**Potentially over 3 million children in EU Europe believed not to be receiving needed medical and dental treatment - and Parents’ reasons why**

**Michael J Rigby**

Emeritus Professor of Health Information Strategy, Keele University

Postal address:

Lavender hill

6 Carrighill Lower

Calverstown

Kilcullen

Co. Kildare

R56 DT91

Ireland

[m.j.rigby@keele.ac.uk](mailto:m.j.rigby@keele.ac.uk)

landline: 00353 45 485858

mobile: 00 353 877653399

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# Abstract

**Background:** Children have the Right to health, and countries a duty under the United Nations Convention on the Rights of the Child to facilitate this. The European Union has emphasised the importance of investing in children, but at times this seems more wish than pragmatism. Furthermore, European statistical systems do not provide any relevant data, and the degree of unmet need has hitherto been unknown. However, new *ad hoc* household survey data have now been published by Eurostat showing the percentage of children with a purported unmet medical or dental need, and the expressed reasons for this.

**Method**: This paper critically reviews these data on children with a reported unmet medical or dental need to create an indication of the number of European children with unmet medical and dental needs, and the contributory factors.

**Results**: This paper calculates that some 1 million European children can be estimated to have an unmet medical need, and 2 million children an unmet dental need, though the survey approach has some weaknesses. A probable overestimate of children affected in sample households offsets the likely failure to capture data about children in institutions, homeless, or in fractured families, or about multiple needs. The reported reasons for not obtaining treatments are a valuable first step in highlighting an important issue for Europe’s children – measurement of service accessibility.

**Conclusion**: Potentially over 3 million European Union children are failing to have their health needs, and their Rights, met. If the incoming European Commission is serious about its predecessor’s promise to invest in children, and to take seriously their rights, action is needed to improve quantification of unmet need and to reduce suffering and potential lasting damage.

Key Words:

Children; Europe; healthcare; dental care; right to health; unmet need; affordability

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Background

Children are important in any society, and health systems and governments are reluctant to admit to anything other than prioritisation of services to this group. Children by definition are dependent on society to ensure their health needs are met, as they cannot advocate for, pay for, or indeed until upper childhood actively seek a service.

*Policy under-writing*

Under the terms of the United Nations Convention on the Rights of the Child (UNCRC), Article 24 recognises “the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health”, and goes on to state that “States Parties shall strive to ensure that no child is deprived of his or her right of access to such healthcare services”; and that “States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures … To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care” [[[1]](#endnote-1)]. All European Union (EU) countries are signatories to the UNCRC.

In European Union terms, health services are a national competence, and the European Commission has little policy mandate other than special topics such as public health, cross-border threats, and research. However, in 2013 the Commission published a Recommendation on the importance of investing in children [[[2]](#endnote-2)]. Though the prime focus was on addressing social and economic disadvantage, one objective specified is “Improve the responsiveness of health systems to address the needs of disadvantaged children — Ensure that all children can make full use of their universal right to healthcare”

The World Health Organisation Regional Office for Europe covers all 53 countries of the European continent, including the EU countries. It has clear policies on child health, endorsed by all countries. The 2005 European strategy for child and adolescent health and development [[[3]](#endnote-3)], with its life-course approach, was re-endorsed by Investing in Children: the European child and adolescent health strategy 2015–2020 document in 2015 [[[4]](#endnote-4)]. This latter emphasised the grounding on the WHO core policy of advancing Universal Health Coverage, which itself implies the importance of access for all children to necessary health care.

*The challenge of measuring compliance*

Ascertaining whether this policy and Right of children to access healthcare is being achieved is difficult. As has already been ascertained from a recent large study of children’s primary care in Europe, children are almost invisible in European data systems [[[5]](#endnote-5)]. This includes the absence of any data on primary care provision for children or on primary care activity, while hospital discharge data for children’s age-groups are only available for 17 of the 28 EU countries.

The European Observatory on Health Systems and Policies published in 2017 a status report on Implementation of the right to health care under the UNCRC [[[6]](#endnote-6)]. Acknowledging the non-specificity of the rights of the child to healthcare under Article 24 of the UNCRC, this report summarised that:

*“Although all EU Member States have ratified the UNCRC, only four (Cyprus, Croatia, Italy and Spain) have introduced a legal disposition that guarantees this right to all children living in their territory, irrespective of their legal status (nationality, social insurance or residence). Two of them (Cyprus and Italy) explicitly refer to the UNCRC. Seven other countries (France, Greece, Malta, Poland, Portugal, Romania, Sweden) ensure health care to all groups of children residing in their territory through regular health care legislation by setting out the eligibility criteria or by organising special additional schemes for specific groups that fall outside of main statutory coverage.”*

The conclusion of this Observatory report is that three countries – Austria, Germany, and the Netherlands - are not considered fully compliant for their own national children, that several countries are not compliant for children of other nationalities than the host state, and that only eleven countries appear fully compliant with this obligation for all groups of children – Croatia, Cyprus, France, Greece, Italy, Malta, Poland, Portugal, Romania, Spain, and Sweden.

However, both the policy commitments and the Observatory policy analysis are devoid of case-based statistics. This paper explores a new opportunity to analyse some newly published facts, albeit very limited in detail and with no clinical verification.

Method

The Eurostat Statistics on Income and Living Conditions (SILC) database is an important survey and source of data on living conditions in Europe. In 2017 for the first time this study included *ad hoc* data on children’s health (ilc\_hch), with specific datasets on Children with unmet needs for medical examination or treatment or dental care (ilc\_hch14), and the reported reasons for the need being unmet (ilc\_hch15) [[[7]](#endnote-7)]. The SILC methodology is described as a framework database, with agreed data being transmitted to Eurostat [[[8]](#endnote-8)]. For this paper, the data were critically reviewed so as to assess their utility as a means of quantifying unmet health and dental needs for children, and whether they could be used to start dialogue to address the problems and barriers identified.

Results

*Unmet Medical Needs*

This provision of data on unmet health need for children is a major step forward, but there are significant limitations. The SILC survey definition of Medical care “*refers to individual health care services (examinations or treatments) provided by or under direct supervision of medical doctors … traditional and complementary medical professionals … or equivalent professions according to national health care systems. [including] …curative, rehabilitative, long-term health care and by different modes of provision (inpatient, outpatient, day, and home care) - medical mental health care - preventive medical services if perceived by respondents as important*.” The adult respondent for the household is asked whether there was ever an occasion in the year when any child did not receive such needed appointment, and the broad reason for that [[[9]](#endnote-9)].

A response from a householder that a child has not been able to avail of necessary medical treatment is then assumed to apply to all children in the household. This is a valid approach for assessment of living conditions such as housing or availability of fresh fruit, but is not logical with regard to health needs as each child’s healthcare needs are personal and different. The survey's Methodological Guidelines state that "Information on unmet need for dental or medical examination or treatment for children applies at household level and refers to all children aged 0-15 living in the household as a whole.” [9] This analysis will therefore result in over-estimation, as it will apply the greatest individual problem to all children in the household. On the other hand, it is not clear that uptake of therapies such as speech therapy will be counted, as the respondent may not consider them a process supervised by a doctor. Moreover, the list of treatment settings does not explicitly include primary care or public health clinics. Multiple needs in a year are not counted. The data are given as total children living in a household with one or more children with an unmet need, as a percentage of all children.

In order to give some quantification of what these results mean in terms of actual children, this paper attempts some approximations. They must have a strong warning attached, as sample size is not given and confidence intervals and significance cannot be computed. But even with that limitation, the results are noteworthy and concerning, while stimulating a thirst for more focussed data.

As explained, children not receiving medical treatment are given as percentages of all dependent children – with children being considered as those under 16. This is it not a normal definition of children in the UNCRC or child health domains, and is a population count not available from Eurostat.

Table 1 presents an attempt at quantification, hampered by the facts that response values are not presented by Eurostat, simply naively extrapolated percentages of children; and secondly that the population of children to match the definition used by SILC is also not published. Hence for this hypothecation the population of children has been computed by adding three fourteenths to the published under 15 years figure, and the bold assumption made that the population percentage of children with purported unmet needs is similar to the percentage reported by SILC.

Apart from these uncomfortable hypothecations, the figure computed in Table 1 will be inflated because of the assumption by SILC that all children in any household are similarly disadvantaged, but also will be deflated by the medically-biased definition of health need which may lead to under-reporting of other key healthcare delivery, because multiple needs are not aggregated, and because the survey method may not capture children living in institutions or in fragile home situations including lack of a stable home. Preparation of such a guestimate is painful for an epidemiologist, but produces a figure of some 1.5 million children with reported unmet healthcare needs. Even if this figure is 50% inflated this shows some 750,000 children in the EU with unmet needs, at risk of increasing damage, and this is even more painful to comprehend than the statistical assumptions.

**Table 1. Hypothesised Number of Children with reported Unmet Health Needs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Purported % of child with unmet medical needs** | **Children aged**  **0-<15 Years**  **2017** | **Hypothesised Population aged 0-<18 Years** | **Indicative estimate of children with unmet medical needs as reported in SILC survey** |
| **Source:** | Eurostat Table:  ilc\_hch14 | Eurostat Table:  yth\_demo\_010 | Under 15 figure adjusted by +3/14ths. | Col.2 percentage applied to Col. 4 |
| Austria | 0 | 1,263,740 | 1,534,541 | - |
| Belgium | 2.5 | 1,927,820 | 2,340,924 | 58,523 |
| Bulgaria | 2.0 | 1,001,019 | 1,215,523 | 24,310 |
| Croatia | 0.4 | 603,450 | 732,761 | 2,931 |
| Cyprus | 1.4 | 139,307 | 169,159 | 2,368 |
| Czech Republic | 2.7 | 1,647,275 | 2,000,263 | 54,007 |
| Denmark | no data | 961,568 | 1,167,618 | no data |
| Estonia | 1.8 | 213,609 | 259,382 | 4,669 |
| Finland | no data | 894,178 | 1,085,788 | no data |
| France | 1.6 | 12,205,108 | 14,820,488 | 237,128 |
| Germany | 0.1 | 11,048,568 | 13,416,118 | 13,416 |
| Greece | 2.4 | 1,554,669 | 1,887,812 | 45,307 |
| Hungary | 0.2 | 1,422,865 | 1,727,765 | 3,456 |
| Ireland | no data | 1,008,455 | 1,224,553 | no data |
| Italy | 1.7 | 8,182,584 | 9,935,995 | 168,912 |
| Latvia | 2.4 | 303,587 | 368,641 | 8,847 |
| Lithuania | 2.3 | 422,122 | 512,577 | 11,789 |
| Luxembourg | 1.1 | 95,923 | 116,478 | 1,281 |
| Malta | 0.6 | 65,084 | 79,031 | 474 |
| Netherlands | no data | 2,781,768 | 3,377,861 | no data |
| Poland | 1.9 | 5,732,323 | 6,960,678 | 132,253 |
| Portugal | 0.9 | 1,442,416 | 1,751,505 | 15,764 |
| Romania | 7.4 | 3,057,024 | 3,712,101 | 274,695 |
| Slovakia | 0.6 | 840,228 | 1,020,277 | 6,122 |
| Slovenia | no data | 308,594 | 374,721 | no data |
| Spain | 0.3 | 7,005,179 | 8,506,289 | 25,519 |
| Sweden | no data | 1,760,994 | 2,138,350 | no data |
| United Kingdom | no data | 11,742,211 | 14,258,399 | no data |
| **European Union - 28 countries** | **1.6** | **79,631,668** | 96,695,597 | 1,547,130 |

*Reasons for Unmet Medical Need*

Respondents were asked for the reasons for non-treatment out of five preset categories, and the results are published as percentages of those allegedly not being treated – though in fact the denominator suffers from the error of extrapolation by association already identified. However, this enquiry does for the first time seek systematically to shed light on the number of children prohibited by cost, parental time pressures, or other reasons from attending – with Cost including the cost of travel and similar personal cost as well as direct medical costs, and No Time recognising the potential difficulty of parents fitting appointments round work and other family, child and adult caring duties.

The published SILC data give the reported reason for fourteen countries, published as percentages and are shown in Table 2. The different leading reasons vary significantly by country. Noteworthy is the publication of the reasons for UK children, while the numbers by household for that country are not given (see Table 1), making impossible any computation of the size of the problem in the UK.

**Table 2. Reasons for Children having Unmet Medical Needs, 2017, Thirteen Countries**

*Compiled based on Eurostat Source SILC - ilc\_hch15*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Expense  % | Too far  % | No time  % | Waiting List  % | Other  % |
| Belgium | 92.1 | 2.2 | 0 | 0 | 5.2 |
| Bulgaria | 94.3 | 5.7 | 0 | 0 | 0 |
| Cyprus | 100 | 0 | 0 | 0 | 0 |
| Czech Republic | 8.2 | 5.4 | 24.3 | 9.7 | 52.4 |
| Estonia | 9.7 | 0 | 0 | 65.9 | 24.4 |
| France | 18.9 | 1.4 | 2.8 | 17.5 | 59.3 |
| Greece | 77.7 | 7.2 | 1 | 5.2 | 8.9 |
| Italy | 86.7 | 0 | 2.5 | 10.8 | 0 |
| Latvia | 34.1 | 0 | 15.5 | 46.3 | 4.1 |
| Poland | 7.4 | 4.5 | 2.2 | 73.2 | 12.8 |
| Portugal | 81.2 | 0 | 0 | 13.8 | 5 |
| Romania | 62.9 | 10.6 | 4.5 | 11 | 11.1 |
| United Kingdom | 0 | 0 | 0 | 82.8 | 17.2 |

*Unmet Dental Needs*

Equivalent data for unmet dental needs are shown in Table 3.

Table 3. Proportions of Children with Unmet Dental Needs and Reasons – 21 Countries

*Compiled based on Eurostat Source SILC - ilc\_hch15*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Purported % of children with unmet Dental Need** | **Indicative estimate of children with unmet Dental Need** | **Reason for not Attending (Data supplied for Nine Countries)** | | | | |
| **Expense as % of untreated** | **Too far as**  **% of untreated** | **No Time as**  **% of untreated** | **Waiting List as % of untreated** | **Other Reason as % of untreated** |
| Austria | 0.9 | 13,811 |  |  |  |  |  |
| Belgium | 7.8 | 182,592 | 89.4 | 0 | 2.1 |  | 8.5 |
| Bulgaria | 2.4 | 29,173 | 94.9 | 5.1 |  |  |  |
| Croatia | 0.4 | 2,931 |  |  |  |  |  |
| Cyprus | 3.1 | 5,244 | 95.8 |  |  |  | 4.2 |
| Czech Republic | 2.0 | 40,005 | 5.8 | 4.2 | 16.8 | 25.4 | 47.8 |
| Estonia | 2.8 | 7,263 | 52.2 | 4.6 | 1.3 | 20.0 | 21.9 |
| France | 0.9 | 133,384 | 38.9 |  | 4.6 | 25.5 | 31.1 |
| Germany | 0.5 | 67,081 |  |  |  |  |  |
| Greece | 4.4 | 83,064 | 98.2 | 1.8 |  |  |  |
| Hungary | 0.3 | 5,183 |  |  |  |  |  |
| Italy | 1.7 | 168,912 | 81.5 |  |  | 18.5 |  |
| Latvia | 7.3 | 26,911 | 57.8 | 1.9 | 8.9 | 30.6 | 0.7 |
| Lithuania | 3.6 | 18,453 |  |  |  |  |  |
| Luxemb’rg | 0.7 | 815 |  |  |  |  |  |
| Malta | 2.8 | 2,213 |  |  |  |  |  |
| Poland | 2.0 | 139,214 | 12.7 | 3.4 | 21.0 | 40.4 | 22.6 |
| Portugal | 6.0 | 105,090 | 89.2 | 0.7 | 7.2 | 0.2 | 2.7 |
| Romania | 5.7 | 211,590 | 67.9 | 16 | 0 | 1.5 | 14.6 |
| Slovakia | 0.9 | 9,182 | 78.1 | 0 | 6.2 | 5.8 | 9.9 |
| Spain | 5.7 | 484,858 | 99.4 |  |  |  | 0.6 |
| European Union – 28 countries | 2.5 | 2,417,390 |  |  |  |  |  |

*Compiled based on Eurostat Source SILC - ilc\_hch15*

With the same qualifications about the nature of the data, it can be seen that in Europe over two million children need dental treatment but are not receiving it. In percentage terms based on households, Belgium, Latvia, Romania and Spain have the highest proportions of children with unmet need. However, when computed into potential numbers related to the number of households with children in the country Spain accounts for a fifth of the total.

Reported reasons for this non-treatment are only published for a sub-set of mainly larger countries and vary considerably by country, but in most cost is almost the sole barrier. This is perplexing as virtually all EU countries claim to have a free service of inspection and basic treatments for children [[[10]](#endnote-10)], so these may be non-health costs of attending with a child. Poland, followed by the Czech Republic, Estonia, France and Latvia have waiting list problems, suggesting lack of workforce or capacity.

*Correlation with other Income and Living Conditions Measures*

The SILC published tables on Eurostat cited but not further analysed here show how the proportion of households with unmet medical and dental need fall between poorer (income below 60% of the national median) and better off (above 60% of median income) [[[11]](#endnote-11)]. In most countries with significant unmet medical need there was a broadly even spread across this income divide, but in Belgium the rate amongst the poor was seven times higher and in Bulgaria five times higher; conversely in Poland it was three times higher in the upper income group.

Turning to unmet dental need, far more countries had a significant disadvantage for poorer families. In Spain the difference was twelve-fold, Slovakia ten-fold, Bulgaria nine-fold, Portugal seven-fold, Belgium six-fold, Romania five-fold, and Spain, Italy and Cyprus four-fold. Though Austria had small numbers, the poorer families were at fifteen-fold risk.

Being a child in a single adult household with dependent children seems to have little effect on risk of unmet need in most countries, but with notable exceptions. In Belgium the risk of unmet medical need is 50% higher, but conversely single adult households had one seventh the rate of full households in Bulgaria and one fifth the rate in Romania. When income is also taken into account, Belgium, Estonia, Italy and Poland have four-fold greater representation by one adult households in the lower income group families, but with a nine-fold difference in Cyprus. Conversely, two adult families with higher income had greater unmet need in France (three-fold), double in Luxembourg, and marginally higher in Greece, suggesting effective positive action to support single parents in most countries except the first-listed. For dental care there is much less information available, hindering deeper analysis.

Expense is given as the biggest single cause of non-treatment for both medical and dental needs. Nearly all European countries have a policy of free medical consultation for children, though many charge co-payments for prescriptions. Not often considered, though, are parental out-of-pocket expenses of taking a child to a medical appointment, including not just fares, but possibly loss of income if the parent has to take time off work - policies of encouraging both parents to re-enter employment may be contributing to the non-affordability of getting their children to medical and dental treatment. This challenge to service uptake has also recently been raised, specifically in the context of children’s vaccination by the Expert Panel on Effective Ways of Investing in Health [[[12]](#endnote-12)]

Conclusions

Children’s health is important in its own right to ensure a healthy future population of Europe, and is a moral duty on current society as children are dependent on society to provide health and dental care for them. How little we know about children, especially aggregated from primary care and related to health needs, has already been flagged up from a major European study [5].

These new *ad hoc* data from the Statistics on Income and Living Conditions (SILC) framework database give for the first time a broad assessment of unmet health need of European Union children. However, welcome though these data are, particularly for their direct assessment of overall parent-reported financial, parental overload, and other practical barriers to access, they contain a difficult assumption that a health need or dental need problem affecting one child in a family will be replicated in all children, yet do not count multiple unmet needs, and the child population chosen is not a normally recognised one. The data are almost entirely presented as rates, making it much harder to produce empirical facts in a way which can stimulate a deeper process of analysis and service adjustment or redesign to meet 21st. Century population and lifestyle needs. Moreover, this survey is likely not to have captured some of the most vulnerable children, namely those not in stable households. These will include migrants and asylum seekers (who may have some form of dedicated health service in their current country of temporary residence but seldom matching that of resident national children) [[[13]](#endnote-13)]. Also likely to be excluded are children resident in institutions, and homeless children. Children in fractured families and other family precariousness also stand less chance of being captured in a household-based survey.

Nevertheless, from those children included in families captured in household surveys in 2017, in the EU countries which participated, we can hypothesise that over a million children have unmet medical needs as viewed by the survey respondents, and some two million children have unmet dental needs. Also noteworthy is that during the period of preparation of this paper in 2019 the results for Ireland and the United Kingdom were removed, and those for Belgium amended.

Finally, how well does expressed non-access reflect intended policy as assessed by the WHO Observatory? Of the three countries giving most concern in the Observatory policy analysis, Austria and Germany are viewed well by householders but there are no Netherlands data, while the list of eleven seemingly compliant countries includes most of those with strongest expressed unmet need.

This analysis shows how little we know about accessibility of health care to Europe’s children. The SILC data have sought to measure this, and have trodden new ground in seeking the parent’s story as to barriers. These data are far from ideal, and almost certainly not capturing the most vulnerable children. Nevertheless, that around 3 million European children are reported as having unmet health needs and are thus deprived of their Health Rights, and that statistical systems can tell us so little, are major causes of concern needing urgent attention.

Paul Brodeur is credited with the observation that “Statistics are human beings with the tears wiped off”. Worryingly we do not know how many of Europe’s children (and their parents) have tears of pain and of frustration at not receiving needed medical or dental treatment, but it seems that some 3 million European Union children are producing a lot of tears in our midst.

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Conflict of Interest

The author has no conflicts of interest.

Key Messages

* Children have a Right to health, and countries should be facilitating this, but policy analysis has indicated that comparatively few are likely to discharge this duty fully.
* Data systems in the European Union are seriously inadequate in their analysis of child health provision and uptake; child-based data and primary care data are absent.
* New data from households reporting children with unmet medical or dental needs shows 3 million EU children in 2017 with unmet need for treatment, with reasons.
* Urgent deeper study, and focussed action, are needed at European and Member State level at alleviate this suffering and harm to children.

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