Domiciliary dentistry – remote consultation and risk assessment tool

Laura Rollings*[1] and Claire Castle-Burrows[2]

Key points

- Introduces a tool to collect information before a domiciliary visit.
- Outlines how a risk assessment can be categorised.
- Provides scenarios including a general dental professional and specialist in special care collaborating.

Abstract

Collecting information in preparation for a domiciliary visit can identify potential barriers to treatment and allow for appropriate planning and mitigation of treatment risks. The coronavirus (COVID-19) pandemic has changed the way dental professionals can work. Prior identification can eliminate unnecessary visits and so reduce the risk of potential COVID-19 transmission between dental professionals and patients receiving domiciliary dental care. This article will explain two documents: the Domiciliary Patient Information Sheet (DPIS) and Domiciliary Risk Assessment (DRA). Case studies will be used to demonstrate the importance of the DPIS and DRA implementation.

Introduction

Domiciliary care is key in enabling access to dental care for some of our most vulnerable population who may require a clinician to attend their place of residence; for example, their own home, a nursing home, or a hospital setting.

Some factors that can contribute to the need for domiciliary care include, but are not limited to: mobility issues; severe physical health problems and mental health conditions; and deeming the patient confined to their bed or home.

The UK life expectancy has been increasing and this is anticipated to continue. On average, life expectancy is 87.6 years for a man and 90.2 years for a woman if born in 2018.[1] Projected figures deduce that in the year 2035, the number of people aged 65 or over residing in a care home in England will total 558,540.[2] From these statistics, an increased demand on the domiciliary dental service can be presumed.

In the 2018/2019 reporting year, over 25 million patients in England and Wales had received at least one course of treatment (COT), equating to 43.1% of the total population (mid-2018). Of which, just under 51,000 patients had domiciliary care. From the FP17 forms received with domiciliary services provided, 7.3% were for those aged 0–39, in comparison to 76.7% which were for patients in the 70–99 age category.[3]

In England and Wales, the number of patients who had a domiciliary COT completed between April and October 2020 was 3,529. For this cohort, 44.9% of the domiciliary claims were for band one care, 16.9% for band two and 11.3% for band three.[3]

Increased domiciliary demand

The cohort of patients who utilise domiciliary services to minimise the barrier to accessing dental care is wide-ranging. This population includes both paediatric and adult patients who may have a physical disability and an underlying comorbidity, such as reduced mobility or a severe medical complexity. Access is not always impeded by a physical or medical complexity; mental health can also impact an ability to access the dental surgery and justify a domiciliary assessment, such as dementia, erratic or challenging behaviour, anxiety and agoraphobia.

It is imperative to limit inequalities that patients accessing our services may experience and reduce the risk of patients contracting coronavirus (COVID-19) from the dental setting and its professionals. Of particular concern are patients who are classed as 'clinically extremely vulnerable', such as those with cancer or those who have received a solid organ transplant,[4] as this group may avoid the dental surgery, whereas before the pandemic they would have attended.[5] The authors found no evidence suggesting it is safer for a vulnerable patient to receive domiciliary dental care, although we believe they may benefit from domiciliary care to reduce their contact with members of the public and communal spaces.

The government's COVID-19 guidelines advocate that these individuals minimise the time spent in places where they cannot socially distance. This scenario could be encountered on the journey to the dental surgery, such as using a taxi or on public transport.[4] It is advised not to travel during peak times;[4] however, this may not allow for the patient to arrive for the first appointment of the day, when fewer people would have been in the surgery and no aerosol generating procedure would have been performed.

[1]Community Dental Officer, Herefordshire and Worcestershire Health and Care NHS Trust and Birmingham Community Healthcare NHS Foundation Trust – Community Dental Service, UK; [2]Clinical Director and Consultant in Special Care Dentistry, Herefordshire and Worcestershire Health and Care NHS Trust – Community Dental Service, UK.
*Correspondence to: Laura Rollings
Email address: laura.rollings1@nhs.net

Refereed Paper.
Accepted 13 June 2021
https://doi.org/10.1038/s41415-021-3724-2

Owing to the pandemic, in addition to those who would have already received domiciliary care due to experiencing barriers to accessing the dental surgery, the domiciliary dental service may subsequently experience an increased demand and such services will need to adapt provision.[5]

Remote information gathering

After receiving a new patient referral, when a recall examination is due or an urgent assessment is required, information can be remotely gathered before the visit and in turn be utilised to complete a risk assessment of the proposed domiciliary visit.

The information can highlight important factors about the patient's environment, any communication or capacity concerns and potential for challenging behaviour. This benefits the dental professional and patient by allowing appropriate and prior appointment planning and risk management to be carried out.

Domiciliary Patient Information Sheet

Since the COVID-19 pandemic, information gathering before an appointment is a more accepted process for patients, carers and professionals. The authors' Trust has successfully implemented the use of two tools:

- 'Domiciliary Patient Information Sheet (DPIS)' (Appendix 1)
- 'Domiciliary Risk Assessment (DRA)' (Appendix 2).

The DPIS is a three-page document with six sections; it is user-friendly and can be utilised by the whole dental team. It can be completed by staff such as a dental receptionist, nurse, therapist[6] or dentist by extracting information from the referral, available clinical records and/or photographs, in addition to contacting the patient or carer via telephone or virtual video consultation before deciding to arrange a domiciliary visit.

The DPIS is divided into the following six sections (Appendix 1):

1. General information
2. Environmental (external and internal) information
3. Patient consent and communication-specific information
4. Patient behaviour and compliance information
5. Coronavirus-related questions
6. Payment

Domiciliary Risk Assessment tool

Useful information can be gathered by completing the DPIS by remote information gathering. The dentist should review the information to complete the DRA. The DRA is a one-page document (Appendix 2), which consists of eight factors:

1. Environmental
2. Medical
3. Consent and communication
4. Behaviour and compliance
5. Treatment requirements (provisional treatment before visual examination)
6. Urgency of case
7. Coronavirus transmission risk to staff
8. Overall risk of harm to team.

Each should be red, amber and green (RAG) rated according to the perceived associated risk and necessary adjustments detailed to mitigate risk.

The authors recognise that some risks could be missed, overlooked or may not become obvious until you are at the patient's residence and therefore the risk assessment process must be flexible and revisited continuously.

It allows the team to be informed with potential risks and therefore enables planning to minimise these. An example of a risk could be bleeding following an extraction in a patient taking an oral antiplatelet, such as clopidogrel; this risk may be mitigated by facilitating transfer to a clinical environment for treatment and implementing local measures.

A risk-benefit analysis may identify that a domiciliary face-to-face appointment should be postponed, for example with a clinically extremely vulnerable patient (that is, a liver transplant recipient)[4] that has a low periodontal and oral cancer risk. The visit need and risk should be reassessed following a complaint of symptoms (that is, reversible pulpitis) and if government guidance changes on the requirement to shield, even after having two doses of the COVID-19 vaccine.[4]

Domiciliary Patient Information Sheet and Domiciliary Risk Assessment tool development

A medical risk assessment tool was created by the West Midlands Domiciliary Special Interest Group, which focused on patient, treatment and environmental factors.[7] It has been modified and developed by the Herefordshire and Worcestershire Health and Care Trust Community Dental Service to create the DPIS and DRA forms, following local staff suggestions.

A literature review found that in 2020, a four-page domiciliary risk assessment form was published following the work of a national expert panel (including dentists with varying years of domiciliary experience) with the use of a modified e-Delphi study.[6]

Similarly, the form comprises of sections to complete about the patient identifiers, next of kin details and risks such as parking and environmental factors. The form also acts as a reminder to consider how to minimise identified risk.[6] Likewise, the form also utilises a RAG rating; comparatively, it gives more details about the individual risk categories and examples of potential risks, such as the property having extremes of temperatures or there being difficult access to the property.

The paper importantly highlighted that the study was performed before the COVID-19 pandemic and made recommendations such as accepting that patient self-isolation periods may affect appointment bookings.[6]

In comparison, the DPIS does include questions related to COVID-19 transmission risk (Appendix 1) such as, does the patient have a new persistent cough? Has a household member tested positive for COVID-19? The DRA includes a section to apply a RAG rating to the 'COVID-19 transmission risk to staff' with a section to comment on 'risk mitigation' (Appendix 2).

Discussion

During the COVID-19 pandemic, the DPIS and DRA have been essential in collecting information and aiding mitigating risk on a domiciliary visit. To demonstrate examples of risks that are faced and to minimise these, the authors would like to share some case scenarios to aid the implementation of the forms among the profession (Tables 1, 2 and 3). The authors recognise the RAG rating for each risk/urgency rating can be subjective and views on risk mitigation may differ.

Internal review

An internal review of the DRA/DPIS documents was undertaken, which enabled an evaluation of the service provider's responses (dentists, dental nurses and a receptionist) to questions about them.

When asked if they thought the DRA/DPIS has or would improve patient and/or staff safety on a domiciliary visit, results highlighted that before the implementation of the DRA and DPIS, staff only had access to a referral form before a new patient visit; however, they found it beneficial to highlight potential environmental risk factors before the visit, such as the presence of pets, aggressive residents, or challenging behaviour.

Staff commented that areas that had worked well were being able to obtain detailed information before their visit, which allowed for consultant advice to be sought if required. The review emphasised areas that service providers thought had not worked well, such as the time necessary to undertake the information gathering and therefore the need to allocate time to staff to allow prompt completion of the documents.

Review responses drew on what was liked about the DRA/DPIS; replies included the fact that all the information can be found in one place and that they prompt to ask about risk factors, allowing for prior planning.

Overall, the internal review demonstrated the DRA and DPIS have been a positive introduction into the domiciliary care pathway.

Conclusion

Collecting information before a domiciliary visit and completing a risk assessment tool can minimise the risks to patients and professionals by being pre-informed and prepared for the visit. The case studies demonstrate the risks that could be experienced by professionals and how the DRA can act as a reminder to think about the methods to reduce those risks. The authors hope that the two documents can be utilised and will benefit other dental professionals and their patients.

Table 1 Case 1 summary – patient receiving domiciliary prosthodontic work by a general dental practitioner; 90-year-old woman who is edentulous has lost her complete-complete (C/C) dentures during a recent hospital admission following a fall at home. She would like a new set of dentures constructed. She has age-related macular degeneration and takes aspirin and atorvastatin

Factor	Red	Amber	Green	Details	Risk mitigation
Environmental			Yes	Lives by herself in a bungalow	N/A
Medical (use medical history form and consider cardiac, dysphagia, bleeding risks)		Yes		Anxious about falling and so does not leave the house	Treat as a domiciliary patient in patient's own familiar environment, reducing fall risk
Consent and communication		Yes		Visual impairment and cannot read small print	Print correspondence in large bold print, for example appointment letters/denture care instructions
Behaviour and compliance			Yes	Previous GDP attender, no challenges were faced	N/A
Treatment requirements			Yes	Needs new C/C dentures constructing	N/A
Urgency of case			Yes	Patient managing soft diet	N/A
COVID-19 transmission risk to staff			Yes	Lives alone, no visitors	Wear appropriate personal protective equipment
Overall risk of harm to team		Yes		Additional comments: if the patient falls, follow the local manual handling guidance	

Table 2 Case 2 summary – patient receiving domiciliary examination but treatment in dental surgery; 89-year-old man who has a painful mobile lower left incisor (31) requiring extraction. He has a history of a stroke which affects his movement. Takes clopidogrel and is a wheelchair user

Factor	Red	Amber	Green	Details	Risk mitigation
Environmental			Yes	Lives in a modified residential care home including a wheelchair ramp. Supportive staff present 24/7	N/A
Medical (use medical history form and consider cardiac, dysphagia, bleeding risks)	Yes			Takes clopidogrel and so is an increased bleeding risk	Carry out extraction of tooth 31 in the surgery following a domiciliary examination. Arrange the treatment appointment at the beginning of the day and early in the week. Liaise with the family – the patient could attend in a wheelchair taxi with a family member who can aid patient transfer onto the dental chair
Consent and communication			Yes	No cognitive impairment	N/A
Behaviour and compliance			Yes	Does not go out very much and does not have any dental anxiety	N/A
Treatment requirements	Yes			Needs extraction and is a bleeding risk	Provide local measures, such as pack and suture, in-line with Scottish Dental Clinical Effectiveness Programme guidelines.[8] Provide a follow-up call
Urgency of case	Yes			Patient in pain which is affecting his dietary intake	Prioritise patient appointment
COVID-19 transmission risk to staff		Yes		Has 24/7 carers	Wear appropriate personal protective equipment
Overall risk of harm to team		Yes		Additional comments: no dental anxiety and staff will be present who know patient well	

Table 3 Case 3 summary – patient receiving specialist input; 54-year-old woman with bleeding gingiva. She had a traumatic brain injury and subsequently has dysphagia and is fed via percutaneous endoscopic gastrostomy. She lives with her supportive husband in a rural location

Factor	Red	Amber	Green	Details	Risk mitigation
Environmental		Yes		Difficult house to find, even with satellite navigation	Have the husband's number available and ring to ask for further visual directions if needed
Medical (use medical history form and consider cardiac, dysphagia, bleeding risks)	Yes			High aspiration risk and if it did occur could cause pneumonia	Referral to specialist in special care dentistry for advice regarding treatment plan. Follow British Society of Periodontology guidelines, including delivery of professional mechanical plaque removal[9] and oral hygiene instruction tailored to dysphagia using the Special Interest Group Wales guidance.[10] Shared care across GDP and specialist[7]
Consent and communication	Yes			Minimal, non-verbal communication. Unable to ascertain remotely whether patient can give consent	At visit, assess whether a mental capacity assessment is required. If patient does not have capacity to consent, then a best interests decision may be required, liaising with family and carers about the treatment options
Behaviour and compliance		Yes		She gets frustrated and anxious with lots of people around	Explain everything doing, take breaks, abandon and rebook appointment if she gets distressed
Treatment requirements	Yes		Yes	Green for examination. Red for professional mechanical plaque removal	With professional mechanical plaque removal, use caution with patient posture, no irrigation should be used on the visit. Have suction available
Urgency of case		Yes		Husband reports change in behaviour demonstrating patient may be in discomfort	Prioritise patient visit
COVID-19 transmission risk to staff			Yes	Patient and husband adhere to social distancing guidance	Wear appropriate personal protective equipment
Overall risk of harm to team		Yes		Additional comments: patient has previously been aggressive towards staff; avoid factors that are known to trigger challenging behaviour	

Ethic declaration

The authors have no conflicts of interest to declare.

Acknowledgements

The authors would like to thank the staff of Herefordshire and Worcestershire Community Health and Care Trust Dental Services for their dedication and help in implementing the DPIS and DRA successfully, benefiting their staff and patients. The final DPIS/DRA form published would only have been possible following collaboration with the West Midlands Domiciliary Special Interests Group. The authors would like to recognise the work the group has done to share best practice. The authors would also like to acknowledge Gill Howie (specialist in special care dentistry) for her guidance towards the development of the article.

Author contributions

Laura Rollings and Claire Castle-Burrows equally contributed to undertaking the internal review and modifying the DPIS/DRA form. Both authors were involved in writing the article. The clinical scenarios are based on the co-authors' expert opinions and draw from a wide selection of relevant patients.

References

1. Office for National Statistics. Past and projected period and cohort life tables, 2018-based, UK: 1981 to 2068. 2019. Available at https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/pastandprojecteddatafromtheperiodandcohortlifetables/1981to2068#howhaverecenttrendsinmortalityaffectedprojectedlifeexpectancyat-birth (accessed October 2020).
2. Public Health England. Commissioning better oral health for vulnerable older people. An evidence-informed toolkit for local authorities. 2018. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/738722/CBOH_VOP_V16_Final_WO_links.pdf (accessed October 2020).
3. NHS Business Services Authority. Freedom of Information request November 2020 – Domiciliary FP17s. Available at www.nhsbsa.nhs.uk (accessed November 2021).
4. UK Government. Guidance on shielding and protecting people who are clinically extremely vulnerable from COVID-19. 2020. Available at https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19 (accessed October 2020).
5. Dziedzic A, Tanasiewicz M, Tysiąc-Miśta M. Dental Care Provision during Coronavirus Disease 2019 (COVID-19) Pandemic: The Importance of Continuous Support for Vulnerable Patients. *Medicina (Kaunas)* 2020; **56:** 294.
6. Zaidman B, Awojobi O, Lewis D, Dickinson C, Gallagher J E. Development of a Domiciliary Dentistry Risk Assessment form by means of modified e-Delphi study using an expert panel. *J Dent Oral Health* 2020: **21**: 80–88.
7. Clark R C, Yates C, Howie G C. A service evaluation of domiciliary medical emergency equipment and domiciliary medical risk assessment in the West Midlands, UK. *J Dent Oral Health* 2021; **22**: 22–32.
8. Scottish Dental Clinical Effectiveness Programme (SCDEP). Management of Dental Patients Taking Anticoagulants or Antiplatelet Drugs Quick Reference Guide. 2015. Available at https://www.sdcep.org.uk/wp-content/uploads/2015/09/SDCEP-Anticoagulants-Quick-Reference-Guide.pdf (accessed December 2020).
9. British Society of Periodontology and Implant Dentistry. BSP UK clinical practice guidelines for the treatment of periodontal diseases. 2021. Available at https://www.bsperio.org.uk/assets/downloads/BSP_Treatment_Flow_Chart_17_SCREEN_READY_ytube_link.pdf (accessed June 2021).
10. All Wales Special Interest Group Special Oral Health Care. Dysphagia and Oral Health: Recommendations for the dental team for the management of oral health care of children and adults with dysphagia. 2014. Available at http://sigwales.org/wp-content/uploads/sig-dysphagia-guidelines1.pdf (accessed December 2020).

Appendix 1 The DPIS. Section 1 – general information collection, such as patient name and referrer details. Section 2 – environment (external and internal) information to be asked; this includes questions about risk factors, such as 'will there be any animals present?' Sections 3, 4, 5 and 6 prompt the clinician to gather details about the patient, such as if there are any known challenging behaviours, any COVID-19 transmission risks and if the patient pays for dental treatment

Domiciliary Patient Information Sheet

Date of completion:

Completed by (name and role):

Person answering the questions (name and relationship):

Section 1: general information

Information	Delete/detail as appropriate		
Patient details	Name		
	ID number		
	Date of birth		
	Address		
	Telephone number(s)		
Are support services involved?	Y/N	Contact details	
Access to home	Key code?	Contact beforehand?	Y/N
Carer/next of kin contact (if applicable)	Details	Person 1	Person 2
	Name		
	Relationship		
	Address (if not the same as address detailed above)		
	Telephone number		
Referrer details (include their name, role and email address)	GDP/general medical professional/district nurse/other health care professional (please specify)		

Section 2: environment (external and internal) information

Factor	Delete/detail as appropriate					
Type of accommodation	House	Ground floor	1st floor or higher (with lift)	1st floor or higher (without lift)		
	Own home	Residential care	Nursing home	Other		
Parking	On-street	Car park/off-road	Difficult			
Instructions on how to find property (if appropriate)						
External lighting	Well-lit		Poorly-lit		Not lit	
Location in home	Flat access		1–2 steps		Upstairs	
Medical equipment available	Oxygen	Y/N	Monitoring	Y/N	Defibrillator	Y/N

Risk factor	Delete/detail as appropriate	
Obstructions?	For example, clutter, furniture, soiled flooring/furniture	
Others in home?		
Animals present?	If yes, where? If they are not in a restricted space (for example, cage or tank) can they be put into a different room than those we need access to while the visit takes place?	
Fire hazards (please delete or state as appropriate)	Smoking	Y/N
	Oxygen cylinders	Y/N
	Gas fire	Y/N
	Other	
Access to patient	For example, space, height, privacy for visit obtainable? Dignity, in a chair or confined to their bed?	

Section 3: patient consent and communication information

Risk factor	Delete/detail as appropriate
Communication difficulties	Y/N
Capacity to consent?	Y/N
Recommended summary plan for emergency care and treatment/do not attempt cardiopulmonary resuscitation or deprivation of liberty safeguards in place?	

Section 4: patient behaviour and compliance information

Risk factor	Delete/detail as appropriate
Best time of day	
Challenging behaviour	Y/N
Previous incidents	Y/N
Triggering factors	Y/N

Section 5: COVID-19-related questions

Risk factor	Delete/detail as appropriate
Does the patient, household members or essential visitors that will be present have any of the following:	State details (that is, who will be present at the visit and if they can wear a face covering and socially distance from staff)
• Temperature?	
• New persistent cough?	
• Altered/loss of taste/smell?	
• Tested positive for COVID-19?	
• Contacted by test and trace and advised to self-isolate (when does the 14 days isolation end)?	
Is the patient shielding?	Y/N
Is there an area where staff can handwash away from the patient?	Y/N, where –
Is there an area where staff can don and doff personal protective equipment away from the patient?	Y/N, where –
Are staff required to do a lateral flow test before entry (for example for visits to care home residents)?	Y/N

Section 6: payment – in addition to Practice Record Form

Risk factor	Delete/detail as appropriate
Does the patient pay for dental treatment?	Y/N – if no, please state exemption:
If the patient pays, who should be contacted for the payment? (please give contact details if not the patient)	

Appendix 2 The DRA form – to be completed for all new domiciliary patients and course of treatments. It allows the dentist to read the DPIS and determine a risk rating (red, amber, or green) for each of the eight categories

Domiciliary Risk Assessment (DRA)

To be completed for all new domiciliary referrals and for new courses of treatment for existing referrals where the situation has changed significantly.

Minor reviews or changes during a course of treatment can be added, with the amendment dated and initialled below.

When the treatment plan has changed, an additional risk assessment tool sheet can be completed without a new Domiciliary Patient Information Sheet.

Factor	Red	Amber	Green	Details	Risk mitigation
Environmental					
Medical (use medical history form and consider cardiac, dysphagia, bleeding risks)					
Consent and communication					
Behaviour and compliance					
Treatment requirements					
Urgency of case					
COVID-19 transmission risk to staff					
Overall risk of harm to team				Additional comments:	

Date of completion:

Risk assessment completed by (name and role):

Patient information and risk assessment reviewed, and no change needed:

Date

Initial