for vulnerable children supported by national legislative frameworks or established multi-professional practice networks show promise. Action to address inequalities in primary care to children and young people must be primarily at the national level, as this is where the competency base for health and welfare services is sited. However, the exploration at European Commission level of means of targeting European funds is a welcome signal and endorsement as to the importance of this challenge to children.

References

Austin, J. B., Selvaraj, S., Godden, D., & Russell, G. (2005). Deprivation, smoking, and quality of life in asthma. *Archives of Disease in Childhood*, *90*(3), 253–257. doi:10.1136/adc.2004.049346

Berra, S., Borrell, C., Rajmil, L., Estrada, M. D., Rodríguez, M., Riley, A. W., … Starfield, B. (2006). Perceived health status and use of healthcare services among children and adolescents. *European Journal of Public Health*, *16*(4), 405–414. doi:10.1093/eurpub/ckl055

Black, D. (1980). *Inequalities in health: Report of a research working group*. London: Deparment of Health and Social Security.

Britto, P. R., Lye, S. J., Proulx, K., Yousafzai, A. K., Matthews, S. G., Viavada, T., … Bhutta, Z. A. et al. (2017). Nurturing care: Promoting early childhood development. *Lancet*, *389*(10064), 91–102. doi:10.1016/S0140-6736(16)31390-3

Burstrom, B., Burstrom, K., Nilsson, G., Tomson, G., Whitehead, M., & Winblad, U. (2017). Equity aspects of the primary health care choice reform in Sweden – A scoping review. *International Journal for Equity in Health*, *16*(1), 29. doi:10.1186/s12939-017-0524-z

Burstrom, B., Marttila, A., Kulane, A., Lindberg, L., & Burstrom, K. (2017). Practising proportionate universalism – A study protocol of an extended postnatal home visiting programme in a disadvantaged area in Stockholm, Sweden. *BMC Health Services Research*, *17*(1), 91. doi:10.1186/s12913-017-2038-1

Calderón-Larrañaga, A., Gimeno-Feliu, L. A., Macipe-Costa, R., Poblador-Plou, B., Bordonaba-Bosque, D., & Prados-Torres, A. (2011). Primary care utilisation patterns among an urban immigrant population in the Spanish National Health System. *BMC Public Health*, *11*, 432. doi:10.1186/1471-2458-11-432

Carey, G., Crammond, B., & De Leeuw, E. (2015). Towards health equity: A framework for the application of proportionate universalism. *International Journal for Equity in Health*, *14*, 81. doi:10.1186/s12939-015-0207-6

Chau, K., Baumann, M., & Chau, N. (2013). Socioeconomic inequities patterns of multi-morbidity in early adolescence. *International Journal for Equity in Health*, *12*(1), 65. doi:10.1186/1475-9276-12-65

Cook, E. J., Randhawa, G., Large, S., Guppy, A., & Chater, A. (2012). A UK case study of who uses NHS direct: Investigating the impact of age, gender, and deprivation on the utilization of NHS direct. *Telemedicine and E-Health*, *18*(9), 693–698. doi:10.1089/tmj.2011.0256

Cooper, D., Arnold, E., Smith, G., Hollyoak, V., Chinemana, F., Baker, M., & O'Brien, S. (2005). The effect of deprivation, age and sex on NHS Direct call rates. *British Journal of General Practice*, *55*(513), 287–291.

Ethelberg, S., Olesen, B., Neimann, J., Schiellerup, P., Helms, M., Jensen, C., Böttiger, B., Olsen, K. E., Scheutz, F., Gerner-Smidt, P., & Mølbak, K. et al. (2006). Risk factors for diarrhea among children in an industrialized country. *Epidemiology*, *17*(1), 24–30.

European Commission. (2013). *Investing in children: Breaking the cycle of disadvantage.* Report no. 2013/112/EU. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013H0112&from=EN

European Parliament. (2011). *Resolution of 8 March 2011 on reducing health inequalities in the EU* (2010/2089(INI)) 2011. Retrieved from http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0081+0+DOC+XML+V0//EN

European Parliament. (2018). *Parliamentary questions 24th August, 2018. Answer given by Ms Thyssen on behalf of the European Commission*. Retrieved from http://www.europarl.europa.eu/doceo/document/E-8-2018-003679-ASW_EN.html?redirect

Eurostat. (2015). http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di12

Fadnes, L. T., Moen, K. A., & Diaz, E. (2016). Primary healthcare usage and morbidity among immigrant children compared with non-immigrant children: A population-based study in Norway. *BMJ Open*, *6*(10), e012101. doi:10.1136/bmjopen-2016-012101

Giannakopoulos, G., Tzavara, C., Dimitrakaki, C., Ravens-Sieberer, U., & Tountas, Y. (2010). Adolescent health care use: Investigating related determinants in Greece. *Journal of Adolescence*, *33*(3), 477–485. doi:10.1016/j.adolescence.2009.06.003

Gilson, L., Doherty, J., Loewenson, R., & Francis, V. (2007). *Challenging inequity through health systems – Final report knowledge network on health systems*. WHO Commission on Social Determinants of Health. Retrieved from http://www.who.int/social_determinants/resources/csdh_media/hskn_final_2007_en.pdf

Gimeno-Feliu, L. A., Armesto-Gomez, J., Macipe-Costa, R., & Magallon-Botaya, R. (2009). Comparative study of paediatric prescription drug utilization between the Spanish and immigrant population. *BMC Health Services Research*, *9*, 225. doi:10.1186/1472-6963-9-225

Hart, J. T. (1971). The inverse care law. *Lancet*, *1*(7696), 405–412. doi:10.1016/S0140-6736(71)92410-X

Health Organisation Commission on Social Determinants of Health. (2008). *Closing the gap in a generation Health equity through action on the social determinants of health*. Geneva: WHO, 2008.

Hintzpeter, B., Klasen, F., Schon, G., Voss, C., Holling, H., Ravens-Sieberer, U., & BELLA Study Group. (2015). Mental health care use among children and adolescents in Germany: Results of the longitudinal BELLA study. *European Child and Adolescent Psychiatry*, *24*(6), 705–713. doi:10.1007/s00787-015-0676-6

Hjern, A., & Østergaard, L. S. (2016). *Migrant children in Europe: Entitlements to health care.* Retrieved from http://www.childhealthservicemodels.eu/wp-content/uploads/2015/09/20160831_Deliverable-D3-D7.1_Migrant-children-in-Europe.pdf

Hjern, A., Arat, A., & Klöfvermark, J. (2017). *Report on differences in outcomes and performance by SES, family type and migrants of different primary care models for* *children*. Retrieved from http://www.childhealthservicemodels.eu/wp-content/uploads/2017/12/20171214_Deliverable-D12-7.2-Report-on-differences-in-outcomes-and-performance-by-SES-family-type-and-migrants-of-different-primary-care-models-for-children-v1.1.pdf

Hjern, A., Haglund, B., Rasmussen, F., & Rosen, M. (2000). Socio-economic differences in daycare arrangements and use of medical care and antibiotics in Swedish preschool children. *Acta Paediatrica*, *89*(10), 1250–1256.

Ivert, A., Torstensson-Levander, M., & Merlo. (2013). Adolescents' utilisation of psychiatric care, neighbourhoods and neighbourhood socioeconomic deprivation: A multilevel analysis. *PLoS One*, *8*(11). doi:10.1371/journal.pone.0081127

Klanšček, H. J., Žiberna, J., Korošec, A., Zurc, J., & Albreht, T. (2014). Mental health inequalities in Slovenian 15-year-old adolescents explained by personal social position and family socioeconomic status. *International Journal for Equity in Health*, *13*(1), 26. doi:10.1186/1475-9276-13-26

Lai, C. K., Beasley, R., Crane, J., Foliaki, S., Shah, J., Weiland, S., the ISAAC Phase Three Study Group (2009). Global variation in the prevalence and severity of asthma symptoms: Phase three of the International Study of Asthma and Allergies in Childhood (ISAAC). *Thorax*, *64*(6), 476–483. doi:10.1136/thx.2008.106609

Lewis, K. M., Ruiz, M., Goldblatt, P., Morrison, J., Porta, D., Forastiere, F., … Pikhart, H. (2017). Mother's education and offspring asthma risk in 10 European cohort studies. *European Journal of Epidemiology*, *32*(9), 797–805. doi:10.1007/s10654-017-0309-0

Maeseneer, M., Willems, S., De Sutter, M., Van de Geucchte, I., & Billings, M. (2007). *Primary health care as a strategy for achieving equitable care: A literature review commissioned by the Health Systems Knowledge Network*. Retrieved from http://www.who.int/social_determinants/resources/csdh_media/primary_health_care_2007_en.pdf

Mangrio, E., Hansen, K., Lindstrom, M., Kohler, M., & Rosvall, M. (2011). Maternal educational level, parental preventive behavior, risk behavior, social support and medical care consumption in 8-month-old children in Malmo, Sweden. *BMC Public Health*, *11*, 891. doi:10.1186/1471-2458-11-891

Marmot, M. (2010). *Fair society, healthy lives: The Marmot review*. London: Strategic Review of Health Inequalities in England post-2010. Retrieved from http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf

Moore, T. G., McDonald, M., Carlon, L., & O'Rourke, K. (2015). Early childhood development and the social determinants of health inequities. *Health Promotion International*, *30*(Suppl 2), ii102–ii115. doi:10.1093/heapro/dav031

Muscat, M. (2011). Who gets measles in Europe? *Journal of Infectious Diseases*, *204*(Suppl 1). S353–S365.

Olesen, B., Neimann, J., Bottiger, B., Ethelberg, S., Schiellerup, P., Jensen, C., Helms, M., Scheutz, F., Olsen, K. E. P., Krogfelt, K., Petersen, E., Mølbak, K. & Gerner-Smidt, P. (2005). Etiology of diarrhea in young children in Denmark: a case-control study. *Journal of Clinical Microbiology*, *43*(8), 3636–3641. doi:10.1128/JCM.43.8.3636-3641.2005

Palacio-Vieira, J. A., Villalonga-Olives, E., Valderas, J. M., Herdman, M., Alonso, J., & Rajmil, L. (2013). Predictors of the use of healthcare services in children and adolescents in Spain. *International Journal of Public Health*, *58*(2), 207–215. doi:10.1007/s00038-012-0360-2

Pearce, A., Rougeaux, E., & Law, C. (2015). Disadvantaged children at greater relative risk of thinness (as well as obesity): A secondary data analysis of the England National Child Measurement Programme and the UK Millennium Cohort Study. *International Journal for Equity in Health*, *14*(1), 61. doi:10.1186/s12939-015-0187-6

Pickett, K. E., & Wilkinson, R. G. (2007). Child wellbeing and income inequality in rich societies: Ecological cross sectional study. *BMJ*, *335*(7629), 1080. doi:10.1136/bmj.39377.580162.55

Pillas, D., Marmot, M., Naicker, K., Goldblatt, P., Morrison, J., Pikhart, H. (2014). Social inequalities in early childhood health and development: A European-wide systematic review. *Pediatric Research*, *76*(5), 418–424. doi:10.1038/pr.2014.122

Räisänen, S., Kramer, M. R., Gissler, M., Saari, J., & Heinonen, S. (2014). Unemployment at municipality level is associated with an increased risk of small for gestational age births – A multilevel analysis of all singleton births during 2005-2010 in Finland. *International Journal for Equity in Health*, *13*(1), 95. doi:10.1186/s12939-014-0095-1

Rattay, P., Starker, A., Domanska, O., Butschalowsky, H., Gutsche, J., Kamtsiuris, P., KiGGS Study Group et al. (2014). Trends in the utilization of outpatient medical care in childhood and adolescence. Results of the KiGGS study – A comparison of baseline and first follow up (KiGGS Wave 1). *Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz*, *57*(7), 878–891. doi:10.1007/s00103-014-1989-1

Ruiz, M., Goldblatt, P., Morrison, J., Kukla, L., Švancara, J., Järvelin, M.-R., … Pikhart, H. (2015). Mother's education and the risk of preterm and small for gestational age birth: A DRIVERS meta-analysis of 12 European cohorts. *Journal of Epidemiology and Community Health*, *69*(9), 826–833. doi:10.1136/jech-2014-205387

Ruiz, M., Goldblatt, P., Morrison, J., Porta, D., Forastiere, F., Hryhorczuk, D., … Pikhart, H. (2016). Impact of low maternal education on early childhood overweight and obesity in Europe. *Paediatric and Perinatal Epidemiology*, *30*(3), 274–284. doi:10.1111/ppe.12285

Saltman, R., Allin, S., Mossialos, E., Wismar, M., Kutzin, J.Ie. (2012). Assessing health reform trends in Europe. In J. Figueras & M. McKee (Eds.), *Health systems, health, wealth and societal well-being assessing the case for investing in health systems* (pp. 209–246). London: European Observatory on Health Systems and Policies. McGraw Hill Open University Press. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0007/164383/e96159.pdf

Shadmi, E., Wong, W. C., Kinder, K., Heath, I., & Kidd, M. (2014). Primary care priorities in addressing health equity: Summary of the WONCA 2013 health equity workshop. *International Journal for Equity in Health*, *13*, 104. doi:10.1186/s12939-014-0104-4

Starfield, B. (2011). The hidden inequity in health care. *International Journal for Equity in Health*, *10*, 15. doi:10.1186/1475-9276-10-15]

Starfield, B., Gervas, J., & Mangin, D. (2012). Clinical care and health disparities. *Annual Review of Public Health*, *33*, 89–106. doi:10.1146/annurev-publhealth-031811-124528

Tchicaya, A., & Lorentz, N. (2014). Socioeconomic inequalities in the non-use of dental care in Europe. *International Journal for Equity in Health*, *13*(1), 7. doi:10.1186/1475-9276-13-7

Turi, A. L., Bals, M., Skre, I. B., & Kvernmo, S. (2009). Health service use in indigenous Sami and non-indigenous youth in North Norway: a population based survey. *BMC Public Health*, *8*(9), 378. doi:10.1186/1471-2458-9-378

United Nations. (1989). *Convention on the rights of the child*. New York, NY: United Nations. Retrieved from https://downloads.unicef.org.uk/wp-content/uploads/2010/05/UNCRC_united_nations_convention_on_the_rights_of_the_child.pdf?_ga=2.209651665.274437633.1540996300-199092997.1540996300

Van Damme, P., Van der Wielen, M., Ansaldi, F., Desgrandchamps, D., Domingo, J. D., Sanchez, F. G., … Rose, M. (2006). et al. Rotavirus vaccines: Considerations for successful implementation in Europe. *Lancet Infectious Diseases*, *6*(12), 805–812. doi:10.1016/S1473-3099(06)70657-0

Varga, S., Piko, B. F., & Fitzpatrick, K. M. (2014). Socioeconomic inequalities in mental well-being among Hungarian adolescents: A cross-sectional study. *International Journal for Equity in Health*, *13*(1), 100. doi:10.1186/s12939-014-0100-8

Vinnerljung, B., & Hjern, A. (2018). *Health care in Europe for children in societal out-of-home care*. Retrieved from http://www.childhealthservicemodels.eu/wp-content/uploads/Mocha-report-Children-in-OHC-May-2018.pdf

Wenner, J., Razum, O., Schenk, L., Ellert, U., & Bozorgmehr, K. (2016). Health status and use of health services of children with insecure residence status in Germany. *European Journal of Epidemiology*, *30*, S226–S227.

Whitehead, M., & Dahlgren, G. (2006). *Concepts and principles for tackling social inequities in health. Levelling up Part 1*. Copenhagen: WHO Europe. Retrieved from. http://www.euro.who.int/__data/assets/pdf_file/0010/74737/E89383.pdf

Wilson, C., Hogg, R., Henderson, M., & Wilson, P. (2013). Patterns of primary care service use by families with young children. *Family Practice*, *30*(6), 679–694.

Wirback, T., Möller, J., Larsson, J.-O., Galanti, M. R., & Engström, K. (2014). Social factors in childhood and risk of depressive symptoms among adolescents – A longitudinal study in Stockholm, Sweden. *International Journal for Equity in Health*, *13*(1), 96. doi:10.1186/s12939-014-0096-0

Wölfle, S. 1., Jost, D., Oades, R., Schlack, R., Hölling, H., & Hebebrand, J. (2014, Sep). Somatic and mental health service use of children and adolescents in Germany (KiGGS-study). *European Child and Adolescent Psychiatry*, *23*(9), 753–764. Retrieved from https://doi.org/10.1007/s00787-014-0525-z.

World Health Organization. (2008). *Commission on social determinants of health: Closing the gap in a generation* (p. 247). Retrieved from https://www.who.int/social_determinants/thecommission/finalreport/en/World.

World Health Organization Early Child Development Knowledge Network, (ECDKN). (2007). *Early child development: A powerful equalizer.* Final report of the Early Childhood Development Knowledge Network of the Commission on Social Determinants of Health. Geneva: WHO.