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La perspectiva de género para mejorar la asistencia sanitaria. El caso del infarto agudo de miocardio

Elena Aldasoro.
Dirección de Salud Pública y Adicciones. Departamento de Salud

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Universidad del País Vasco Euskal Herriko Unibertsitatea

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EUSKO JAURLARITZA GOBIERNO VASCO

OSASUN SAILA

DEPARTAMENTO DE SALUD

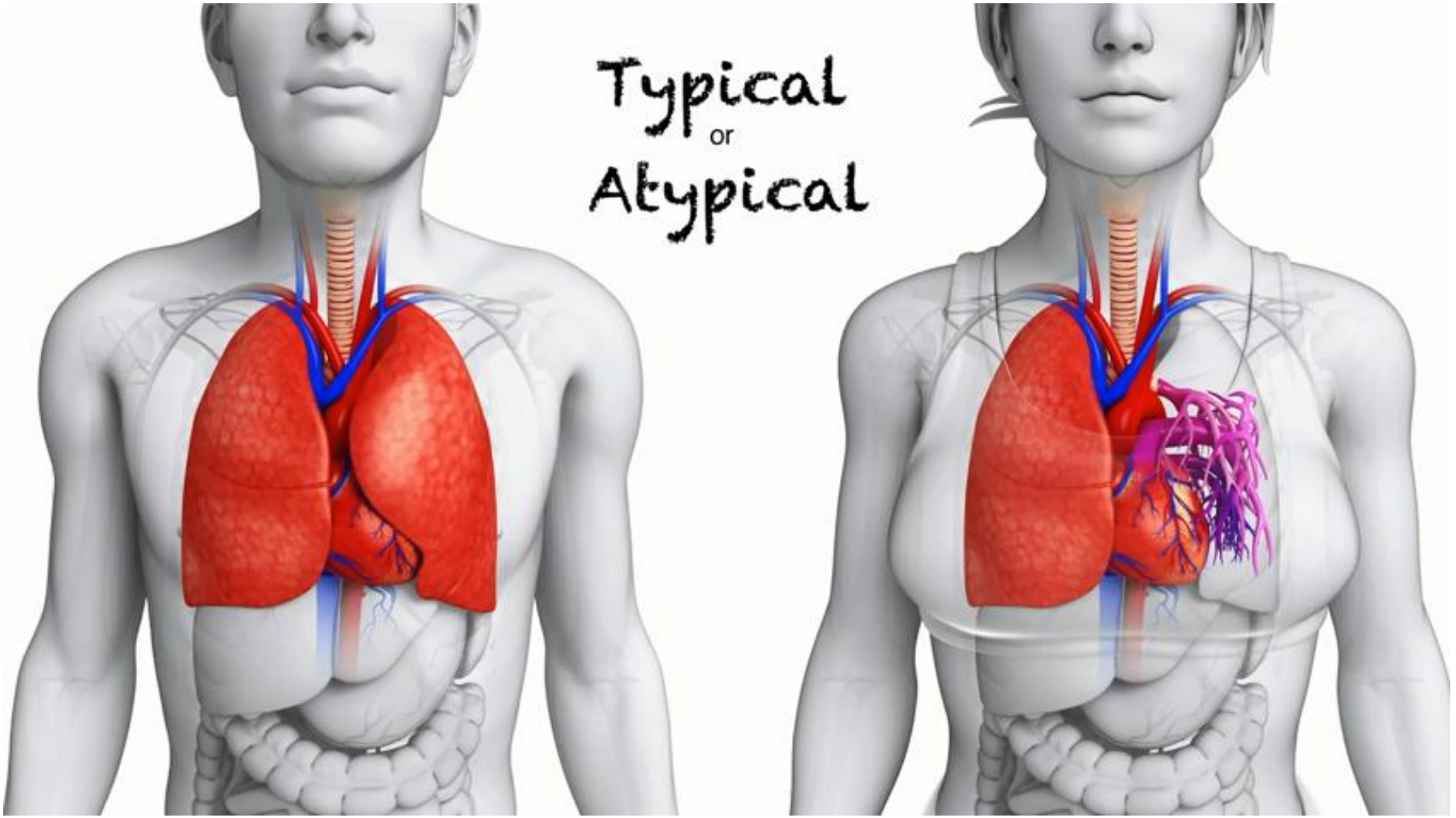
La Ciencia en Medicina,
¿Perjudica la salud de las mujeres?

Elena Aldasoro

Dirección de Salud Pública y Adicciones

Leioan, 10 de marzo de 2016eko martxoaren 10ean

Mileva Maric


Typical
or
Atypical

La importancia de estos términos…

sexo ≠ género

Sexo

Tamaño de los órganos corporales

- diferencias biológicas entre hombres y mujeres que son incambiables (relativamente)

Género

Vendaje de los pies, queratitis microbiana

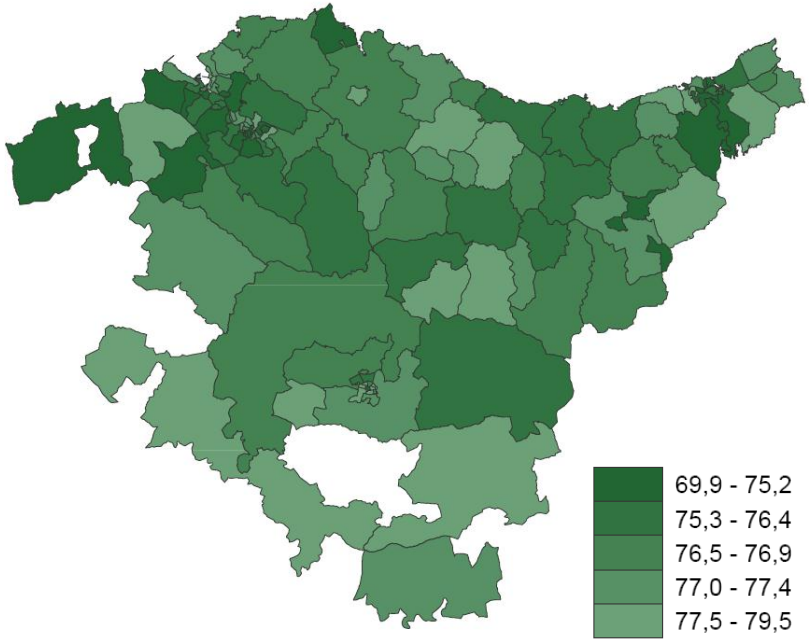
- diferencias contruidas socialmente
- variables en el tiempo y entre paises, comunidades, etc.

En el caso de la salud ambos están implicados

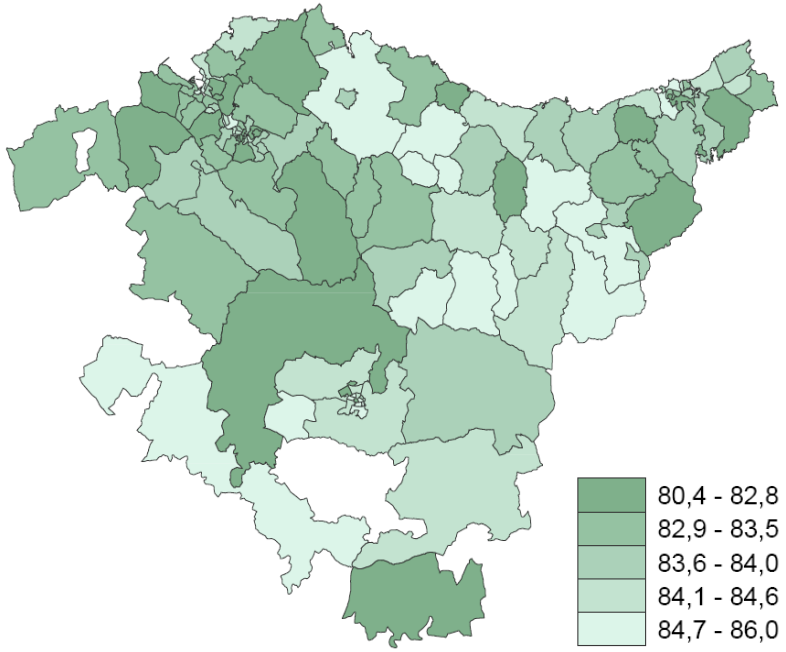
Esperanza de vida 2005

Desigualdades geográficas (ZBS)

Hombres 77,2



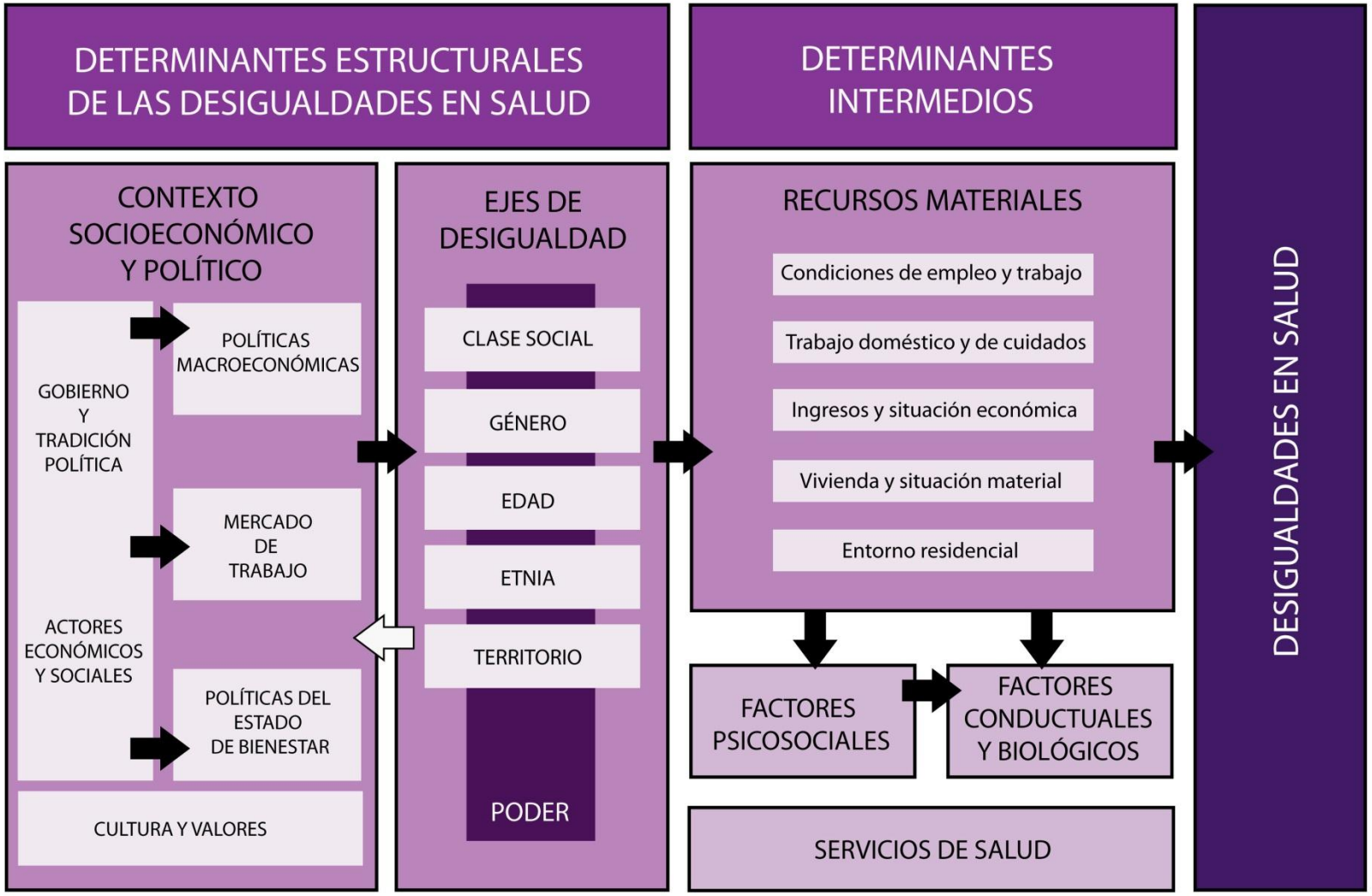
Mujeres 84,3



Masculinidad

(déficit masculino)

Modelo sobre determinantes sociales de la salud y de desigualdades en salud (CSDH-OMS, 2007)



El Infarto Agudo de Miocardio (IAM)

ORIGINALES

Diferencias de género en el tratamiento de revascularización precoz del infarto agudo de miocardio

Localizador web
Artículo 147.621

Elena Aldasoro[a], Montse Calvo[a], Santiago Esnaola[a], Iraida Hurtado de Saracho[a], Eva Alonso[a], Covadonga Audicana[a], Fernando Arós[b], Iñaki Lekuona[c], José M. Arteagoitia[a], Mikel Basterretxea[a] y Jaime Marrugat[d] en nombre del grupo IBERICA-País Vasco

[a]*Departamento de Sanidad. Gobierno Vasco.*
[b]*Hospital Txagorritxu. Vitoria-Gasteiz. Álava.*
[c]*Hospital de Galdakao. Galdakao. Bizkaia.*
[d]*Institut Municipal d'Investigació Mèdica (IMIM). Barcelona. España.*

El contexto

- Estudio IBERICA: multicéntrico (8 CCAA) coordinado por el Instituto Municipal Investigación Médica

- Objetivo: conocer la incidencia y la letalidad por IAM, asi como los cuidados médicos

El diseño

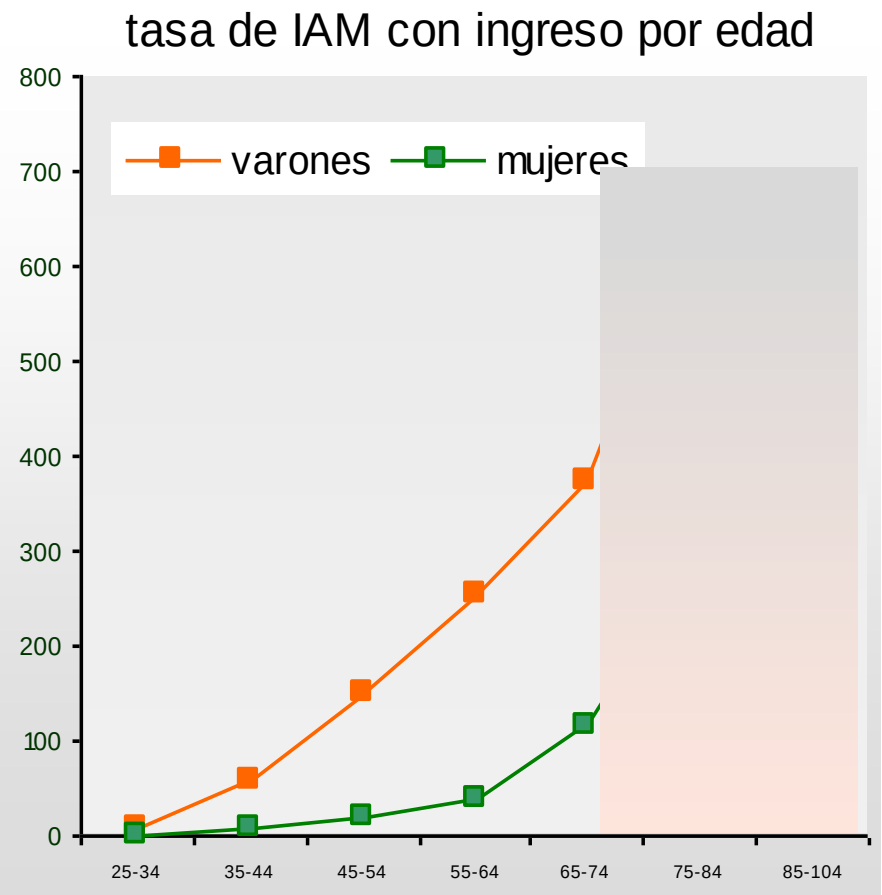
Criterio de inclusión de la edad

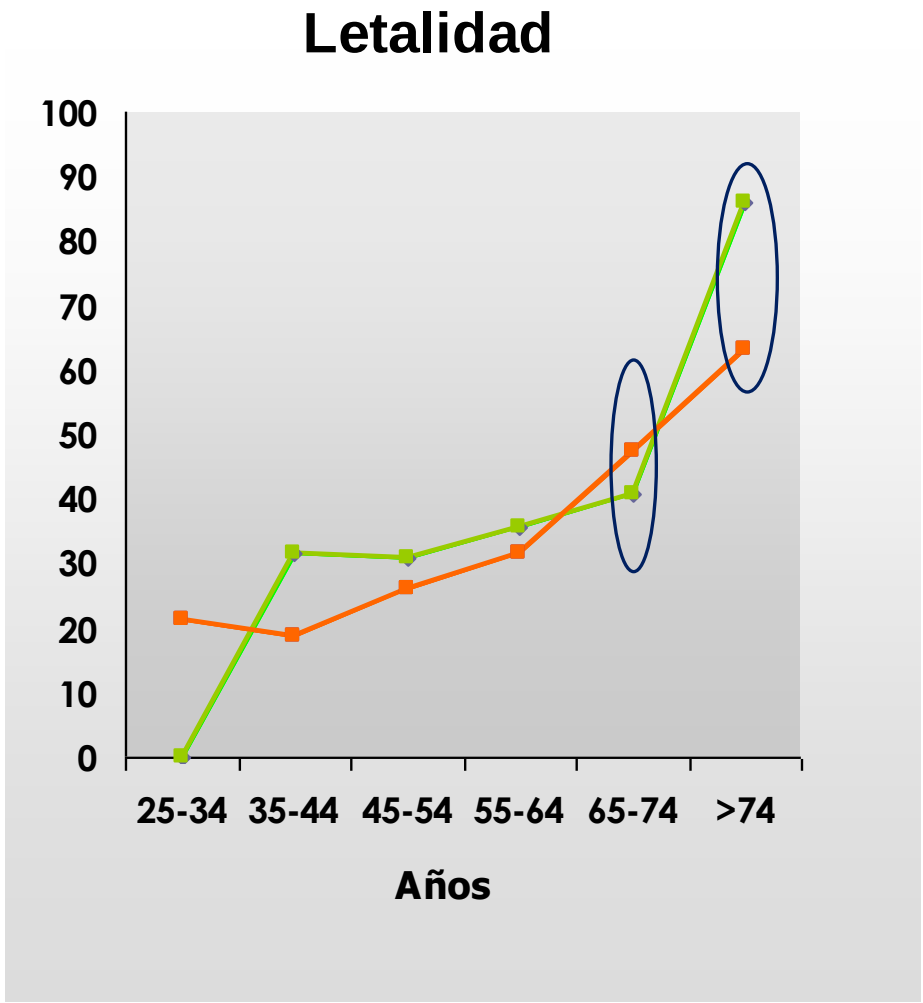
- 25-74 años (las mujeres que entraban en el estudio eran solo el 18%)
  - Análisis sin desagregar por sexo: conocimiento de lo que ocurre a los hombres
  - Análisis por sexo: insuficiente tamaño muestral en mujeres

El diseño

- Revisión literatura: el IAM en **mujeres** ocurre **10 años más tarde** (papel protector de estrógenos?)
- Dos años después: población **mayor de 24** años (29%)

La importancia del problema





Análisis

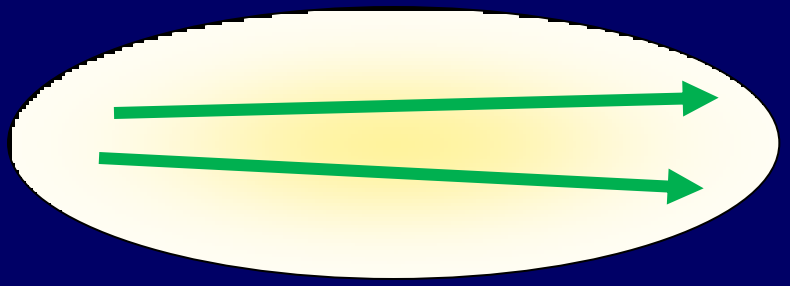
Ajuste de los modelos. Variable dependiente: revascularización

modelo	RR	IC_{95}	valores p sexo*edad$_{67}$
sexo	1,54	1,35-1,76	--
sexo edad	1,16	1,10-1,33	--
sexo edad$_{67}$ sexo*edad$_{67}$	1,19	1,05-1,36	0,002
sexo edad$_{67}$ KIII-IV sexo*edad$_{67}$	1,18	1,04-1,34	0,003
sexo edad$_{67}$ KIII-IV diabetes sexo*edad$_{67}$	1,16	1,02-1,32	0,003
sexo edad$_{67}$ KIII-IV diabetes hipertensión sexo*edad$_{67}$	1,13	1,00-1,29	0,002
modelo a → sexo edad$_{67}$ KIII-IV diabetes hipertensión síntomas sexo*edad$_{67}$	1,13	0,99-1,28	0,006
modelo b → sexo edad$_{67}$ KIII-IV diabetes hipertensión síntomas t° sint-monitorización sexo*edad$_{67}$	1,07	0,95-1,20	0,16

- Los resultados del análisis por subgrupos eran coherentes

Estudio del proceso de cuidados

Momento de los primeros signos síntomas



Tratamiento de revascularización

Demora en recibir los cuidados sanitarios

¿las causas?

Factores relacionados con el **Sexo**	Factores relacionados con el **Género**
• **Presentación diferente** ♀ - edad más avanzada - síntomas y signos “atípicos” - mayor comorbilidad	• Diferente percepcion del riesgo (por profesionales y mujeres) • Rol de Cuidadoras • Androcentrismo de la ciencia (caracterización del infarto en base a la presentación en hombres)

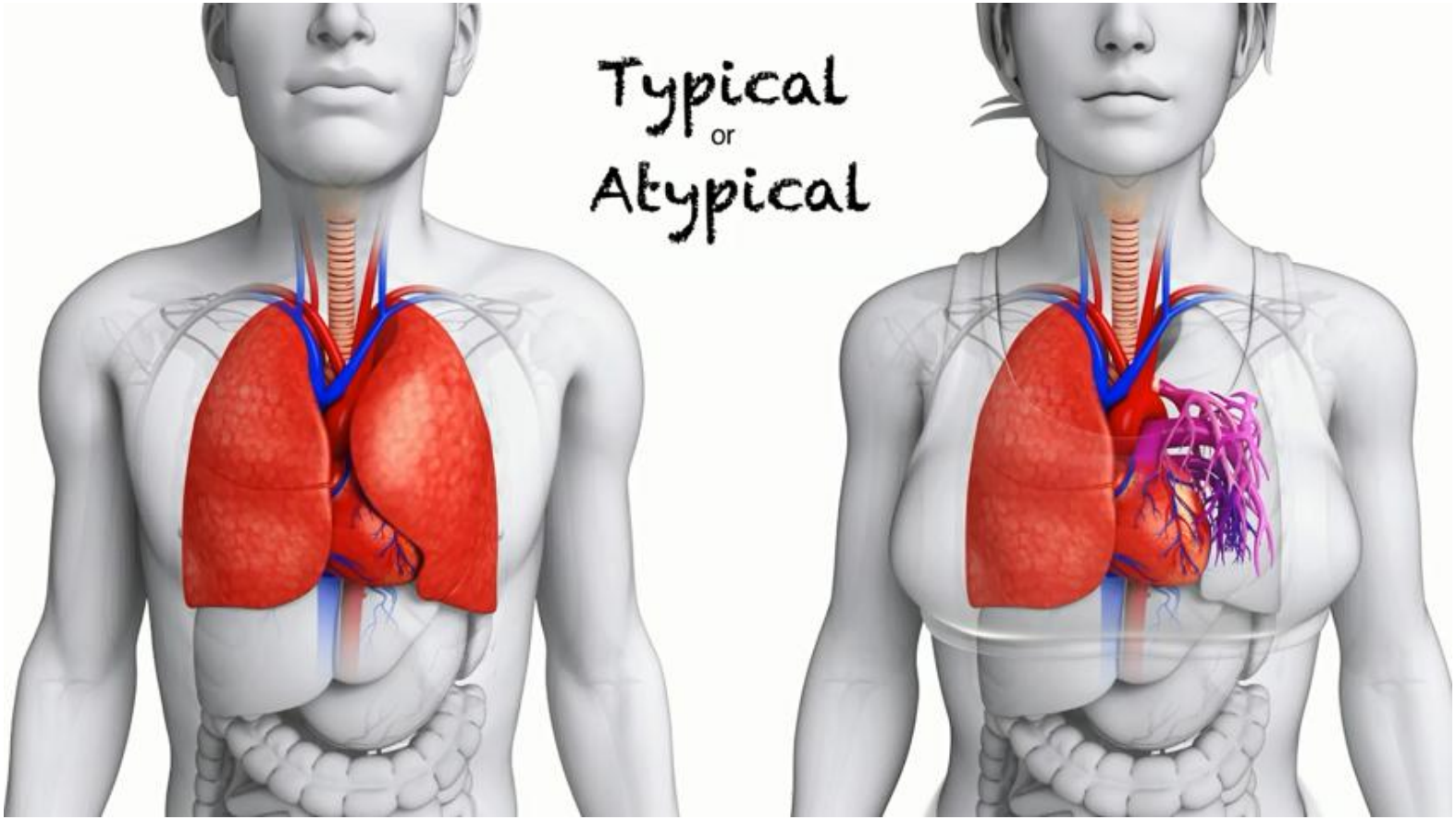
Androcentrismo

- implica la identificación de lo masculino con lo humano en general
- y a su vez, la equiparación de lo humano con lo masculino,
- lo que lleva a constituir **lo masculino como norma**
- contribuye a la **invisibilización** de las mujeres…

Why medicine often has dangerous side effects for women

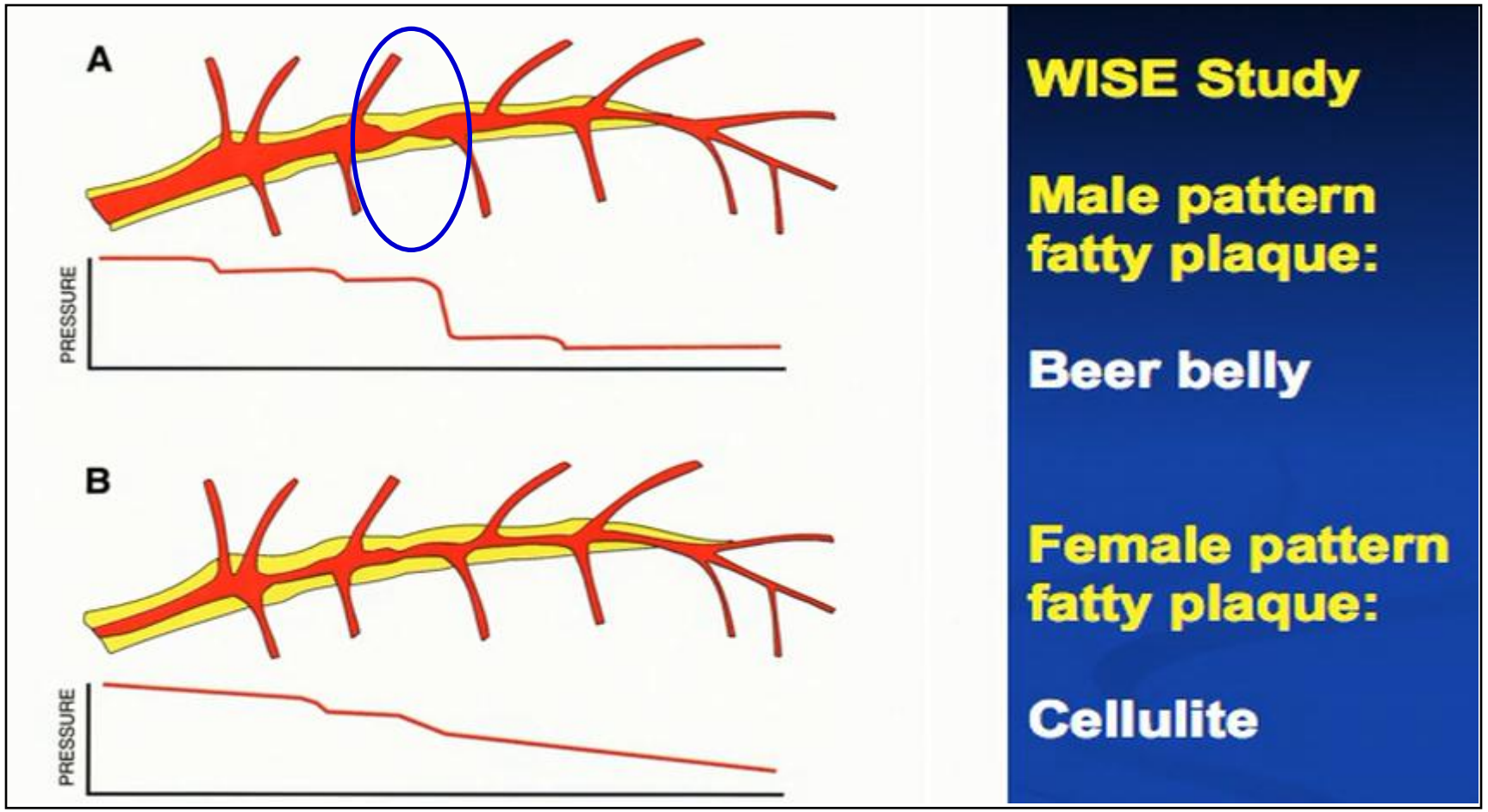
http://bit.ly/1GYOVrH

Síndrome de Yentl



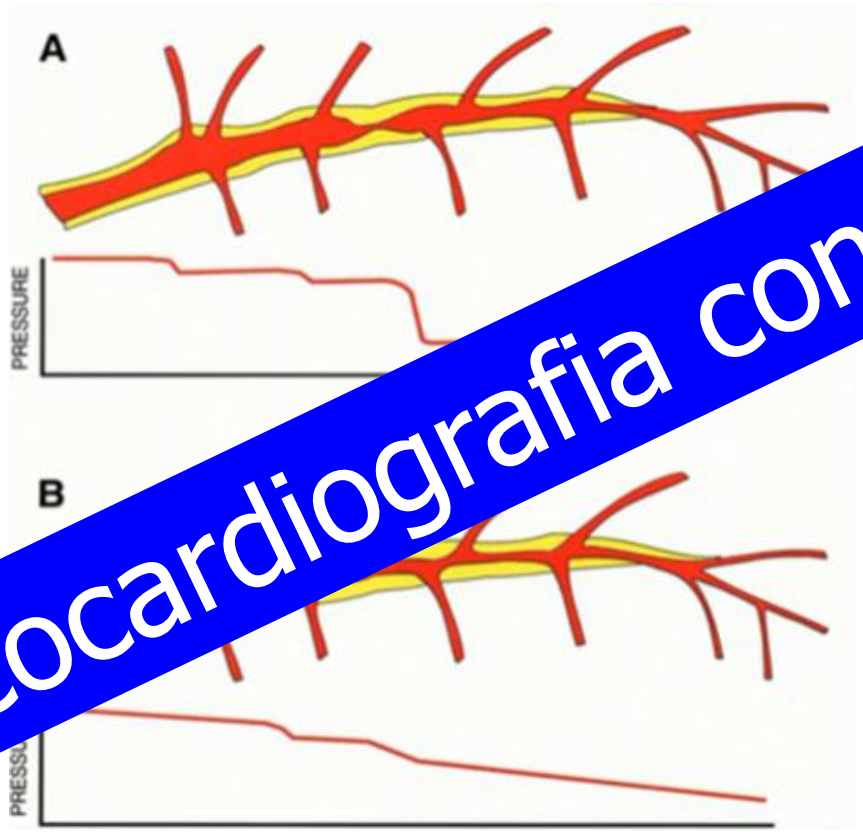
TED.com

Diferencias en la distribución de la placa de ateroma



http://www.ted.com/talks/noel_bairey_merz_the_single_biggest_health_threat_women_face

El caso de Linda solucionado por Paula Johnson



Ecocardiografia con ultrasonidos

cardíaco +

cateterismo cardíaco -

https://www.ted.com/talks/paula_johnson_his_and_hers_healthcare/transcript?language=es#t-289645

LAURA ROBAYNA

Madrid - 19 MAR 2017 - 12:01 CET

Cuatro y media de la tarde. Elvira termina al fin de recoger su casa. Más cansada de lo normal, se siente mareada, así que decide asomarse a la terraza para que el aire le despeje. Pero el frescor del exterior no surte efecto, y con temor a precipitarse por la barandilla, se sienta en el sofá del salón con las ventanas abiertas. El mareo se convierte en un desfallecimiento, y cuando Elvira vuelve en sí, empieza a vomitar. Había tenido un infarto.

> "Con frecuencia, el diagnóstico en mujeres con enfermedades cardiovasculares es erróneo o tardío porque los síntomas son atípicos, no son los clásicos que se describen muy bien fundamentalmente en el hombre", explica el doctor Carlos Macaya, presidente de la Fundación Española del Corazón y jefe de servicio de Cardiología de este mismo hospital. Al igual que en el caso de Elvira, es común

JECH Online First, published on June 16, 2015 as 10.1136/jech-2014-204506

OPEN ACCESS

Social disparities in Disease Management Programmes for coronary heart disease in Germany: a cross-classified multilevel analysis

Kayvan Bozorgmehr,[1] Werner Maier,[2] Hermann Brenner,[3] Kai-Uwe Saum,[3] Christian Stock,[4] [illegible] Szecsenyi,[1] Oliver Razum[6]

2015

Encontramos evidencia muy marcada para el género pero no para el nivel de educación (medido a nivel individual)

[illegible]ale was to [illegible]ntives [illegible]-

[illegible]heir

[illegible]alities (OR=0.70 (0.40 to 1.21)). Models [illegible]for the social situation (instead of health-[illegible]our) yielded comparable effect estimates ([illegible]/most-deprived vs least-deprived areas: OR=0.45 ([illegible].78)/OR=0.68 (0.33 to 1.19)). Controlling for dim[illegible]es in comorbidity attenuated the deprivation effect estimates.

Conclusions We found evidence for marked gender, but not educational disparities in DMP enrolment among patients with CHD. Small-area deprivation was associated with DMP enrolment, but the effects were partly explained by differences in comorbidity. Future studies on DMPs should consider contextual effects when analysing programme effectiveness or impacts on equity and efficiency.

▸ Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/jech-2014-204506).

[1]Department of [illegible] Practice and [illegible] Research, [illegible] Heidelberg, Germany
[2]Institute [illegible] and Health [illegible] Helmholtz [illegible] —German [illegible] Environmental [illegible] Neuherberg, [illegible]
[3]Division of [illegible] Epidemiology [illegible] Research, German [illegible] Research Center [illegible] Heidelberg, Germany
[4]Institute of Medical [illegible] and Informatics, University [illegible] Heidelberg, Heidelberg, Germany
[5]Saarland Cancer Registry, Saarbrücken, Germany
[6]Department of Epidemiology and International Public Health, School of Public Health, Bielefeld University, Bielefeld, Germany

Correspondence to
Dr Kayvan Bozorgmehr,

[illegible] Education [illegible] with DMP enrolment [illegible] least-deprived municipalities, the adjusted DMP enrolment was statistically significantly lower for patients living in medium-deprived municipalities (OR=0.41 (0.24 to 0.71)), and it also tended to be lower for patients living in the most-deprived

[illegible] towards uptake of preventive [illegible] for patients with lower SES. Third, [illegible] factors of the small-area social environment [illegible] as neighbourhood socioeconomic disadvantage, [illegible] as well as characteristics at the level of primary care

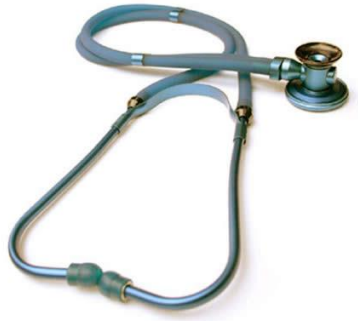
Sex bias in referral of women to outpatient cardiac rehabilitation? A meta-analysis

Eur J Prev Cardiol. 2015 Apr;22(4):423-41.

- # Rehabilitación cardiaca (RC)
  - programa que reduce la frecuencia de nuevos eventos miocardicos y la mortalidad
  - Revisión sistemática de la literatura científica: 19 estudios que cumplian los criterios de inclusión [241.613 participantes (80.505 mujeres]

	Hombres %	**Mujeres %**
	49,4	39,6
$OR_{♀}$ = 0,68 ($IC_{95\%}$: 0,62-0,74)		

http://www.ncbi.nlm.nih.gov/pubmed/24474091



Todo esto
¿porque ha ocurrido?


"bikini medicine"
Play/Pause
© McGregor AJ, Academic Emergency Medicine

La investigación biomédica continua usando más sujetos machos que hembras tanto en estudios con animales como en ensayos clínicos con humanos

nature

www.nature.com/nature

Vol 465 | Issue no. 7299 | 10 June 2010

Putting gender on the agenda

Biomedical research continues to use many more male subjects than females in both animal studies and human clinical trials. The unintended effect is to short-change women's health care.

Differences in the physiology of males and females, and in their response to disease, have been recognized for decades in many species — not least *Homo sapiens*. The literature on these differences now encompasses everything from variations in gene expression between male and female mice, to a higher susceptibility to adverse drug reactions in women compared with men. Moreover, hormones made by the ovaries are known to influence symptoms in human diseases ranging from multiple sclerosis to epilepsy.

And yet, despite the obvious relevance of these sex differences to experimental outcomes, three articles in this issue (see pages 688–690) document that male research subjects continue to dominate biomedical studies. Some 5.5 male animal models are used for every female in neuroscience, for example. And apart from a few large, all-female projects, such as the Women's Health Study on how aspirin and vitamin E affect cardiovascular disease and cancer, women subjects remain seriously under-represented in clinical cohorts. This is despite reforms undertaken in the 1990s, when sex discrimination in human trials was first widely recognized as a problem.

Admittedly, there can be legitimate reasons to skew the ratios. For instance, researchers may use male models to minimize the variability due to the oestrous cycle, or because males allow them to study the Y chromosome as well as the X. And in studies of conditions such as heart disease, from which female mice are thought to be somewhat protected by their hormones, scientists may choose to concentrate on male mice to maximize the outcome under study.

However justifiable these imbalances may be on a case-by-case basis, their cumulative effect is pernicious: medicine as it is currently applied to women is less evidence-based than that being applied to men.

The research community can take a number of steps to address this problem. Journals can insist that authors document the sex of animals in published papers — the Nature journals are at present considering whether to require the inclusion of such information. Funding agencies should demand that researchers justify sex inequities in grant proposals and, other factors being equal, should favour studies that are more equitable.

Funding agencies and researchers alike should also start thinking seriously about how to deal with the most fundamental sex difference: pregnancy. Pregnant women get ill, and sick women get pregnant. They need therapies, too, even though they are carrying a highly vulnerable fetus and their bodies are undergoing massive changes in hormonal balance, immune function and much else besides. Entering pregnant women in clinical trials is problematic in the extreme, for a host of ethical reasons. But ignoring the problem is not an answer either — the result is that physicians will prescribe drugs whose effects during pregnancy are poorly known. One possible solution is systematic retrospective data collection from women who have had no choice but to take an unproven drug while they were pregnant.

"Medicine as it is currently applied to women is less evidence-based than that being applied to men."

More generally, drug regulators should ensure that physicians and the public alike are aware of sex-based differences in drug reactions and dosages. And medical-school accrediting bodies should impress on their member institutions the importance of training twenty-first-century physicians in how disease symptoms and drug responses can differ by sex. Finally, speeding more women into the senior ranks of science, which they still struggle to reach (see page 832), could well have a salutary effect in creating an environment in which all such efforts can thrive.

These may be the first steps in the direction of truly personalized medicine — what, after all, is more personal than sex. But they are urgently necessary ones. ■

Unknown quantities

It is in researchers' interests to help funding agencies quantify the economic benefits of their work.

When research agencies are pressed by politicians to quantify the economic value of scientific research, it is only natural that they reach for whatever numbers they can find and then repeat them as well-established fact. Natural, but wrong. The reality is that few of those numbers — typically, assertions that each unit of research investment will yield a certain amount of additional economic activity — rest on a secure basis (see page 682).

Economists can say with some certainty that basic scientific research plays a substantial role in fostering innovation — by which they mean new technologies, services and business methods. They also have good evidence that innovation is essential for strong economic growth, especially when society faces constraints on key inputs such as labour, capital and materials.

Beyond that, they can't predict which disciplines of scientific research will lead to future innovation — that would require a time machine. Nor, thus far, can they trace how additional research investment will influence a society's ability to innovate.

The problem is that innovation is not a simple, linear system in which basic research begets technology, and technology begets innovation — although that has always been the easiest model for policy-makers to envisage. Innovation is a complex, highly nonlinear ecosystem, full of interdependencies and feedback loops that aren't

La medicina que se aplica actualmente a las mujeres esta ***menos basada en la evidencia*** *que la que se aplica a los hombres*

¿Cuáles son las razones para adoptar el modelo masculino como marco?

1. Pensar que los hombres son muy homogéneos (menos cambios hormonales, menos confusión)
2. La convicción de que el modelo de los hombres funciona en las mujeres
3. La historia…
   - 2ª guerra mundial
   - el caso de la talidomida

Dejar fuera al 50% de la población tiene consecuencias

- Mayor nº de **efectos secundarios** en las mujeres: el 80% de los fármacos que se retiran del mercado se debe a los efectos secundarios que producen en las mujeres
  - el caso del Zolpidem (Ambien®)
- Desconocimiento del **efecto** diferente de los **fármacos** en función del sexo
  - el caso de la aspirina en la prevención de enfermedades cardiovasculares
- Desconocimiento del **efecto** diferente de ciertas **sustancias** en función del sexo
  - el caso del alcohol: diferente tolerancia (♀ **menos** aldehido deshidrogenasa) a considerar en la medida de la exposición

Los tratamientos en la mujeres embarazadas tendrían que mejorar

Pregnant women deserve better

- las mujeres **embarazadas** se ponen enfermas
- las mujeres **enfermas** se quedan embarazadas

developing fetus.

This is ethically and medically unacceptable for two reasons: pregnant women get sick, and sick women get pregnant. Patients who happen to be pregnant are as entitled as anyone else to safe and effective treatments, yet they are denied this and will be for as long as pregnant women are excluded from clinical studies. New drugs and devices are typically not approved for use in pregnant women as the many physiological changes that women experience during

For example, some of the adjuvants in a recent H1N1 vaccine were tested extensively in clinical trials with different vaccines that excluded pregnant women.

There is an obvious alternative: small, well-designed trials for pregnant women, starting with phase I safety trials that would begin at the same time as phase III efficacy trials in the general population. With this staggered approach, pregnant women and fetuses would not be exposed to any compounds that failed in

women in such trials mandatory, and oblige drug companies to conduct follow-up studies to identify any short- or long-term effects of the drugs.

Persuading pregnant women to take part in research can be difficult because of the perception that trials are riskier than taking prescribed medication. Trial organizers should take pains to demonstrate that this is often a false belief, and that it is generally safer for pregnant women to use drugs in a trial under controlled

nature International weekly journal of science

NATURE | COMMENT

Policy: NIH to balance sex in cell and animal studies

Janine A. Clayton & Francis S. Collins

14 May 2014

Janine A. Clayton and Francis S. Collins unveil policies to ensure that preclinical research funded by the US National Institutes of Health considers females and males.

Subject terms: Medical research · Policy · Research management

Better with both

..políticas para asegurar que la investigación preclínica, que depende de los Institutos Nacionales de Salud, consideren la inclusión de los dos sexos

http://www.nature.com/news/policy-nih-to-balance-sex-in-cell-and-animal-studies-1.15195#/ref-link-4

http://mujeresconciencia.com/2017/02/19/la-salud-de-el-y-de-ella/?platform=hootsuite

SEX and GENDER
Women's Health Collaborative

FOSTERING A SEX AND GENDER APPROACH TO MEDICAL EDUCATION AND PRACTICE

National Sex and Gender Physician Registry

Access the registry of medical practitioners who have demonstrated a commitment to applying sex and gender evidence into their clinical practice, and who have completed a certificate program which requires 10 hours of accredited sex and gender specific health continuing medical education (CME) activities.

GenderMed Database

Contains more than 11,000 abstracts analyzing sex and gender differences

View Content

GenderedReactions

GenderedReactions, from the Karolinska Institutet's Centre for Gender Medicine, gives gender specific reactions to drugs based on FDA data.

CENTRE FOR GENDER MEDICINE

View Content

Do You Know...

- Women with PAD have four times the risk of heart attack and stroke
- Not only has one in four Women had a migraine, this form of headaches is three times more common in Women than Men
- More Women die of COPD, despite being less likely than Men to be pack smokers

FOUNDING PARTNERS

American Medical Women's Association
American College of Women's Health Physicians
Society for Women's Health Research

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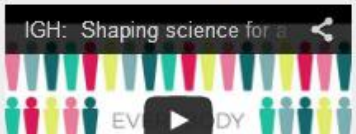


Cáncer de pulmón en personas no fumadoras

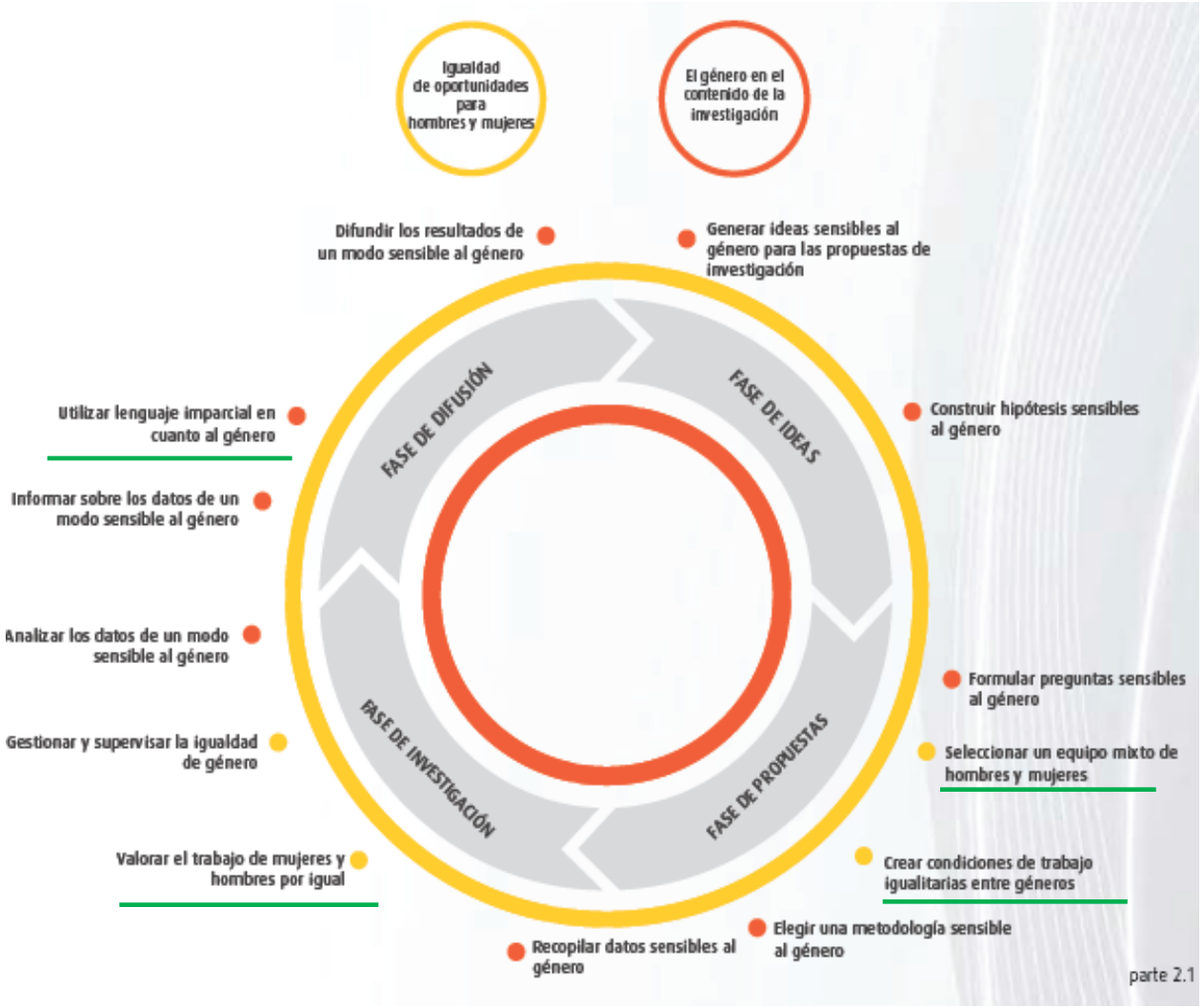
3 veces más frecuente en mujeres

Otros casos de desigualdades de genero en atención sanitaria

- Cribado de cáncer de colon sin perspectiva de género
- Diagnóstico de espondiloartropatía más tardía en mujeres
- Poco conocimiento sobre las migrañas
- Mujeres mal diagnosticadas de depresión (30-50% de las veces)
- Osteoporosis en hombres
- EC sobre anticonceptivos en hombres suspendido por efectos secundarios (muy ≠ en mujeres donde los efectos secundarios no se tuvieron en cuenta)

http://mujeresconciencia.com/2017/02/19/la-salud-de-el-y-de-ella/?platform=hootsuite
Teresa Ruiz Cantero

El género debe tenerse en cuenta en todas las etapas del ciclo de investigación



Fuente: Ministerio de Ciencia e Innovación. El género en la investigación. Madrid, 2011 [traducido del docuemento de la Comisión Europea (2009)]

¿y con respecto a **la igualdad** de **oportunidades**?

Teoría de la relatividad y la teoría del efecto fotoeléctrico

"Hace poco hemos terminado un trabajo muy importante que hará mundialmente famoso a mi marido".

Revista Nature 2013

A pesar de las mejoras, las mujeres científicas siguen afrontando la discriminación y desigualdades de salario y financiación

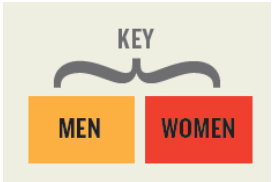
MIND THE GENDER GAP

Despite improvements, female scientists continue to face discrimination, unequal pay and funding disparities.

BY HELEN SHEN

22 | NATURE | VOL 495 | 7 MARCH 2013

Las mujeres que tienen hijos o piensan en tenerlos son más proclives a dejar la investigación



POSTGRADUATE POSITIONS

A 2009 survey of postdoctoral fellows at the University of California showed that women who had children or planned to have them were more likely to consider leaving research.

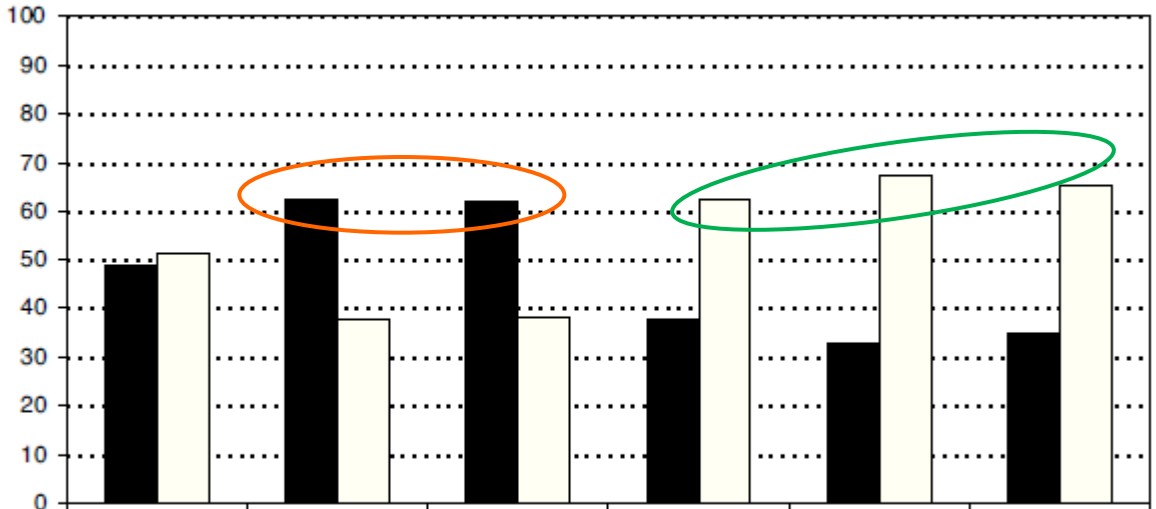
POSTDOCS WHO DECIDED AGAINST CAREERS AS RESEARCH FACULTY MEMBERS (2009)

"The plan to have children in the future, or already having them, is responsible for an enormous drop-off in the women who apply for tenure-track jobs."

Wendy Williams, Cornell University

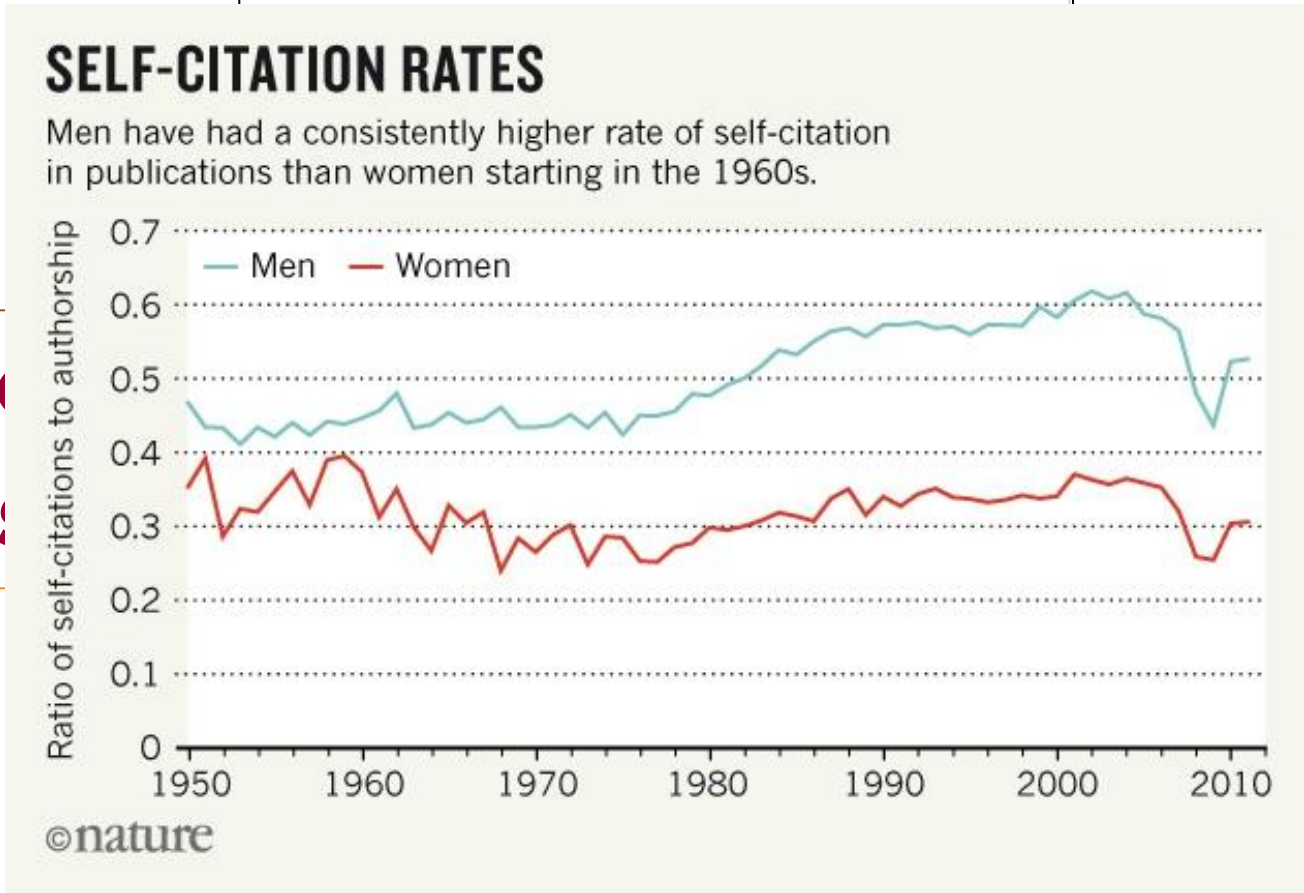
Rol en congresos de Salud Pública

M.M. García-Calvente et al. / Gac Sanit. 2015;29(6):404–411



	Comité científico	Comité organizador	Moderación comunicaciones	Moderación ponencias	Ponencias conferencias	Gurús
■ Mujeres	48,7	62,3	61,9	37,5	32,8	35
□ Hombres	51,3	37,7	38,1	62,5	67,2	65

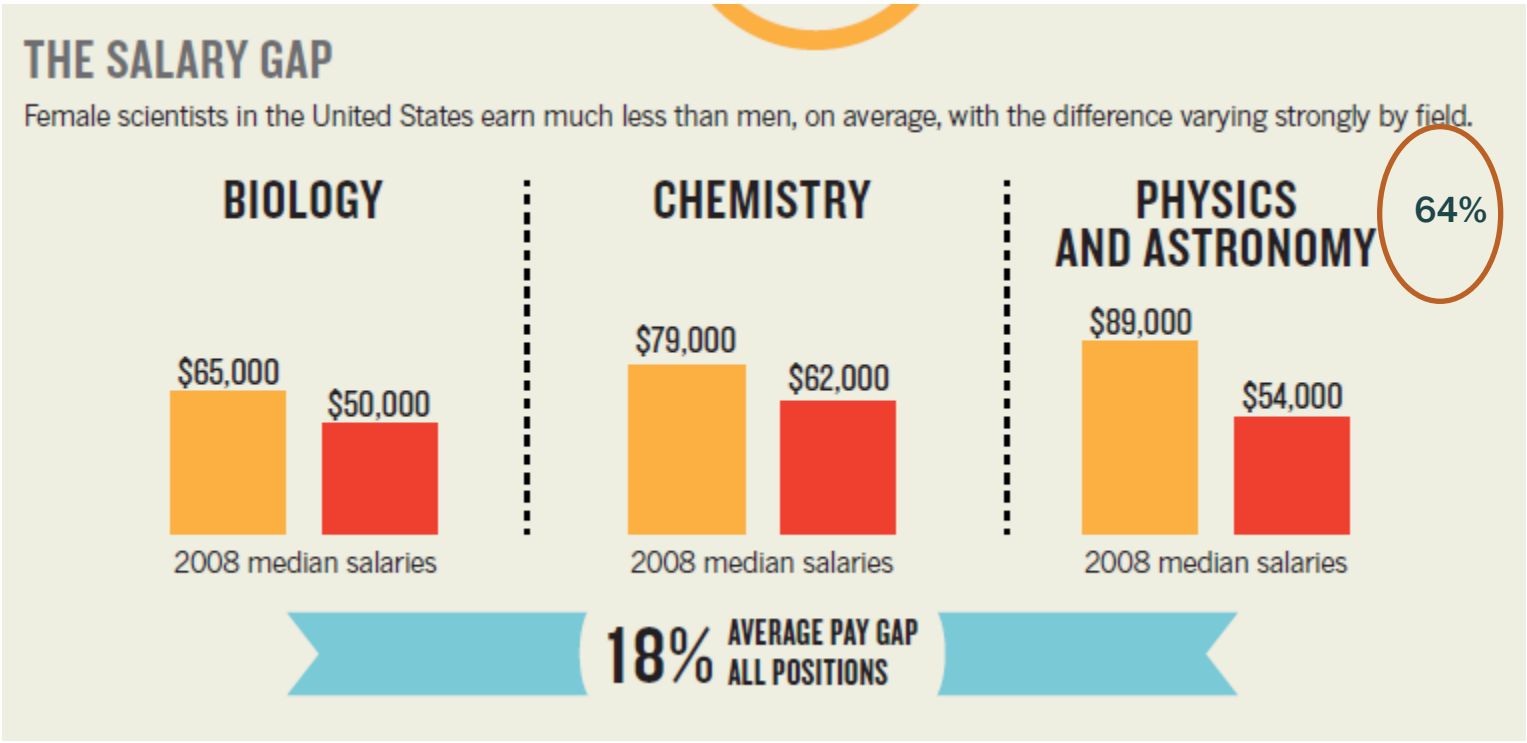
Porcentaje de mujeres y hombres en diversas posiciones de reconocimiento científico y profesional en los congresos y reuniones científicas de SEE y SESPAS. Periodo, 2009-14



L 0%
más eres

http://www.nature.com/news/men-cite-themselves-more-than-women-do-1.20176

Las mujeres científicas en EEUU ganan mucho menos que los hombres y la diferencia tiene una gran variación en función del campo científico

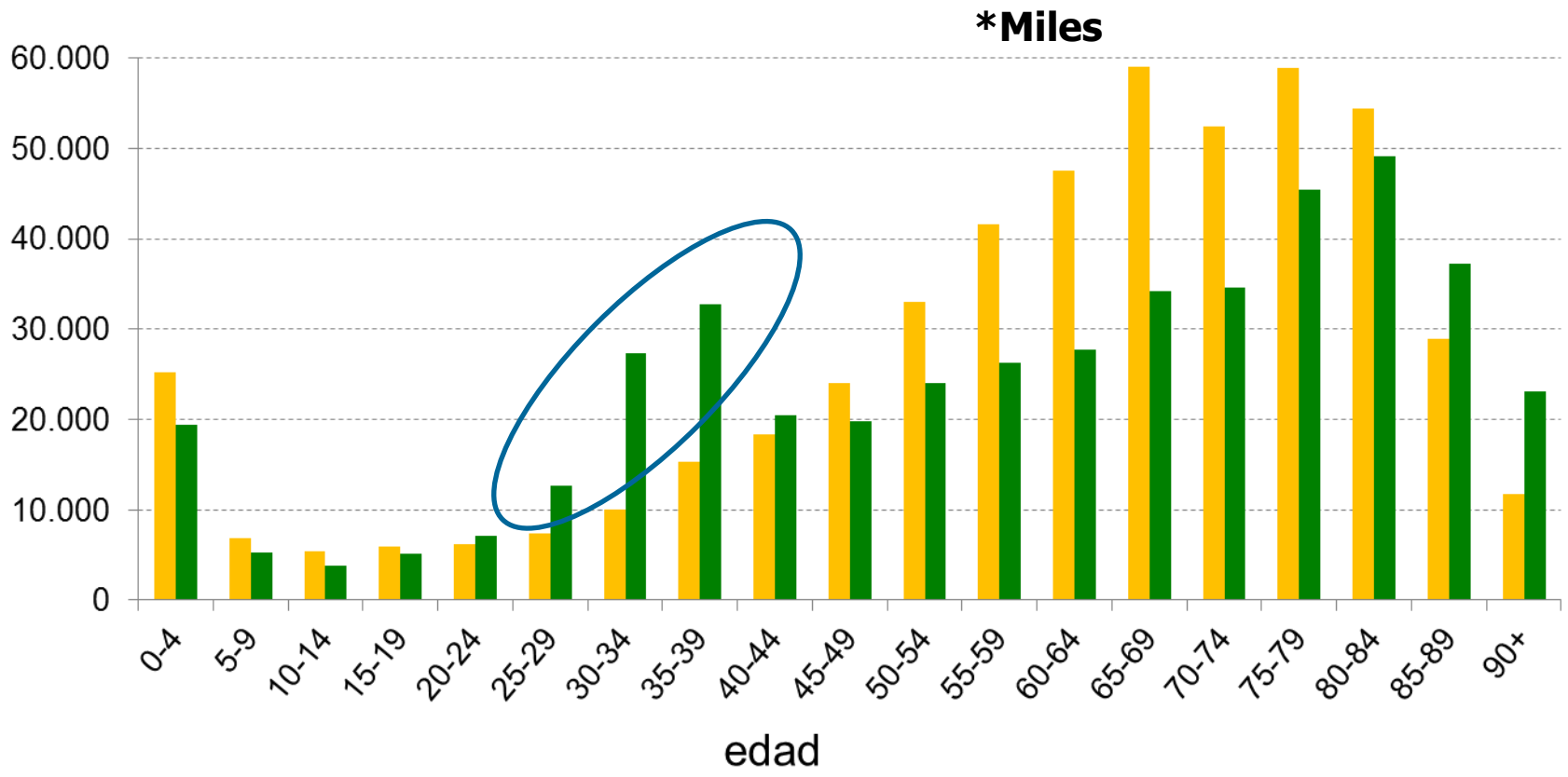


Las pequeñas cosas

- Deshacer mitos
- Cuidar las imágenes
- En el lenguaje sexista

Coste hospitalario por grupos de edad y sexo. Osakidetza, 2013

	coste total por sexo
hombres	512,363
mujeres	455,380
	967,743



Hombres
Mujeres

COSTE PARTOS AÑO 2013: 45.036.637 €

Conciliación laboral, familiar y personal

Políticas de familia y de empleo

Fathers in Sweden, one of the top four countries for gender equality, benefit from mandatory paternity leave. Photograph: Johner Images/Alamy

El lenguaje...

La alternativa de los médicos y enfermeros para garantizar la sostenibilidad del Sistema Nacional de Salud

Abril 2013

Documento elaborado por:

ANÁLISIS E INVESTIGACIÓN

Estudios de Mercado, Marketing y Opinión

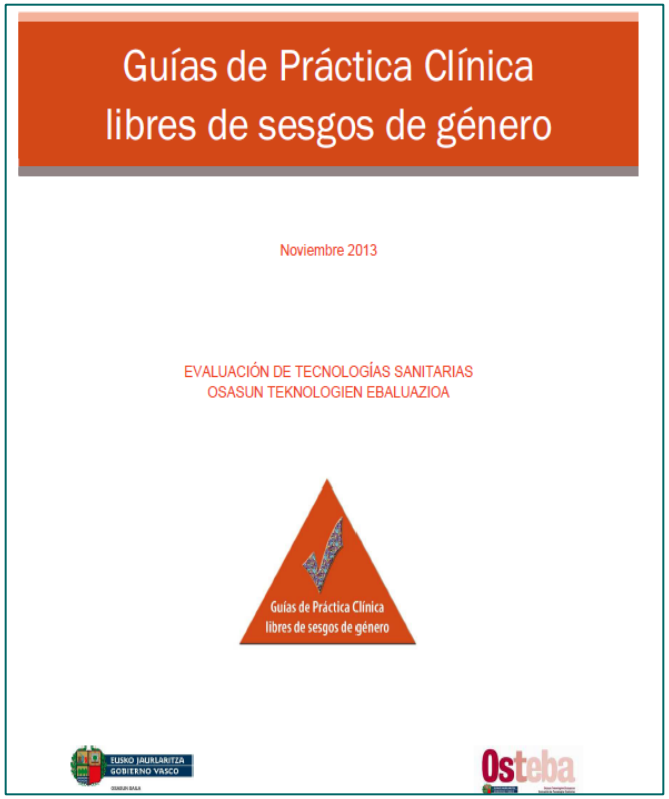
Públicos participantes

Para avanzar…

Perspectiva de género en el curriculo de Medicina y Enfermeria

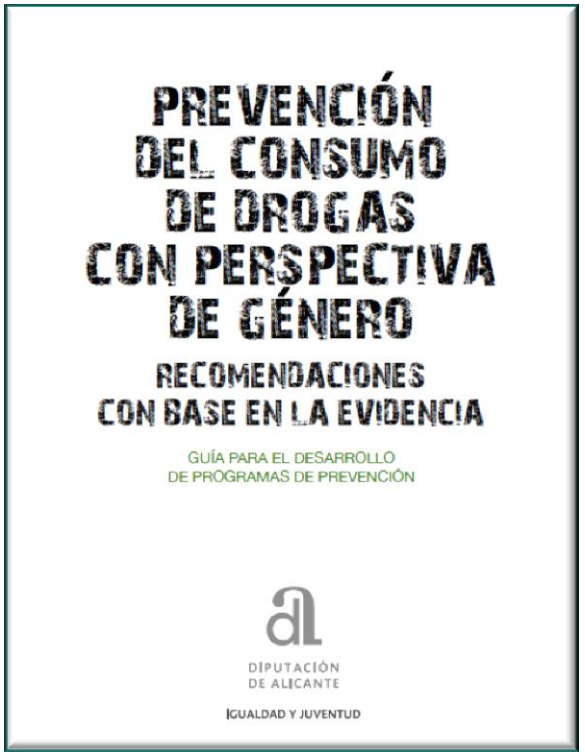
Instrumentos para eliminar los sesgos de género

Ámbito de la clínica



- http://bit.ly/2pkkDfX

En prevención



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