

Medical exposure to ionizing radiation: Communication, justification and optimization of radiological risks in dental clinics and for X- rays preventive procedures

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The diagram illustrates the structure of the European Union Horizon 2020 Marie Skłodowska Curie grant project, organized into five Work Packages (WPs) and a Stakeholder Advisory Board.

Work Packages (WPs):

- WP1: Rationales and frameworks for stakeholder engagement**
- WP2: Stakeholder engagement in practice**
- WP3: Development of radiation protection culture to support the governance of radiological risks**
- WP4: Competence building and dissemination**

Stakeholder Advisory Board

The central part of the diagram shows three main areas of focus, each with an associated image:

- MEDICAL EXPOSURES** (Image: A person lying down, possibly receiving medical treatment or radiation therapy)
- EMERGENCY & RECOVERY PREPAREDNESS & RESPONSE** (Image: A road with a yellow warning sign, indicating a hazard or emergency situation)
- INDOOR RADON** (Image: A house with a green roof and a red arrow pointing to the word "RADON", indicating radon levels inside)

Arrows indicate the flow of the project: WP1 leads to WP2, WP2 leads to WP3, WP3 leads to WP4, and WP4 leads back to WP1. The Stakeholder Advisory Board is involved in all WPs. The central areas of focus are linked to the WPs: Medical Exposures is linked to WP1 and WP2; Emergency & Recovery Preparedness & Response is linked to WP2 and WP3; Indoor Radon is linked to WP3 and WP4.



2 Cases:

- 1) Stakeholders' engagement in RP in **dental clinics** (private in Spain)
- 2) Example of rising awareness on justification of RP in medical (preventive) use and **self-engagement** of stakeholders (general public) via internet Forums in Belarus, Russia and Ukraine (**drive license applicants**)

Liutsko L., et al., RICOMET2019, 2nd July, Barcelona

X-rays use in dental clinic (Spain)

Aim:

Observation of awareness on optimization & justification of X rays use in dental private clinic in Spain and stakeholders engagement in it

Methodology: web analysis + (2 observational cases: 1 – observer for another patient, and 2 – being as a patient)

Does exist in a practice Informed Consent in dental clinics?

Do professionals of dental clinics provide information on IR exposure, doses, risks, RP, etc.?

What is knowledge of professionals of dental clinics have on IR exposure and risks in their practices?

Liutsko L., et al., RICOMET2019, 2nd July, Barcelona

ICF (Informed Consent Form)

Rev Esp Med Legal. 2016;42(2):67–71



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Quite limited ammount of
ICDs for public use

BRIEF REPORT

Accesibility to informed consent documents in medical scientific societies☆



CrossMark



Esperanza L. Gómez-Durán^{a,b,c,*}, Berta Ferran-Ballús^a, Laia Torrent Jansà^a,
Carles Martin-Fumadó^{a,c}, Josep Arimany-Manso^{b,d}

KEYWORDS

Autonomy;
Informed consent
document;
Consent;
Scientific society;
Patient safety

Abstract

Introduction: Informed consent document (ICD) must be obtained in those cases defined by law. The development of ICD templates by experts in medical scientific societies would ensure the quality of the information procedure.

Method/results: This study tracked (October–December 2014) the website of 152 official scientific societies and identified ICD in just 25.66% of them (39 societies); 56.41% of them (22 societies) offered free access to ICD (462 documents), and the others, restricted public access. Among the 17 societies that offered ICD exclusively for members, access was achieved in 6 of them with a total of 52 ICDs obtained. A 19.04% of the specialties assembled the 94.94% above all the ICD founded.

Discussion: The development and accessibility of ICD built by certain scientific societies is wide in certain specialties; however, despite its enormous potential, in the overall analysis it remains insufficient.

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Journal of Family Medicine and Primary Care

Wolters Kluwer – Medknow Publications

Informed Consent: Corner Stone in Ethical Medical and Dental Practice

Heena Kakar, Ramandeep Singh Gambhir, [...], and
Tarun Nanda

[Additional article information](#)

Abstract

Progress in health care technologies has enabled patients to be better informed about all aspects of health care. Patients' informed consent is a legal regulation and a moral principle which represents patients' rights to take part in the clinical decisions concerning their treatment. With increasing awareness among the patients, the concept of informed consent is also evolving in developing countries like India. It is important for the medical and dental practitioners to have a written and signed informed consent from their patients before performing any invasive or irreversible procedures. Informed consent is also needed when

providing medical care to children, foreign patients, and incorporating images of the patients while conducting medical and dental research. The present review addresses some of the vital issues regarding informed consent when providing medical and dental care with current review of the literature.

Keywords: Children, dentistry, informed consent, medicine, risks, smart consent

Introduction

Law in the field of health care is an established concept in developed countries but remains in its infancy in developing countries. Due to global advancements, the situation is now changing because of increased awareness of the patients' rights, and it is just a matter of time before we fall prey rightfully or wrongfully to an ever-evolving legal framework for the health care industry including dentistry.[1] It is a general legal and ethical principle that one must get valid consent before starting treatment or physical investigation, or providing personal care, for a patient or conducting research involving human participants.

[2] In medical terms, informed consent implies to "providing sufficient information for a patient to make an informed and rational choice, the information

includes the inherent risks and alternatives that a reasonable doctor would provide having regard to the particular circumstances of the patient." [3] This principle reflects the right of patients to decide what happens to their own bodies and is an essential part of good practice. In health and social care research, informed consent can be defined as "The process of agreeing to take part in a study based on access to all relevant and easily digestible information about what participation means, in particular, in terms of harms and benefits." [4]

A patient's informed consent to investigations or treatment is a fundamental aspect of the proper provision of dental care as well. Without informed consent to treatment, a dentist is vulnerable to criticism on a number of counts. The concept of consent to treatment is increasingly becoming contested in courts of law in many western countries like United Kingdom.[5] Any practitioners who cannot demonstrate that a patient has properly consented to treatment are laying themselves open to litigation. A survey was conducted to determine the quality of information given to patients before the endoscopic procedures in countries that are members of the European Society of Gastrointestinal Endoscopy.

J Law Med Ethics. 2017 Mar;45(1):77-94. doi: 10.1177/1073110517703102.

Informed Consent in Dentistry.

Reid KI¹.

⊕ Author information

Abstract

A review of literature regarding informed consent in dentistry reveals a paucity of information and minimal scholarship devoted to this subject. But this begs the question about informed consent somehow being different for dentistry than for medicine or other healthcare delivery. My account draws distinctions where appropriate but is rooted in the premise that informed consent is an ethical construct applicable to vulnerable people as patients independent of what type of treatment or body part being considered. This paper highlights the crucial importance of the process of informed consent and refusal in dentistry, underscoring its important place in oral healthcare. This paper will not address the unique circumstances involving consent in those without capacity or focus on informed consent in the research setting; our focus will be on those patients with full decisionmaking capacity in the clinical setting. I will emphasize the importance of disclosure of treatment options and highlight the benefits of shared-decision-making in the informed consent process.

PMID: 28661282 DOI: [10.1177/1073110517703102](https://doi.org/10.1177/1073110517703102)

Where patients can obtain information from?

- Patients' **informed consent** is a legal regulation and a moral principle. It represents patients' rights to take part in the clinical decisions concerning their treatment.
- In order to **practice** in a professionally responsible manner, **dentists** must assist patients to make well-**informed** decisions about treatment procedures.



What about information on X-rays, etc? – Where patients can obtain from?
Are they are aware of IR risks?

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Radiografías en el dentista: ¿son necesarias?, ¿conllevan peligro para nuestra salud?

9 febrero, 2018



Escrito por
Dr. Pedro Pablo Martínez

Internet: professional blogs

Here an example of a private dental clinics: *“Radiographies at the dentists: Are they necessary?, Do they bring any danger to our health?”*

¿Cuánta radiación producen las pruebas realizadas en el dentista?

La toma de imágenes con rayos X siempre supone **exponer al cuerpo a una pequeña dosis** de radiación.

Para mitigar estos efectos, en nuestra clínica dental **contamos con aparatos digitales**, en lugar de convencionales. Esto beneficia notablemente al paciente, ya que hace que se exponga **a mucha menor radiación**.

En la siguiente tabla comparativa **podrás ver las grandes diferencias** que hay entre la radiación que producen las pruebas convencionales y las digitales que ofrecemos en Ferrus & Bratos:

**Not clear
information:**

“a small dose”

Digital apparatus have **“much less radiation”** compared those conventional



Doctor's blog: Madrid

“

La dosis de radiación a la que nos exponemos de manera artificial es mucho más pequeña que la recibida de manera natural

“Doses of radiation obtained from artificial sources are much less than those received from natural sources”



¿Cómo se mide la cantidad de radiación?

La unidad de medición de la dosis de radiación es el **milisievert (mSv)**.

En España, el **Consejo de Seguridad Nuclear (CSN)** estima que cada español recibe al año una **dosis media de 3,7 mSv en total**.

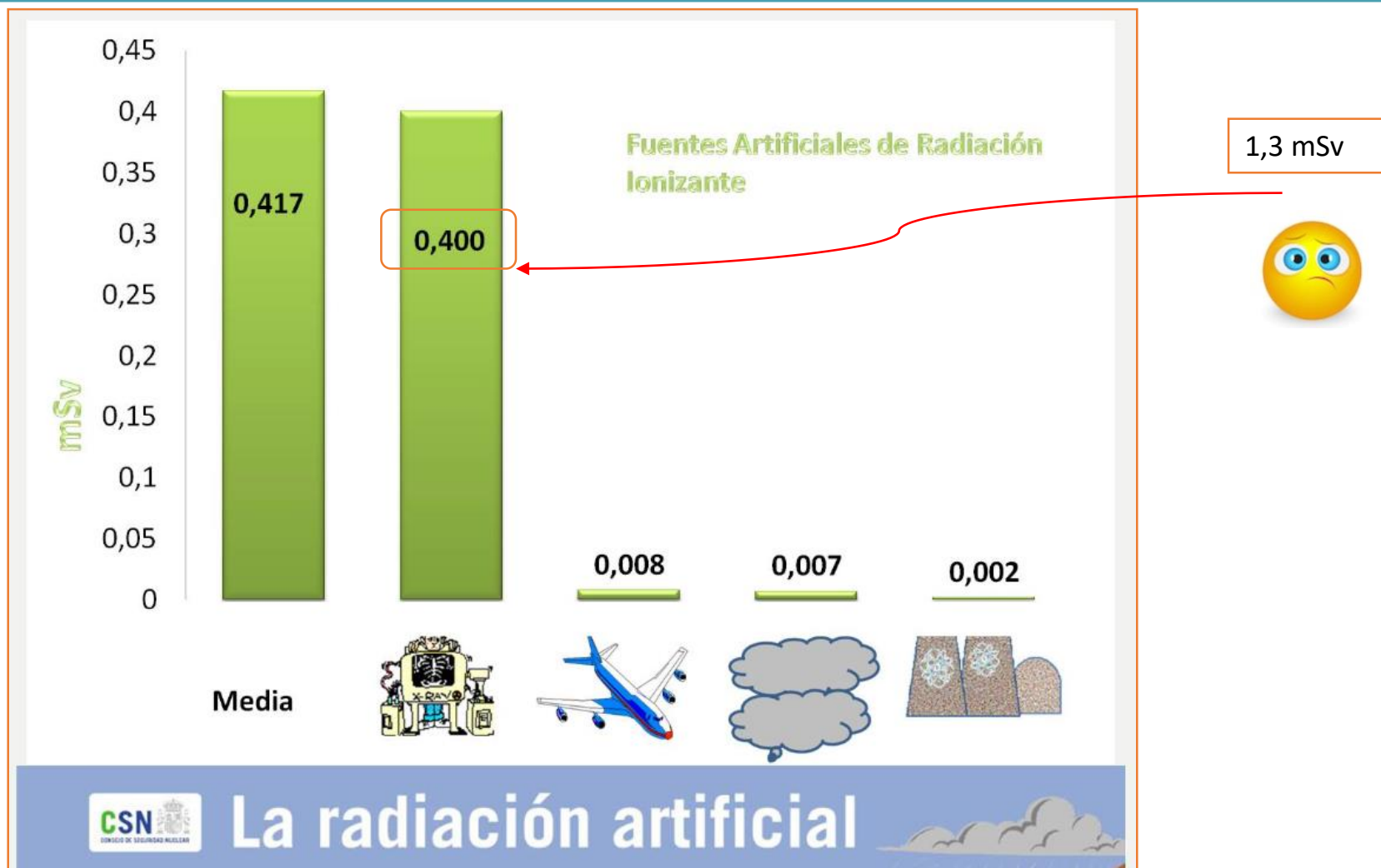
De dicho total, **2,4 mSv** tienen su origen en la **radiación natural**.

Por tanto, los **1,3 milisievert** restantes se deben a la radiación que cada español recibe de media al año procedente de **fuentes médicas**.

**Erroneous information
Errors in interpretation of
information -> incorrect info**



CSN data on artificial sources of ionizing radiation



X-rays use in dental clinic (Spain)

Results / Conclusions, lessons learned

- (from web analysis): incoherent information on a professional blog about “small doses” (natural & artificial)
- Limited (to say zero) awareness on use of X – rays for dental practice (“the doses are small, nothing will happen”)
- Not all professionals of clinics know well how to use a X ray machine but use it on practice (repeated exposure just of not using correctly / doubts in procedure “which button to press?” / bad quality of output)
- “Expert” on doing x-rays in clinics, on the request to show the doses applied to procedure on machine: no any basic knwoledge on it “Here it is [showing on the maching screen numbers ... Sv/cm2], but I do not know what does it mean”


Liutsko L., et al., RICOMET2019, 2nd July, Barcelona

Best practices examples



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1/15/2019: [Disparities in Radiation Protection Burden from Trauma Evaluation at Pediatric Versus Nonpediatric Institutions](#)

<https://www.imagegently.org/>

2nd Case: X-rays (x lungs) are needed to pass the medical commission (post-Soviet countries)

Aim:

Observation of awareness on optimization & justification of X rays use – Are they really needed to obtain a drive license? // Stakeholders self-involvement

Methodology web analysis of relevant docs and public Forums

- Is it necessary to pass a breast X rays (Flurography) for a medical commission to obtain a drive license?

нужно ли проходить флюорографию для сдачи на права?



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Ver resultados de **нужно ли проходить флюорографию** для сдачи на права?

Нужна ли флюорография для справки на права - driving-177.ru

driving-177.ru/nuzhna-li-flyuorografiya-dlya-spravki-na-prava/ Traducir esta página

Ir a **Процесс прохождения комиссии** - Порядок прохождения медосмотра в этом случае может ... После сдачи всех клинических лабораторных ...

Нужно ли проходить ... - 403 forbidden · Порядок оформления · Процедура ...

Флюорография при медкомиссии на права - обязательно или нет ...

forum.yurclub.ru > ... > Медицинское право Traducir esta página

14 sept. 2011 - отправлено в Медицинское право: Собираюсь сдавать на права. ... **Обычно в поликлинике заставляют проходить флюорографию всех ...**

Получение водительской медицинской справки формы 003-B/y

https://unit-car.com/.../174-medspravka-dlya-voditelskih-prav.ht... Traducir esta página

В этой статье мы расскажем о порядке получения медсправки на права в ... г. обследование у врача-психиатра и врача-нарколога можно проходить ...

Нужна ли флюорография для получения справки на обучение на ...

https://otvet.mail.ru > Авто, Мото > ГИБДД, Обучение, Права Traducir esta página

11 respuestas

24 jun. 2012 - Здесь тебе и флюорография, и кардиограмма, и каково с чаем)) ... Помнится в США сдавал на права, так медосмотр проходит ...

Почему в поликлинике заставляют проходить флюорографию ... 5 jul. 2015

каких врачей нужно проходить для сдачи на водительские права ... 2 jul. 2015

чтоб сделать флюорографию нужно направления врача или ... 29 jun. 2015

Справка 086/y - обязательная? И можно ли отказаться от ... 25 jun. 2011

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https://www.avtogai.ru/medkomissiya-dlya-voditelej-2016.html Traducir esta página

13 jun. 2016

ЦарьПушка

#3 <

За свободную конкуренцию
на рынке юрслуг

Отправлено 14 Сентябрь 2011 - 22:11



продвинутый
429 сообщений

Обратиться

Публикации

ЮРдоктор, просто я не хочу облучать свой организм радиацией и не считаю нужным прохождение флюорографии для комиссии на права.
Поэтому мне необходимо НПА, который регулирует процедуру прохождения медосмотра водителей.

0

“JurDoctor, I simply do not want to expose my organism to radiation and do not consider a fluorography as necessary to pass medical comission for drivers....”

guestPR

#4 <



продвинутый
671 сообщений

Обратиться

Публикации

Отправлено 15 Сентябрь 2011 - 04:40

У меня в медсправке нет отметки о флюорографии. Обычно в поликлинике заставляют проходить флюорографию всех обратившихся по любому поводу - скорее всего, из-за плана. Возможно, избежать флюорографию удастся, если обратиться в какой-нибудь коммерческий медицинский центр. Вот только не знаю, насколько действительна будет такая справка - раньше было обязательное требование, что в медкомиссии должны быть психиатр и нарколог из поликлиники по месту жительства, которые ведут учет соответствующих граждан...

Прочитал недавно, что в ряде стран в Европе приостановлены реклама и рекомендации женщинам чаще делать маммографию. Там заметили, что в районах, где женщины регулярно проходят профилактическое обследование, смертность от рака груди на 1...2% выше, чем в соседних районах, где обследований нет.

Кстати, а на самолетах не боитесь летать? 10-часовой полет на высоте 10 км увеличивает годовую естественную дозу из-за повышенного фона космического излучения на 16%... Хотя, вроде, одна флюорография дает прирост к естественной годовой дозе чуть ли не 50%...

Ну а если флюорографии избежать все-таки не удастся - остается только бороться со свободными радикалами этиловым спиртом. Лучше, конечно, принять "защитную" дозу до "просвечивания" - но есть риск, что после флюоро сразу отправят к наркологу...))

0

V.R.I.

#5 <

Проконсул

Отправлено 15 Сентябрь 2011 - 11:13



Старожил

3 799 сообщений

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Публикации

прохождение флюры один раз в год (или полгода) отметка о прохождении в амбулаторной карте, а также в журнале в флюоркабинете, проблем никогда не было, показывал отметку что тогда то пройдено в край письменно откажитесь от флюры "вера не позволяет", после чего если у вас разовьется тубик поликлинике будет чем отмахаться

0

ЦарьПушка

#7

За свободную конкуренцию
на рынке юрслуг

Отправлено 20 Сентябрь 2011 - 01:07



продвинутый
429 сообщений

Обратиться

Публикации

В новой справке, утв. Приказ Минздравсоцразвития РФ от 28.09.2010 N 831н нет графы флюорография.
Это уже хорошо.

Но чем руководствуются медики, когда осматривают водителей и кандидатов в водители?

Вот нашёл: **Приказ Минздрава СССР от 29.09.1989 N 555**
(ред. от 14.03.1996)

"О совершенствовании системы медицинских осмотров трудящихся и водителей индивидуальных транспортных средств"

п. 12.1:

...

26. Хронические заболевания легких и плевры, в том числе туберкулезной этиологии, бронхиальная астма, состояние после резекции легкого, бронхо-эктатическая болезнь - вопрос о допуске решается индивидуально.

...

То есть в любом случае надо облучаться?

Да я лучше всю жизнь пешком прохожу!

Citing the Ministry of Health Law from 1989...
and further comment: *"So, it is obligatory to exposure?
Then I better all my life will walk instead!"*

0

sivl

#8



ЮрКлубовец
181 сообщений

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Публикации

Отправлено 20 Сентябрь 2011 - 01:37

ВИЛОПИСАНИЕ...

Сведения о прохождении флюоры могут вносить в документы о прохождении мед комиссии со слов водителя о том, что он пару месяцев назад уже прошел ее там то и там то.

Если так оно и было, то еще лучше. А получаемая доза не так и велика, меньше чем от мрт и ладно

0

X-rays (x lungs) are needed to pass the medical commission (post-Soviet countries)

Results / Conclusions, lessons learned

Requirement: to pass a medical revision to obtain a drive license

Physician who is saying that “person is healthy” need to prove it, and without Lungs’ X-ray procedure performed (a traditional method for prevention against tuberculosis).

The topic “is it possible to obtain medical commission pass without having been exposed to x-rays?” results in the bureaucracy of the established procedure many years ago (from soviet epoch): “theoretically you have a right to deny it, but if your medical commission will not pass, you will not get a drive license”.

This is an example of self organised engagement of general public in RP issues...

DISCUSSION and questions???

THANK YOU VERY MUCH!



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