

# Contract reform – the BDA’s view

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## Key points

The NHS dental contract in England is fundamentally not fit for purpose and the funding available is insufficient to provide access to all who want it.

Modest and marginal changes to the existing contract will not deliver change at a scale necessary to resolve the problems facing NHS dentistry.

There is a need for urgent and significant contractual and system reform, supported with additional investment, if the current crisis is to be resolved.

## Abstract

The imposition of the 2006 Units of Dental Activity contract remains a significant source of anger for the dental profession, which is perhaps only surpassed by the fact that, 16 years on, a reformed contract is yet to be delivered. After many years of piloting and prototyping and a more than year-long process to deliver marginal changes, the profession and patients clearly now need ambitious and urgent reform.

This does not mean that there are simple answers – the redesign of any healthcare system is profoundly complex – but these complexities must be approached with a concerted and determined effort to bring about change as rapidly as possible.

## Tipping point

‘Dentistry’ has been raised by Members of Parliament in the House of Commons more times (168) in the first seven months of 2022 than in any other year in the last decade, reflecting the now widespread concern about the ability for patients to access NHS dental treatment.<sup>1</sup> Healthwatch says three in five patients had difficulties getting an NHS appointment.<sup>2</sup> The period since the onset of the pandemic in 2020 has seen 40 million lost appointments in England according to British Dental Association (BDA) analysis<sup>3</sup> and 951 dentists stopped providing NHS treatment in England between 2019/20 and 2020/21.<sup>4</sup> BDA research has found that, on top of those leaving the NHS altogether, 45% have decreased their NHS commitment since the pandemic began and 75% intend to reduce or further reduce their NHS commitment over the next 12 months. It is difficult to interpret

this as anything other than NHS dentistry reaching a tipping point, in which the long-term and deep frustrations with the contract and funding, combined with the disruption of the pandemic, have led many dentists to lose patience with reform and choose change for themselves.

## Modest and marginal

In March 2021, the Department of Health and Social Care (DHSC) formally handed control of the dental contract reform process to NHS England, and in assuming responsibility for developing and implementing changes, it said that ‘rapid, modest and marginal changes’ would be made to the contract should that prove possible.<sup>5</sup> In the intervening period, advisory and technical groups were convened by NHS England to review various matters and then from November 2021, the BDA and NHS England entered into ‘scoping’ and later, negotiations as to what changes could be made. It was clear from the outset that the scale of ambition was tweaks rather than transformation but it appeared worthwhile to seek improvements, where possible, so that the system worked better while long-term reform could be developed and implemented.

The outcome of this process was announced in July 2022 and the General Dental Practice Committee, feeling underwhelmed with even the best possible outcomes from negotiations, opted to take a neutral stance on the package, neither able to endorse nor reject the changes.<sup>6,7</sup> The introduction of sub-divisions to Band 2 treatment will clearly bring the cost and complexity of treatment performed into better alignment with the payment received and the BDA pressed particularly strongly to ensure better remuneration for molar endodontics. Nonetheless, the Units of Dental Activity (UDA) remains a blunt and unfair currency. The introduction of a minimum UDA value is a positive recognition that there must be a floor to the funding to support NHS care but few will believe £23 represents an appropriate level at which to set that floor. In Wales, the minimum UDA value is £25.<sup>8</sup> It is preferable that those struggling to deliver their contracted activity will now be able to take on a more achievable target rather than have their contract terminated and that steps will be taken to keep funds within dentistry, rather than have it clawed back and spent elsewhere in the NHS. Taken together, these changes will likely help some to deliver their contracts, but after much anticipation, they are undoubtedly anticlimactic.

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## 'First significant change'

In announcing the 'marginal changes' to the current contract, NHS England has said that 'these reforms represent the first significant change to the contract since its introduction in 2006'.<sup>9</sup> At first, this could be taken as an endorsement of the scale of the proposed changes, but it is really more of an indictment of the failure to act for more than a decade. Not only have the problems long been clear, but so have many of these solutions now set to be implemented. The House of Commons Health Select Committee recommended in 2008 that 'in the short term, the Department should consider increasing the number of UDA bands so that dentists are rewarded for providing appropriate treatment'.<sup>10</sup> Fourteen years later, that proposal will now be put into place.

It should not take the situation we are now in to force change. The BDA and NHS England meet regularly throughout each year and these meetings should be the subject of a continuous process of improving NHS dentistry. Rarely have these discussions with NHS England been stuck for ideas on what can or should be done; what is lacking is the political will to make a change.

In 2009, the Steele Review quoted an experienced NHS dentist in the West Midlands as having said '[under the new contract] I find it difficult to take pride in my work anymore'.<sup>11</sup> If that dentist is still practising, they will be working under the same contract now and so it is no wonder that NHS dentistry is in the position it is. Further delay to reform does not feel necessary, desirable or even possible if NHS dentistry is to continue in anything like its present form.

## Prototypes: a missed opportunity

The prototypes represented a major testing of a new approach to delivering and paying for NHS dentistry; significantly, embracing capitation as the major component of the remuneration package. In their communication to the profession in March 2021, NHS England, Office of the Chief Dental Officer and the DSHC indicated that the evaluation of the prototypes had led to the conclusion that, in their current form, they were not fit for roll-out.

This had been the long-standing position of the BDA, which argued that the experience of prototyping demonstrated that it was necessary to revise the model in a number of ways.<sup>12,13,14</sup> The prototypes rolled over many of the failures of the current system: continuing to use UDAs to pay for some activity, maintaining large inequalities in

the payments practices received for undertaking the same work and failing to weight payments based on patient need.<sup>14</sup> It also appears that the implementation of the oral health assessment created a bottleneck in appointment books that may have contributed to falls in the patients seen and those assessments could have been modified to ameliorate this. The BDA engaged extensively with the DHSC and others over a number of years through the dental contract reform programme to develop proposals to address the prototypes' inadequacies and to model how they could be applied. There were challenges but they were not insurmountable.

In considering the outcomes of the prototypes, it is also important to note the limitations of the evaluation process. There are of course many methodologies for evaluating policy interventions, each with its own applications, advantages and limitations,<sup>15</sup> but by far the greatest error with the regard to the prototypes was that no consistent methodology was applied to the evaluation at all. This led to weaknesses in the analysis, for example, the control group of non-prototype practices was identified *post hoc* and therefore did not collect the same datasets as the prototypes, meaning that the ability to compare prototype and non-prototype is limited. These are technical missteps but they mean that the reported outcomes can only tell us so much about how well this system would work if applied more generally.

In examining the findings, the profession should be aware that the reported outcomes from the third evaluation that have been discussed most recently reflect on the experiences of only the 'wave three' cohort, made up of just 21 practices. While these had never been involved with previous pilots and therefore give a better sense of what a roll-out might look like, there are clear difficulties in extrapolating from such a small group to the thousands of practices across England. There are areas, such as access and patient charge revenue, where these 21 practices did not perform as hoped for, but on measures such as patient satisfaction, 97% said they were either quite or very satisfied with the treatment received. There was also a shift over time to prototypes delivering a great complexity of treatment per course of treatment.

The number of courses of treatment provided in all bands reduced in those wave three prototypes over time, while Band 1 courses of treatment in non-prototypes increased. As previous capitation studies have found, it is not clear whether this means there is over-treatment in one system or under-treatment in another.<sup>16</sup>

NHS England claims that prototype practices demonstrated closer adherence to National Institute for Health and Care Excellence recall guidelines and therefore, it could be argued that these falls in courses of treatment represent appropriate clinical behaviour.

Given the relative lack of evidence on what works when it comes to paying for dentistry,<sup>17</sup> it is hard not to see the significant effort put into many years of testing a new model of remuneration as a substantial missed opportunity to contribute to that evidence base and guide the path to implementing reform.

## What is the problem?

With marginal changes now set to be rolled-out and the prototypes abandoned – if still useful – experiment, the question turns to what comes next.

Stating the problem to be addressed in clear terms is a necessary prerequisite to then developing the policy solutions that can solve it.<sup>18</sup> So, what is the problem? With regard to NHS dentistry, this is not exactly a difficult question to answer. Half the population does not have funded access to an NHS dentist. The UDA system is as perverse as it is difficult to explain. Despite patient need, thousands of practices face clawback each year because they can't jump through quite the right hoops to satisfy UDA targets. Practices are unable to recruit associates willing to do NHS work and dental nurses are looking at careers outside of dentistry which are more personally and financially rewarding. There are many, many more.

Fundamentally, the problem facing NHS dentistry in England is that the contract, and in particular, the contract currency, does not provide a framework that supports dentists to deliver care in a way that accords with the best clinical practice and available evidence and that the funding available is fundamentally insufficient to provide access to all who want it.

As we move forward, we must also accept that we will never have a perfectly designed study that provides incontrovertible evidence that one particular system will answer all problems and work as intended in many thousands of practices, with tens of thousands of clinicians and for millions of patients. Instead, public policy's most challenging problems will always require a degree of 'muddling through'; making best use of the evidence available, determining which outcomes to prioritise, making logical connections between which means are likely to lead to which ends and demonstrating insofar

as is possible that the policy represents the best solution achievable.<sup>19</sup> There is plenty of theorising that can be done about the best way to develop public policy, but the profession expects and patients need us to move on to action.

## A reformed contract

Calls to consider reforms to the dental contract are nearly as old as this contract itself<sup>10,20</sup> and the BDA has set out plainly that the UDA cannot form the basis of future contractual arrangements. A view reinforced by a recent Health and Social Care Select Committee report that declared ‘the current UDA-contract system is not fit for purpose.’<sup>21</sup> Instead, the BDA has long argued for the NHS dental contract in England to be reformed around capitation payments as the new contractual currency.

Since its inception, the NHS has largely used activity-based contracts to remunerate dentists for the treatment they provide. Over the intervening 74 years, the oral health need of the population has changed dramatically, from a situation in which edentulousness was common to one in which it is rare. While the scale of the oral health gains of the twentieth century are unlikely to be replicated in the twenty-first, it can be hoped that treatment need will continue to decline, but nonetheless health inequalities will persist.<sup>22</sup> The need to move away from activity payments as the basis for paying for NHS dentistry has been long identified<sup>23</sup> and was influential in the thinking ahead of the botched 2006 reforms. However, the shift from fee-per-item to UDA did not mark a break with this activity-based model. The Steele Review argued that ‘so long as we see value for taxpayers’ money as measured only by the production of “widgets” (fillings, dentures, extractions or crowns), it is difficult to escape the cycle of intervention and repair that has persisted from a different age.’<sup>11</sup>

A capitation-based system would shift the financial incentives so that ‘drilling and filling’ would no longer be the focus of targets and instead, dentists would be rewarded for appropriately managing and improving the oral health of their patients. If access is the political priority, then it is logical to align the contractual incentives to this objective.<sup>24</sup>

Of course, there are concerns that such a system would lead to ‘supervised neglect’<sup>25</sup> and the BDA has consistently proposed that dental reference officers are introduced to apply appropriate scrutiny to treatment behaviour. There should also be funded peer review and clinical audit so that dentists and practices

actively engage in reviewing treatment patterns and focus on quality improvement.

The activity-based contracts that NHS dentistry has used have both been criticised for creating a ‘treadmill’ for dentists.<sup>11,19</sup> This effect has therefore been present even before the introduction of the UDAs denominated target and perhaps points to it being a fundamental feature of systems based on a form of piecework. This culture is not only demoralising but has been found to be a contributing factor in the stress that dental professionals experience. A participant in Gallagher *et al*’s research into the influences on dentists’ health said that ‘dentists within the current NHS contract have punitive penalties if they don’t hit their UDA target so they’re having to work faster and faster and faster and they’re being encouraged to deliver UDA-centred care, so it’s all about the UDA.’<sup>26</sup> Ideally, we should be looking to replace the faster-faster-faster model at present, with a supportive financial framework that frees dentists to provide evidence-based and best-practice-based care to their cohort of patients.

Among the UDAs core failings is that the three broad bands mean that the remuneration received often bears no relation to the complexity and scale of treatment the patient requires. Until the marginal changes are implemented, the same payment will be made for one filling as ten and even after those tweaks, there will still be sharp cut-offs to the UDA sub-divisions that mean payments will continue to be out of line with treatment undertaken. Seven UDAs for molar endodontics is better than three but it doesn’t really reflect the costs, time and skill involved. This has wide ranging implications for how NHS dentistry operates, but in particular, it means that dentists are operating at a loss on a number of treatments and most importantly, leads to a financial disincentive to treat high-needs patients. This effectively leads, as per Hart’s inverse care law, to NHS dentistry being least available to those that need it most.<sup>27</sup>

To seek to resolve this, under a capitation model, the BDA has proposed that these payments be weighted (and based on a national fee, rather than varying from practice to practice). Through the work done with the DHSC to develop the prototype model, weighting based on age, sex and deprivation was explored, but there are also other approaches that could be taken, such as individual patient weighting based on an oral health assessment. The Health Select Committee argued in 2008 that funding should better match oral health need, rather than patterns of historical provision<sup>10</sup> and weighted capitation provides a

route to achieve this. Weighting payments so that they relate to the costs of providing care for that patient may also help to counter concerns of ‘under-treatment.’<sup>27</sup>

There is also the crucial dynamic of the patient-dentist relationship. While the 2006 contract did away with formal patient registration, many still believe it exists and in effect; most regularly attending patients return to the same practice and dentist with who they have an established relationship. If dental care is most effective when delivered over time and as part of a trusting dentist-patient relationship,<sup>10</sup> then capitation would have the effect of restoring that link between dentist and patient in a continuing care relationship to manage and improve their oral health.

None of this is to say that designing and implementing a capitation-based NHS dental contract will be simple. From this discussion of a capitation contract, there are indications of the areas that will require discussion and negotiation and there are many others besides, such as the length of the capitation period, what is to be covered by capitation on the NHS and how the oral health assessment could be simplified to ease some of the difficulties experienced by the prototypes. What is required is detailed and determined consideration of these matters with a focused commitment of delivering a reformed contract as soon as possible.

## System change

Upon its assumption of responsibility for reform, NHS England has renamed the process as system, rather than contract reform and this seems to be an indication that it intends to consider matters beyond strictly the contents of the general dental services and personal dental services contracts.

The BDA’s criticism of NHS dentistry in England is not limited merely to the existence of the UDAs and so an examination of the wider NHS dental system is welcome. The Steele Review said that the system needed to ensure ‘pointing in the same direction.’<sup>11</sup> It is logical that we first establish the fundamentals of the contract that forms the basis of the reformed system and then turn to bringing other aspects in line with this new contract model to improve how NHS dentistry operates in the round.

As already highlighted, the other core problem facing NHS dentistry beyond UDAs is its underfunding and this must be addressed to allow any reformed contract to function adequately. The capping of the budget in 2006

has meant a long stagnation in funding that has then been exacerbated by the austerity and ‘efficiency savings’ since the 2008 financial crisis. While other areas of the NHS have seen increases in funding, NHS dentistry had funding (net of patient charge revenue) in 2010/11 of £2.2 billion and in 2019/20 it was £2.11 billion. Taking into account inflation over this period, there has been a significant real-terms cut to the budget and the BDA estimates that it would take £880 million to restore the annual funding to 2010 levels. Funding remains at levels to fund provision for around half the population and this will need to be addressed if the aims of improving access are to be delivered on and the NHS Constitution rights to care are to be upheld.<sup>28</sup>

There are many other aspects of the system that the BDA would wish to seek improvements to. One need only look at the orthodontic procurement processes to know that competitive tendering is not an appropriate model for selecting dental providers. Again, this is a problem which was identified long ago.<sup>10</sup> Not only are these procurement exercises blunt tools to determine the best practice to provide care, they can also lead to significant disruption for patients and create a race-to-the-bottom competition within the profession. This latter point is recognised in the Review Body on Doctors’ and Dentists’ Remuneration’s recent report, which highlights how this can squeeze practice profits and diminish dentists’ pay.<sup>29</sup> There are opportunities in the Health and Care Act’s changes to make improvements here and these must be seized upon.

There are also a range of workforce issues to be addressed, such as how to make dentists feel a genuinely valued part of the NHS, to reward those colleagues who are most committed to the NHS and to facilitate recruitment and retention across the dental team. To take one issue that is a regular subject of motions at the Local Dental Committees conference, there are many concerns about the Performer List Validation by Equivalence process and designing an improved pathway for overseas dentists to come to work under an attractive, supportive capitation contract would feel a very appropriate component of the work to be done to implement a reformed NHS dental system. So too should we look to support and strengthen the other arm of primary care dentistry in the community dental service, so that it is reinforced as a specialised service and not allowed to become a safety net for problems in the general dental services.

## What next?

Dentists have already been waiting too long for contract reform and many have reached the end of their patience. If NHS England and the DHSC believe that they have plenty of time to deliver change, then they are mistaken. At present, there is understandable concern that there is a lack of ambition – the scale of envisaged change is too small – and a lack of urgency – the timeframes are too vague and may be too late. As the BDA and NHS England begin a further series of meetings this autumn to discuss that reformed contract, our starting point must be that significant change can’t come soon enough.

### Ethics declaration

The authors declare no conflicts of interest.

### Author contributions

Tom King contributed to conceptualisation and drafting of the manuscript and Shawn Charwood contributed to conceptualisation, editing and approved the final version.

## References

1. UK Parliament. Find in Hansard. Available at <https://hansard.parliament.uk/search?startDate=2013-01-01&endDate=2022-07-31&searchTerm=dentistry&house=Commons&partial=False> (accessed August 2022).
2. Healthwatch. Lack of NHS Dental Appointments Widens Health Inequalities. 2022. Available at <https://www.healthwatch.co.uk/news/2022-05-09/lack-nhs-dental-appointments-widens-health-inequalities> (accessed August 2022).
3. British Dental Association. A Year’s Worth of Dentistry Lost, but No Urgency from Government. 2022. Available at <https://bda.org/news-centre/press-releases/Pages/A-years-worth-of-dentistry-lost-but-no-urgency-from-government.aspx> (accessed August 2022).
4. NHS Digital. NHS Dental Statistics for England – 2020-21 Annual Report. 2021. Available at <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-dental-statistics/2020-21-annual-report> (accessed August 2022).
5. Dodge I, Hurley S, Churchill J. NHS Dental Contract Reform and Arrangements. 2021. Available at <https://www.england.nhs.uk/coronavirus/documents/nhs-dental-contract-reform-and-arrangements-letter/> (accessed August 2022).
6. Sparke A, Hurley S. Outcome of 2022/23 Dental Contract Negotiations. 2022. Available at [https://www.england.nhs.uk/wp-content/uploads/2022/07/B1802\\_First-stage-of-dental-reform-letter\\_190722.pdf](https://www.england.nhs.uk/wp-content/uploads/2022/07/B1802_First-stage-of-dental-reform-letter_190722.pdf) (accessed August 2022).
7. British Dental Association. NHS Dentistry: New Plans Will Not Bring Real Reform. 2022. Available at <https://bda.org/news-centre/latest-news-articles/Pages/nhs-dentistry-new-plans-will-not-bring-real-reform.aspx> (accessed August 2022).
8. Bridgman C. Dental Contract Reform Explained. [http://www.primarycareone.wales.nhs.uk/sitesplus/documents/1191/Reform%20programme%20summary\\_Slide%20pack-final%20draft.pdf](http://www.primarycareone.wales.nhs.uk/sitesplus/documents/1191/Reform%20programme%20summary_Slide%20pack-final%20draft.pdf) (accessed August 2022).
9. Sparke A, Hurley S. Outcome of 2022/23 Dental Contract Negotiations. 2022. Available at [https://www.england.nhs.uk/wp-content/uploads/2022/07/B1802\\_First-stage-of-dental-reform-letter\\_190722.pdf](https://www.england.nhs.uk/wp-content/uploads/2022/07/B1802_First-stage-of-dental-reform-letter_190722.pdf) (accessed August 2022).

10. House of Commons Health Select Committee. Dental Services, Fifth Report of Session 2007-08. 2008. Available at <https://publications.parliament.uk/pa/cm200708/cmselect/cmhealth/289/289i.pdf> (accessed August 2022).
11. Steele J. NHS Dental Services in England – An Independent Review. 2009. Available at [http://www.sigwales.org/wp-content/uploads/dh\\_101180.pdf](http://www.sigwales.org/wp-content/uploads/dh_101180.pdf) (accessed August 2022).
12. British Dental Association. Contract Reform and General System Improvements: Briefing to LDCs. 2018. Available at <https://bda.org/news-centre/blog/Documents/Contract-reform-system-improvement-BDA-briefing-May2018.pdf> (accessed August 2022).
13. General Dental Practice Committee. Policy Document. 2020. Available at [https://www.ldcuk.org/documents/archive/download?path=2020%252F2020\\_gdpc\\_policy\\_document.pdf](https://www.ldcuk.org/documents/archive/download?path=2020%252F2020_gdpc_policy_document.pdf) (accessed August 2022).
14. Whitehead P. Dental Contract Reform: Our Asks for 2020. 2019. Available at [https://bda.org/news-centre/blog/dental-contract-reform-our-asks-for-2019-\(2\)](https://bda.org/news-centre/blog/dental-contract-reform-our-asks-for-2019-(2)) (accessed August 2022).
15. Khandker S, Koolwal G B, Samad H. *Handbook on Impact Evaluation: Quantitative Methods and Practices*. 2009. Available at <https://doi.org/10.1596/978-0-8213-8028-4> (accessed August 2022).
16. Hill H, Birch S, Tickle M *et al*. Does Capitation Affect the Delivery of Oral Healthcare and Access to Services? Evidence from a Pilot Contact in Northern Ireland. *BMC Health Serv Res* 2017; **17**: 175.
17. Brocklehurst P, Price J, Glenny A-M *et al*. The Effect of Different Methods of Remuneration on the Behaviour of Primary Care Dentists. *Cochrane Database Syst Rev* 2013; DOI: 10.1002/14651858.CD009853.pub2.
18. Bacchi C. *Women, Policy and Politics: The Construction of Policy Problems*. 1999. Available at <https://doi.org/10.4135/9781446217887> (accessed August 2022).
19. Lindblom C E. The Science of “Muddling Through”. *Public Admin Rev* 1959; **19**: 79–88.
20. London Assembly Health and Public Services Committee. Teething Problems: A Review of NHS Dental Care in London. 2007. Available at [http://www.london.gov.uk/sites/default/files/gla\\_migrate\\_files\\_destination/archives/assembly-reports-health-dentistry.pdf](http://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/archives/assembly-reports-health-dentistry.pdf) (accessed August 2022).
21. House of Commons Health and Social Care Select Committee. Workforce: Recruitment, Training and Retention in Health and Social Care. 2022. Available at <https://committees.parliament.uk/publications/23246/documents/169640/default/> (accessed August 2022).
22. Public Health England. Inequalities in Oral Health in England. 2021. Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/970380/inequalities\\_in\\_oral\\_health\\_in\\_england.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/970380/inequalities_in_oral_health_in_england.pdf) (accessed August 2022).
23. Schanschneiff S G, Department of Health and Social Security. *Report of the Committee of Enquiry into Unnecessary Dental Treatment*. London: HMSO, 1986.
24. Grytten J. Models for Financing Dental Services. A Review. *Community Dent Health* 2005; **22**: 75–85.
25. Holloway P J, Lennon M A, Mellor A C, Coventry P, Worthington H V. The Capitation Study. 1. Does Capitation Encourage “Supervised Neglect”? *Br Dent J* 1990; **168**: 119–121.
26. Gallagher J E, Colonio-Salazar F B, White S. Supporting Dentists’ Health and Wellbeing – Workforce Assets under Stress: A Qualitative Study in England. *Br Dent J* 2021; DOI: 10.1038/s41415-021-3130-9.
27. Hart J T. The inverse care law. *Lancet* 1971; DOI: 10.1016/S0140-6736(71)92410-X.
28. Department of Health & Social Care. The NHS Constitution for England. 2021. Available at <https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england> (accessed August 2022).
29. Review Body on Doctors’ and Dentists’ Remuneration. Fiftieth Report 2022. 2022. Available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1092259/DRRB\\_2022\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1092259/DRRB_2022_report.pdf) (accessed August 2022).