

# Good Practice

## Tel-e-dent: assisted tele-expertise to provide dental care to nursing home residents in rural areas

Detailed information on the Tel-e-dent good practice, inspired by the Interreg Europe Good Practice template

### 1. Author contact information

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Are you involved in an Interreg Europe project?  Yes

Please select the project acronym: CARES: Remote Healthcare for Silver Europe

### 2. Organisation in charge of the good practice

Organisation in charge: Hospital of Guéret

### 3. Good practice general information

Thematic objective of the practice: Increased availability of telecare and telemedicine services for the European population, making care fairer within the region

Geographical scope of the practice: Regional/Local

Location of the practice	Country	France
	Region	Nouvelle-Aquitaine
	City	Guéret

Practice image



*Dr Alain Queyroux, Hospital of Guéret*

Title of the practice

**Tel-e-dent: assisted tele-expertise to provide dental care to nursing home residents in rural areas**

## 4. Good practice detailed information

**Short summary of the practice:** Assisted tele-expertise with the Hospital of Guéret to provide access to dental care to nursing home residents in rural areas.

**Detailed information on the practice:**

**Why?**

The Creuse department is faced with a local context in which a shortage of healthcare has been identified and the healthcare offer is inadequate. For example, there are 36 dentists per 100,000 inhabitants in Creuse, compared with 66 in France.

In addition, the oral health of nursing home residents is an identified but underestimated problem. The specificity of this older population is that their suffering is not expressed verbally, and compliance with oral health care is poor. Older people living in institutions are patients who may require specific care, they may have cognitive disorders (Alzheimer, dementia, etc.) or be uncooperative or even opposed to dental care. It is also difficult for these patients to travel (reduced mobility, pain, etc.). Finally, there is a lack of equipment suitable for effective dental tele-expertise.

**For whom?**

Non-cooperating and dependent people (seniors and people with disabilities)

**Area:**

Department of Creuse

**What is it for?**

Tel-e-dent is based on videos taken by nurses using an ORL endoscope to examine the oral cavity of older people in institutions. The data and medical records are sent to the dental surgeon, who analyses the videos to establish a pre-diagnosis. The process follows a precise protocol, using high-quality optical equipment, specially trained staff, and complies with all regulations. A nurse trained in oral and dental telemedicine coordinates these examinations in nursing homes, allowing the dental surgeon to focus on the diagnosis.

3 criteria are required prior to tele-expertise:

- An approved digital tool that ensures data confidentiality and cybersecurity.

>Secure video transmission (PACS system - Picture Archiving and Communication System, DICOM - Digital Imaging and Communications in Medicine)

>Secure Health Messaging: (*MS Santé*)

- Validation of the process by academic clinical research to ensure professionalism and legal and insurance protection
- The means to provide care after telediagnosis and to have access to a dental surgeon

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**The 3 stages:**

- The application:

>Applications submitted by carers, families, beneficiaries, guardians or trustees

>Written information notice sent to the applicant

>Receipt of written consent from the patient or his/her legal representatives

- Making the video

The nurse visits the patient in his or her own environment:

>Oral reminder of written information and oral confirmation of consent where possible

>Collection of medical records

>An exhaustive protocolised film of the resident's oral cavity

>Film + medical file are sent to the dental surgeon for asynchronous interpretation

The nurse carries out 5 examinations in an average of 2 hours. If we take into account the editing of the film and the selection of images that will be sent to the dental surgeon for the pre-diagnosis, we need to add 45 minutes per examination.

- The response

>Protocolised report with care proposals

**Next steps:**

1/ Gradual roll-out to all nursing homes in Creuse

2/ Roll-out in the department of Corrèze: for ex. Ussel, Uzerche

3/ New clinical research identical to Tel-e-dent, but on disabled people in institutions

4/ Roll-out for people with disabilities in institutions (health and social structures)

5/ Setting up specific tele-expertise training for nurses

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**Timescale (start/end date):**

Since 2013/ongoing

**Financial resources:**

- Funding received from the Regional Health Agency, the Nouvelle-Aquitaine Region and the Hospital of Guéret
- The Regional Health Agency Nouvelle-Aquitaine (ARS NA): In the absence of any national pricing system for telemedicine procedures, ARS NA is financing a flat rate of €44 per telemedicine procedure:

**Resources needed:**

>€30 for the nurse

>€14 for the dental surgeon's interpretation.

- Hospital of Guéret: covers staff costs

**Human resources:**

- Dental surgeons
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>0.4 full-time equivalent (FTE) for interpretation and care

- Nurses

>0.8 FTE

- Coordinating doctor

>0.5 FTE

- Secretarial staff

>0.4 FTE

**Material resources:**

- A portable PC
- Software: with GDT interface (Germany), DICOM format compatible (France)
- A USB Full HD 1920 x 1080 p. video camera, USB 3.0 compatible, integrated LED, IPX8 waterproof, for endoscopic surgery with f: 14-28 mm zoom.
- A wide-angle 120° endoscopic surgery lens, 16 cm long, 4 mm in diameter, 30° *foroblique*.
- Ancillary equipment: transport bag, personal protective equipment, decontamination products.
- Vehicle

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**Evidence of success (results achieved):**

- Improving coordination between different healthcare professionals
- Improvement of the care pathway
- Increased healthcare provision (delegation of tasks, increase in dental surgeon activity, time savings for practitioners, improves territorial coverage in under-dense areas)
- Improved patient approach (trusting relationship, solution that adapts to patients with specific needs)
- Optimising patient care (reducing the need to travel)
- Economic gains (avoids costly travel, optimisation of dental surgeon activity)
- Presence in 15 of the 31 nursing homes of the department of Creuse by 2023, representing around 1,250 residents
- An average of 300 examinations per year

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**Challenges encountered**

- The lack of dentists in the Creuse department to provide post-diagnosis care
  - The time allocated to editing the videos
  - The extent of resistance to change on the part of staff, for fear of an increase in workload
  - The corporatism of the healthcare professions
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Tel-e-dent is a project that could be transferred to other regions thanks to several success factors:

**Potential for learning or transfer:**

- Validation of the process by academic clinical research ensures professionalisation, legitimises the practice, and offers legal and insurance protection.
- The use of an approved digital tool that ensures data confidentiality and cybersecurity is a key success factor. The use of secure remote transmission systems (PACS, DICOM format, MSS) guarantees the protection of the medical information exchanged.
- A trust-based approach and the ability to adapt to specific patient needs
- Optimising patient care by reducing the need for patients to travel, increasing the range of care offered by delegating tasks, and saving time for practitioners are all significant advantages.
- Adaptation to all regions with a shortage of dental surgeons and training for nurses

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**External website (optional):**

<https://telesante.esea-na.fr/tel-e-dent>

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**Documents (optional):**

**Research article:** Queyroux, A., Saricassapian, B., Herzog, D. P., Müller, K., Herafa, I., Ducoux, D., Marin, B., Dantoine, T., Preux, P., & Tchalla, A. (2017). Accuracy of teledentistry for diagnosing dental pathology using direct examination as a gold standard : Results of the Tel-e-Dent study of older adults living in nursing homes. *Journal of the American Medical Directors Association*, 18(6), 528-532.  
<https://doi.org/10.1016/j.jamda.2016.12.082>

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**Video (optional):**

Tel-e-dent presentation: <https://vimeo.com/594644836>

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