

Oral Health

Summary

- The oral health of the population of Hampshire is generally good. However, inequalities remain with those from the most deprived backgrounds experiencing the highest levels of dental disease – dental (tooth) decay, periodontal (gum) disease and oral cancer.
- Over a fifth of Hampshire's five-year-olds experienced dental decay, but this varied from 13.4% in Winchester to 34.6% in Havant, and 30.9% in Rushmoor. compared to the England average of 30.9%.
- The average Hampshire child aged five, had 0.7 decayed, missing (due to extraction) or filled teeth (dmft), compared to a national average of 1.1 teeth per child, and the South East average of 0.9 teeth per child.
- Among five-year-olds in Havant this estimate was 3.65, which means that, of the five-year-olds in Havant who had dental decay, nearly four of their teeth were affected.
- A quarter of twelve-year-olds had dental decay in Hampshire, lower than the national prevalence (33.4%). Over twice as many children from Gosport (32.6%), Eastleigh (31%), the New Forest (30.7%) and Rushmoor (29.2%) experience dental decay, compared to just 13.5% of children from Hart.
- More adults are keeping their own teeth into old age, much of it heavily restored. This group will need significant care to maintain this dentition including an increased need for restorative care (large fillings, root canal treatment, periodontal treatment) and more complex prosthodontic care (dentures, dental crowns and dental bridges). This is a growing problem with an ageing population, particularly those who need residential care.

Recommendations

Use local information and intelligence to inform development of local services

- Continue to ensure that all dental commissioning including those developing preventive interventions meet local needs.
- Complete the current three-year-old survey as part of on-going participation in the national dental epidemiological survey programme.
- Monitor access to dental care and service utilisation with a focus on reducing dental health inequalities.

Focus on prevention

- Expand supervised toothbrushing initiatives to all "Early Years"

Facilitate access to high-quality care

- Work with all partners to ensure that people are able to access the care they need.

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1. Introduction

Oral health is an important aspect of general health and wellbeing. Good oral health enables people to eat and enjoy a variety of food, communicate and socialise in the community all of which contributes to a healthier lifestyle. Poor oral health can result in pain, sleepless nights and time off school and work. This is particularly undesirable in vulnerable groups such as young children. The oral health of the population of Hampshire is generally good. However, inequalities remain with those from the most deprived backgrounds experiencing the highest levels of dental disease – dental (tooth) decay, periodontal (gum) disease and oral cancer. In line with the Marmot review *Fair Society, healthy Lives*¹, reducing inequalities is a priority, if population level improvements are to be achieved.

2. Level of need in the population

2.1 Dental health in five-year-old children

The last national survey of 5-year-olds took place in 2007/08. Over a fifth of Hampshire's five-year-olds experienced dental decay, which varied from 13.4% in Winchester to 34.6% in Havant, and 30.9% in Rushmoor compared to the England average of 30.9%. The average Hampshire child aged five, had 0.7 decayed, missing (due to extraction) or filled teeth (dmft), compared to a national average of 1.1 teeth per child, and the South East average of 0.9 teeth per child. Mean dmft varied from 0.36 in Winchester to 1.28 in Havant. Of those five-year-olds in Hampshire who had experienced decay (dmft in %dmft>0), the mean dmft was 3.04 which was below the England average of 3.45. But among five-year-olds in Havant this estimate was 3.65, which means that, of the five-year-olds in Havant who had dental decay, nearly four of their teeth were affected (table1).

The requirement for positive consent introduced for the 2007/08 dental survey introduced some bias into these data as those with dental decay are less likely to participate².

Like many diseases, there is a strong relationship between deprivation and poor dental health. Children from the most disadvantaged backgrounds are at greatest risk from tooth decay and tend to have higher levels of caries^{3,4}. Figure 1 is a map depicting the 2005/06 figures and showing the links with areas of deprivation in Hampshire. These data are representative of the true extent of dental decay in the five-year-old Hampshire population as it was a census survey done with negative consent. This means that every child aged five years in Hampshire, for whom consent was not expressly refused, was examined.

¹ <http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report>

² Dyer T, Marshman Z, Merrick D, Wyborn C and Godson J (2008). School-based epidemiological surveys and the impact of positive consent requirements. *British Dental Journal*, 205: 589-592

³ Mellor, A.C. (2000) Tooth decay and deprivation in young children. *British Dental Journal*, 189, 372.

⁴ Office for National Statistics (2003) Children's Dental Health Survey.

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Table 1: Dental decay in 5 year olds, 2007/08

Local Authority	Mean dmft	Experience of decay % dmft > 0*	Mean dmft in those who have experienced decay Mean dmft
Basingstoke and Deane	0.68	22.4%	2.78
East Hampshire	0.59	17.3%	3.22
Eastleigh	0.53	18.7%	2.84
Fareham	0.67	25.5%	2.45
Gosport	0.85	23.5%	3.37
Hart	0.71	21.0%	3.39
Havant	1.28	34.6%	3.65
New Forest	0.45	17.6%	2.58
Rushmoor	1.04	30.9%	3.40
Test Valley	0.68	22.7%	3.02
Winchester	0.36	13.4%	2.69
HAMPSHIRE	0.68	21.7%	3.04
SOUTH EAST	0.90	26.2%	3.32
ENGLAND	1.11	30.9%	3.45

Source: North West Public Health Observatory, The Dental Observatory

* % dmft > 0: with one or more obviously decayed, missing (due to decay) and filled teeth

** For those children with decay experience, the average number of obviously decayed, missing (extracted due to decay) and filled teeth per child

2.2 Dental health in twelve-year-old children

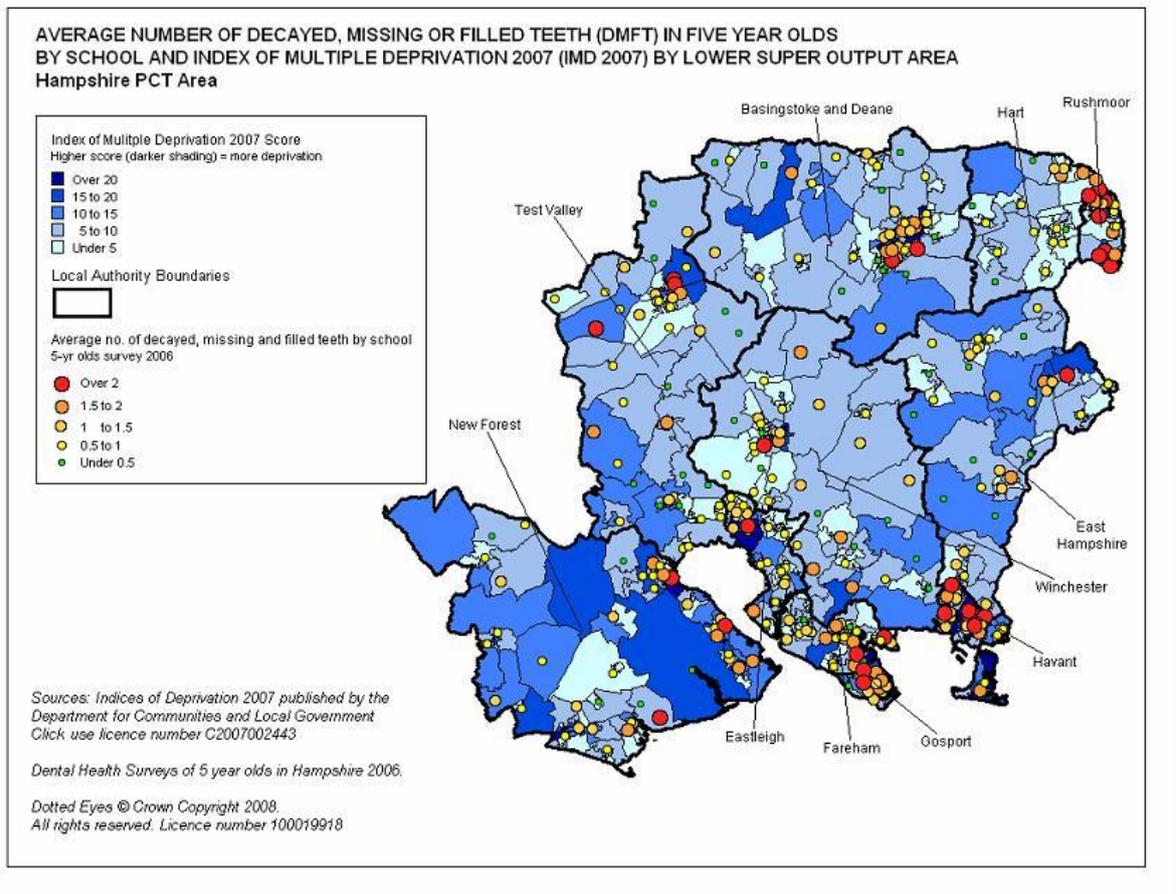
Figures for 2008/09 show that a quarter of twelve-year-olds had dental decay in Hampshire, lower than the national prevalence (33.4%). However the situation varies across Hampshire, with children in the most deprived areas experiencing higher levels of tooth decay relative to the least deprived areas. Over twice as many children from Gosport (32.6%), Eastleigh (31%), the New Forest (30.7%) and Rushmoor (29.2%) experience dental decay, compared to just 13.5% of children from Hart (table 2 and figure 2).

Compared with the average for England and the South East region, Hampshire had a lower DMFT index for twelve-year-olds in the most recent 2008/09 survey (table 2). At a local authority area level a more detailed picture of the variations in dental decay experience emerges, with a higher index among twelve-year old children in the New Forest, Eastleigh, Gosport, Rushmoor and Havant. Among twelve-year-olds who have experienced decay the mean DMFT was 1.99 which was below the England average of 2.21. However this estimate for children from Havant was 2.26, implying that, of the twelve-year-olds in Havant who had dental decay, about two of their teeth were affected, resulting in the need for dental treatments. Apart from Havant, oral health was also poorer than the national average in East Hampshire, New Forest, Rushmoor, Eastleigh and Fareham. All these districts (with the

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exception of Rushmoor) are ranked amongst the least deprived fifth of districts in England in terms of the Index of Multiple Deprivation. Rushmoor is amongst the second least deprived fifth of districts. Oral health should not be poorer than the national average.

Figure 1: Decayed, Missing or Filled Teeth (DMFT) Index in 5 year olds, 2005/06 and IMD 2007

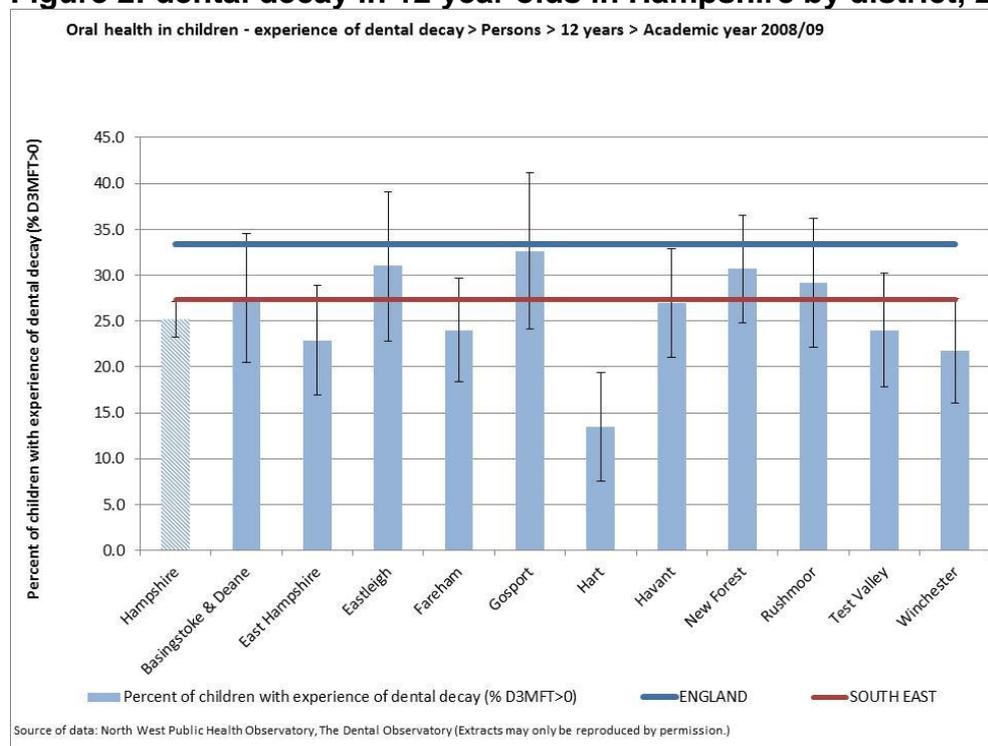


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Table 2: Dental decay in 12-year-olds 2008-09

Local Authority	Mean DMFT	% experiencing dental decay (% DMFT > 0)	Mean d3mft (%DMFT > 0)
Basingstoke and Deane	0.50	27.50	1.80
East Hampshire	0.52	22.90	2.27
Eastleigh	0.65	31.00	2.09
Fareham	0.52	24.00	2.15
Gosport	0.63	32.60	1.93
Hart	0.20	13.50	1.52
Havant	0.61	27.00	2.26
New Forest	0.65	30.70	2.12
Rushmoor	0.62	29.20	2.13
Test Valley	0.44	24.00	1.81
Winchester	0.34	21.80	1.57
HAMPSHIRE	0.50	25.20	1.99
SOUTH EAST	0.55	27.30	2.02
ENGLAND	0.74	33.40	2.21

Figure 2: dental decay in 12 year olds in Hampshire by district, 2008/09



Source: North West Public Health Observatory, The Dental Observatory

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A dental survey of three-year-olds has been undertaken during 2013 in parts of Hampshire as part of a national survey. Information from this survey will inform the interventions needed to improve the dental health of five-year-old children which is a marker in the Public Health Outcomes Framework.

2.3 Dental health in adults

Although very little information is available regarding the oral health of adults at a local level, we can build up a picture using national adult oral health data and by using information on deprivation and children's oral health as proxy indicators. Since 1978, the National Adult Dental Health Surveys have been carried out every ten years. The latest Adult Health Survey (2009) reported that the proportion of adults in England who have no natural teeth has fallen by 22 per cent from 28 per cent in 1978 to 6% in 2009. This indicates that more adults are keeping their own teeth into old age, much of it heavily restored.⁵ This group will need significant care to maintain this dentition including an increased need for restorative care (large fillings, root canal treatment, periodontal treatment) and more complex prosthodontic care (dentures, dental crowns and dental bridges). This is a growing problem with an ageing population, particularly those who need residential care.

2.4 Dental health for special groups

There are no local data on the dental health of special care groups. However, all individuals, including those in special care groups need to be supported to maintain a good standard of oral health, so that they can remain free from pain or discomfort and continue to enjoy a wide range of healthy foods. This will contribute to a better quality of life. Many can access care from general dental practices but there are those who need access to specialised or specialist facilities and skills for dental care. Older people in supported and/or residential care may be dependent on their carers to help maintain their oral health. These carers will need to be trained and supported to deliver this. Without a reasonable dentition, this group of vulnerable people may have to compromise on their diet, at a time when they need a good nutrition to maintain a healthy life. Those with certain medical conditions are particularly at risk.

3. Current services in relation to need

3.1 Oral Health Improvement programmes

Much dental decay is preventable. The key to achieving oral health improvement is to improve protection of the teeth through such measures as increasing the availability of fluoride in conjunction with a healthy diet, good oral hygiene and regular dental visits to access preventive care and advice.

There are currently 69 settings with supervised toothbrushing programmes in Hampshire. Daily toothbrushing schemes are in place some areas in Hampshire with teachers supervising young children to brush with a fluoride toothpaste. Children are also given free toothbrushes and fluoride toothpaste every term to use at home.

A scheme to provide topical fluoride varnish has been piloted in a school in Totton through a general dental practice. These applications also need to be carried out two

⁵ Restoration is increasing partly due to changes in dental practice (restoration is now viewed as preferable to extraction where possible), but also changes in the views of people regarding keeping their teeth rather than extracting them.

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to four times a year every year from the age of three years to 16 years to achieve sustained long-term dental benefits. One-off, ad-hoc or short-term applications are ineffective as the benefits stop when the applications stop. The pilot was set up to assess the feasibility of delivering this intervention in a community setting. The pilot will be evaluated to inform any decision regarding the future of such a programme.

Both the supervised toothbrushing schemes and the fluoride varnish pilots are part of holistic oral health improvement programmes which include information on diet and oral hygiene. Encouraging regular dental visits to access preventive care and treatment are part of every initiative.

An initiative to provide training on dental health for carers of older people in residential care is in place in 96 settings involving more than 780 carers. To make the programme more sustainable, there are plans to try and identify champions within care homes who can be trained, rather than trying to train all carers. The champions will then be supported to cascade the training and monitor the outcomes within their own site. Outcome indicators include development of oral health care plans and audits of the proportion of residents who have had their teeth or dentures cleaned on a daily basis. The indicators have been developed to link with the requirements of the Care Quality Commission so the initiative supports the care homes in meeting some of their responsibilities.

Plans are underway locally to provide more support to dental teams working in general dental practice across Hampshire to deliver preventive interventions more proactively. Dental teams are well placed to discuss the impact of poor diet, poor oral hygiene, smoking and high levels of alcohol consumption in the mouth.

3.2 Access to general dental services

Over the last few years, there has been significant investment to increase the availability of dental services across the county. In the last year, additional capacity was secured in Fareham. People can access these services through the nhs.uk website or using the new 111 service.

The availability of care is being monitored locally by the NHS England Wessex Area Team working closely with the Dental Public Health team (Wessex Public Health England Centre) to ensure that access to care is informed by public health and dental public health information regarding population needs.

The challenge is to encourage utilisation of these dental services. Those with the highest needs tend to be less likely to attend regularly. They are, therefore, less likely to access preventive dental care and advice, resulting in higher treatment needs. Barriers include fear of dental care and the cost of treatment. Addressing these barriers has proved difficult and more work is needed to increase the numbers of regular attenders. The situation has become more acute with the difficult economic conditions, where increased worklessness has resulted in decreased incomes for many.

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3.3 Access to special care dentistry

Dental care for special care groups, including those with medical conditions that make it difficult for them to be cared for within general dental practices, can obtain care from the local Community Dental Service (CDS). The CDS has access to specialist staff and equipment to provide care for these patients. Many of their patients have been cared for by the service for many years which is valuable in building clinician-patient trust.

The CDS is commissioned to provide a domiciliary service to patients who are unable to get to a dentist. The full range of care is not always possible in these circumstances, but without it, some of these patients would not be able to access any dental care.

The CDS also manages referrals for care from general dental practitioners where there are complexities which need their specialist skills or need specialist equipment. General anaesthetic (GA) sessions are scheduled to manage a range of patients which includes those with special needs who are unable to accept care under a local anaesthetic. Young children who need multiple extractions are also referred to the CDS for management under GA. The GA sessions are carried out in a hospital with the GA provided by a specialist anaesthetist and access to critical care support, in line with national regulations.

3.4 Access to specialised/ specialist dental care

In the last few years, new care pathways have been piloted for Hampshire residents who need access to advanced care in oral surgery or orthodontics. Initial reviews of the pilots have led to them being established as interim services across the county pending the publication of national care pathways which are currently being developed.

3.5 Access to hospital services

Specialist teams in Oral and Maxillofacial Surgery (OMFS) provide care from within a secondary care (hospital) setting. Much of the work of specialist OMFS teams is not purely “dental” with referrals coming from both dental and medical primary care teams. They deal with patients who require care ranging from emergency lifesaving procedures to extensive reconstructive surgery and rehabilitation. The range of work can be broadly classified under the following sub-headings:

- Oral Surgery including removing buried teeth which are complicated by proximity to vital structures such as nerves.
- Oral Medicine, including managing oro-facial infections which can be life-threatening.
- Head and Neck Trauma management for example after a road traffic accident.
- Salivary gland disease which may require complex surgery involving vital structures in the head and neck.
- Head and Neck cancer, including managing cancers of the lip, inside of the mouth, tongue or throat.
- Facial skin cancer surgery such as in the management of melanomas and basal skin carcinomas.

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- Temporomandibular joint surgery where surgical intervention is needed.
- Facial aesthetic surgery, where reconstruction and/or realignment of the jaws and other facial bony structures is required to correct facial deformity and restore normal function.
- Cleft lip and palate surgery.

This list is not exclusive and OMFS teams may be called upon to support other specialist teams within the hospital with the management of their patients. They therefore work co-dependently, supported by and providing support to, a range of specialist teams in the hospital including Ear, Nose and Throat (ENT), neurosurgery, oncology and orthodontics.

4. Evidence of what works

The Department of Health published a strategy to improve dental health *Choosing Better Oral Health*⁶. This was followed by a “Toolkit” of interventions based on the best available evidence, *Delivering Better Oral Health*. These documents have been used to inform planning of appropriate strategies for improving oral health.

Exposure to fluorides reduces the risk of dental caries. The evidence indicates that twice daily toothbrushing with a fluoride toothpaste is effective in reducing the risk of tooth decay⁷. Fluoride varnish applications have been shown to reduce the risk of dental caries in research settings⁸ but community interventions have been found to be less effective^{9,10}. This has been attributed to the difficulties of securing participation from those in highest need. This can result in an undesirable widening of dental health inequalities¹¹. The clinical and cost-effectiveness of fluoride varnish applications are being evaluated in the Scottish *Childsmile*¹² initiative which uses this intervention as part of a national programme to improve dental health. Results will not be available for at least three years. When they do become available, this will be valuable information for commissioning local oral health improvement services.

The National Institute of Clinical Excellence (NICE) has published guidance based on best available evidence for dental recalls, i.e. the time between dental check-ups. The dental recall period should be tailored to the person’s individual oral health

⁶ Choosing better oral health: An oral health plan for England 2005

http://webarchive.nationalarchives.gov.uk/+/dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_4123251

⁷ Marinho V C, Higgins J P T, Logan S, Sheiham A. Fluoride varnishes for preventing dental caries in children and adolescents. Cochrane Database of Systematic Reviews 2007; Issue 2. Art. No: CD002279. DOI: 10.1002/14651858.CD002279

⁸ Marinho V, Higgins J, Logan S, Sheiham A. A Cochrane Review. Fluoride gels for preventing dental caries in children and adolescents (2009).

⁹ Milsom K M, Blinkhorn A S, Walsh T, Worthington H V, Kearney-Mitchell P, Whitehead H, Tickle M. A cluster-randomised controlled trial: Fluoride varnish in school children. J Dent Res 2011 Nov; 90(11):1306-11. Epub 2011 Sep 15.18.

¹⁰ Hardman MC, Davies GM, Duxbury JT, Davies RM. A Cluster randomized controlled trial to evaluate the effectiveness of fluoride varnish as a public health measure to reduce caries in children. Caries Res 2007; 41: 371-376

¹¹ Schou L, Wight C. Does dental health education affect inequalities in dental health? Community Dent Health 1994; 11: 97-100

¹² <http://www.child-smile.org.uk/>

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needs and risks of dental disease. This should not be shorter than three months but can range up to 12 months for a child and up to 24 months for an adult. These guidelines were developed to ensure that resources are allocated according to oral health needs. People requiring active treatment and support to achieve good oral health are recalled more frequently to enable this to happen whilst healthy patients who are already maintaining a good standard of oral health are still recalled regularly but less frequently.

5. Recommendations

Use local information and intelligence to inform development of local services

- Continue to ensure that all dental commissioning including developing preventive interventions are in line with local needs.
- Complete the current three-year-old survey as part of on-going participation in the national dental epidemiological survey programme.
- Monitor access to dental care and service utilisation with a focus on reducing dental health inequalities.

Focus on prevention

- Expand supervised toothbrushing initiatives to all “Early Years” settings as a priority.

Facilitate access to high-quality care

- Work with all partners to ensure that people are able to access the care they need.